The Power of Partnership: American Regions Collaborating for Economic Competitiveness

2009 Generation I WIRED Interim Evaluation Report

November 9, 2009

Submitted to:

U.S. Department of Labor, ETA/OGCMOffice of Policy Development and Research200 Constitution Avenue, NWRoom N-5641Washington, D.C. 20210

Submitted by:

Berkeley Policy Associates 440 Grand Avenue, Suite 500 Oakland, California 94610 BPA #830





Authors of this Report

Sherry Almandsmith, Project Director
Mary Walshok, Ph.D., Principal Investigator
Kay Magill, Ph.D., Site Visit Task Leader
Linda Toms Barker, Survey Task Leader
Pamela Surko, Ph.D., Analysis of Existing Data Task Leader
Mary Vencill
Tommy Smith
Hannah Betesh
David Drury
Tricia Cambron
Kristina Lara
Thomas Goldring

This project has been funded, either wholly or in part, with Federal funds from the Department of Labor, Employment and Training Administration under Contract Number DOLJ071A20438. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement of it by the U.S. Government.





Acknowledgements

This report was made possible by the assistance of many people. Eileen Pederson of ETA provided critical information, assistance, and guidance, and was instrumental in serving as a liaison among all those involved in this work. We wish to thank all those at ETA who participated in our assessment, including the ETA Leads for giving the evaluation team background information on the regions as well as their insights. We owe a special thanks to all of the staff, partners, and stakeholders in the 13 Generation I regions. The professionals we visited at each of the regions welcomed us and were generous with their time, information, and ideas.







TABLE OF CONTENTS

Executive Sur	mmary	i
	gs	
Next Steps	······	viii
Chanter 1.	Introduction	1
	I Regions and Goals	
	of the Initiative	
	f this Report	
Chapter 2:	Changes in Context and Governance	10
_	ng Context for Generation I Regions	
	e	
Chanter 3:	Partnerships and Collaboration	26
	os and Partner Roles	
	or Fostering Collaboration	
	vork Analysis	
	: Partnership and Collaboration Foster Global Competitiveness	
Chapter 4:	Strategies, Activities, and Funding	59
Regional S	trategies and Activities.	59
•	the Initiative	
Chanter 5:	Progress Reported by Generation I Regions	85
	ad Regional Metrics	
	Transformation	
	oward Regionalism in Generation I Regions	
	ity	
Summary		107
Chanter 6:	Quantitative Measures of Progress: Changes in Extant Data Me	easures for
_	on I Regions	
	n	
Data Sourc	es	109
Summary	of Incremental Changes in Extant Data Measures	110
Chapter 7:	Workforce Investment System Transformation	112
	ve and Workforce System Transformation	
	oward Workforce System Transformation	
Challenges	to Workforce System Transformation	122
Summary		124
Chapter 8:	Conclusions and Observations	125
_	n	
	ation in the Workforce System	
	ity	
Next Steps		129



AppendicesAppendix A: Site Visit Highlights from Generation I RegionsA-1Appendix B: Generation I Regions' GoalsB-1Appendix C: Social Network Data for Generation I RegionsC-1Appendix D: Supplementary Quantitative Data on Generation I RegionsD-1



LIST OF FIGURES

Figure 1.1	Generation I Regions	4	
Figure 1.2	Map of Generation I Regions		
Figure 1.3	Analytical Framework for Evaluation		
Figure 2.1	Changes in Governance Structures Since Summer 2007	18	
Figure 2.2	Metro Denver Initiative's Transition to "Phase 2"	21	
Figure 2.3	Generation I Regions' Structures for Management and Decision Making		
Figure 2.4	North Central Indiana's Three Leaders		
Figure 3.1	The NCI Regional Compact	38	
Figure 3.2	Type of Organizations in Regional Networks	42	
Figure 3.3	Type of Organizations of Site Visit Respondents		
Figure 3.4	Organizational Roles in Regional Networks		
Figure 3.5	Organizational Roles of Site Visit Respondents		
Figure 3.6	Proportion of Contacts at Each Organizational Level within		
	Collaborating Organizations	45	
Figure 3.7	Frequency of Contact in Regional Networks		
Figure 3.8	2008 WAEM SNA Map		
Figure 3.9	2008 California Corridor SNA Map		
Figure 3.10	2008 Metro Denver SNA Map		
Figure 3.11	2008 Northwest Florida SNA Map		
Figure 3.12	2008 North Central Indiana SNA Map	54	
Figure 3.13	2008 Kansas City SNA Map	54	
Figure 3.14	2008 North Star Alliance SNA Map	55	
Figure 3.15	2008 Mid-Michigan SNA Map	55	
Figure 3.16	2008 West Michigan SNA Map	56	
Figure 3.17	2008 Montana SNA Map	56	
Figure 3.18	2008 Finger Lakes SNA Map	57	
Figure 3.19	2008 Piedmont Triad SNA Map	57	
Figure 3.20	2008 Wall Street West SNA Map	58	
Figure 4.1	Youth Programs and Approved Waivers	71	
Figure 4.2	Progress in Grant Expenditures 12-2008	76	
Figure 4.3	Initiative-Connected Investments Reported to ETA	82	
Figure 4.4	Initiative-Connected Investments for All Generation I Regions		
C	by Funding Source	83	
Figure 5.1	Progress on Initiative Metrics by Regions: Education and Training	88	
Figure 5.2	Progress on Initiative Metrics by Regions: Capacity-Building		
Figure 6.1	Regional Measures Compared to State: Changes Between August 2007 &		
	December 2008	111	
Figure 7.1	Elements of Workforce System Transformation	112	







Executive Summary

In most communities, the organizations and interests that drive economic development activities differ from the organizations and interests that drive workforce and talent development activities. The U.S. Department of Labor, Employment and Training Administration (ETA), has increasingly recognized that the typically separate, "siloed" resources of the business and economic development community and the talent and workforce development systems must come together for economic growth and transformation to occur. ETA has also recognized that while the services of these systems have traditionally been provided within narrow geographical and jurisdictional boundaries, recent research on economic growth and vitality suggest that both local economies and labor pools tend to cross such boundaries and are more typically regional in character. In response, ETA launched the Workforce Innovation in Regional Economic Development Initiative ("the Initiative").

For more than a decade, the U.S. Council on Competitiveness has focused increasing attention on innovation at the regional level as a key to economic competitiveness.³ Emphasizing regional action in a world where the Internet has virtually erased boundaries of space and time may seem paradoxical. Good economic research⁴ and experience have shown, however, that most innovations still come about through face-to-face interactions among highly skilled individuals with diverse knowledge and interests. At the regional level individuals and organizations can connect powerfully, build bridges across traditional institutional and industrial boundaries and, as a result, enable the sorts of "open systems" that enhance rapid flows of knowledge and new ideas. When mechanisms are in place to communicate, integrate, and collaborate within and between education, economic development, and workforce systems, a dynamic and highly productive process can be unleashed.

In February 2006, ETA awarded demonstration grants to 13 regions across the country under the Initiative (see map of Generation I regions). The regions each receive approximately \$5 million per year for three years, as well as access to ongoing technical assistance. The Initiative uses a set of incentives for regional efforts⁶ that link previously siloed assets – such as education, economic development, and workforce development resources – in order to achieve systemic

⁶ This report distinguishes between the national and local WIRED efforts by using Initiative (with a capital "I") for the national effort, and initiative (with a lower case "i") or regions for projects and programs associated with local WIRED regions.





¹ DOL/ETA, Workforce Innovation in Regional Economic Development (WIRED) Initiative Evaluation, http://www.doleta.gov/sga/rfp/DOL061RP20079.pdf

Walshok, Mary L. Knowledge Without Boundaries: What America's Research Universities Can Do for the Economy, the Workplace and the Community. San Francisco: Jossey-Bass Publishers, 1995.

³ See discussion of the Regional Innovation Initiative and the Regional Competitiveness Summit at www.compete.org.

⁴ Krugman, Paul. "First Nature, Second Nature, and Metropolitan Location." Journal of Regional Science 33(2): 129-144, 1993.

⁵ Chesbrough, Henry William. *Open Innovation: the New Imperative for Creating and Profiting From Technology*, Boston, Massachusetts: Harvard Business School Publishing Corporation, 2006.

FIRST GENERATION REGIONS North Star Allorce North Star Allorce North Star Allorce Regions Regions

Map of Generation I Regions

Source: ETA website, http://www.doleta.gov/wired/regions/

change. The desired systemic change is no less than the transformation of the regional economy, as manifested in:

- Preparing workers with the skills and knowledge they need to enter employment in growth sectors and to adapt to changes in increasingly science- and technology-rich workplaces;
- Stimulating the development of regional structures that effectively link previously separate assets, mobilizing the shared resources needed to realize those opportunities, and ultimately contributing to sustainable economic prosperity in the region; and
- Supporting changes in existing workforce and economic development systems to assure their continuing contributions to the ecosystem of regional change and economic prosperity.





In October 2006, ETA contracted with Berkeley Policy Associates (BPA) and its partner, the University of California, San Diego Extension (UCSD), to evaluate the 13 regions (known as "Generation I" regions to distinguish them from two other groups of regions that subsequently received ETA funding⁷). The evaluation's objective is to provide a comprehensive understanding of the implementation and cumulative effects of innovative economic development strategies in the Generation I regions, including transformation of their regional economic and workforce systems. The evaluation's study design includes: reviewing all existing materials on the Initiative in general and the Generation I regions in particular; conducting annual visits to the Generation I regions; conducting surveys of regional partners; gathering and analyzing information from existing databases on regional economic and social indicators to assess the influence of the Generation I initiatives on their local economies; and analyzing information from all of these sources together. The research design is, of necessity, iterative and changeable over time, within the broad general structure originally laid out in the evaluation proposal and design report.⁸

This second evaluation report emphasizes the evolution of regional economic initiatives across the 13 regions since the evaluation's "baseline" report published in May 2008. The evaluation, therefore, examines the changing context in which the Generation I regions operate and how they respond to their environments. This report documents adaptations in strategic activities and resource allocations as the regions shifted from a start-up phase to ongoing operations. The report also attempts to identify measurable progress as indicated by outcome metrics, narrative accounts of the regions, and economic indicators from publicly available sources. All these analyses contribute to the evaluation's assessment of the regions' progress towards their ultimate aim – regional economic transformation through effective integration of economic development institutions and a transformed workforce system.

Key Findings

The evaluation's key findings on the second full year of implementation in the Initiative's Generation I regions are summarized below. These are organized in terms of context and governance, collaboration and partnerships, activities and funding, measures of progress, and transformation of the workforce development system.

⁹ Almandsmith, Sherry, et. al. *Early Implementation of Generation I of the Workforce Innovation in Regional Economic Development (WIRED) Initiative: 2007 Interim Evaluation Report*, ETA Occasional Paper 2008-03, June 2008.





⁷ Based on the original procurement, ETA selected another 13 regions (known originally as the Virtual Community of Regions and subsequently, as Generation II) to receive \$100,000 to support their participation in Initiative conferences and other learning opportunities. In 2007, ETA supplemented these funds with awards totaling \$5 million for each region over three years. Finally, in June 2007, ETA awarded 13 Generation III regions a total of \$5 million each over three years. Information about regions in all three Generations of the Initiative is available at http://www.doleta.gov/wired/regions/.

⁸ Almandsmith, Sherry, Mary Walshok, et. al. *Evaluation of Generation I of the Workforce Investment Regional Economic Development (WIRED) Initiative: Design Report*, August 30, 2007.

Context and Governance

The economic downturn that began in 2008 was a significant contextual factor for the Generation I regions, presenting the initiatives with the complications of dwindling public resources, diminishing industry investment, and limited philanthropic support. On the other hand, dwindling resources also presented opportunities for regional collaboration. Not all regions were equally affected by the weak economy, and several found opportunities to strengthen cooperation and expand into new markets and emerging industries.

Another contextual factor that affected virtually all regions was that of changes in ETA guidance regarding performance measurement and allowable expenditures. Because many of the initiative managers were not from the workforce system, they were unfamiliar with the regulations describing allowable use of funds. Furthermore, ETA staff provided technical assistance directly to the initiative managers, obscuring the role of the state workforce agencies in monitoring compliance with federal policy. Many regions had initiated innovative programs with the express approval of ETA staff. Later, after ETA instituted fiscal reviews and increased its emphasis on the acceptable uses of grant funds, regions found that some of their activities were disallowed. The 2008 fiscal monitoring reviews led to significant disallowed costs in some regions.

While most of the regions maintained consistent governance and management structures, notable changes occurred in some regions. The initiatives made structural changes for two reasons. Many regions consolidated or streamlined their collaborative structures and teams as their goals matured. Others made changes in their governance structures to sustain and institutionalize successful activities and structures after the ETA grant ends.

Effective leadership – with leaders taking on the roles of champion, catalyst, and integrator – was commonly spread among several individuals within a region. This pattern of shared leadership may prove especially effective in assuring long-term sustainability and impact, since a large number of individuals are committed to achieving the initiative's goals, not just a single visionary or champion.

Collaboration and Partnerships

Economic transformation requires synergy among a wide range of agencies and organizations—collaboration that transcends narrow geographical and jurisdictional boundaries. In fact, the Generation I regions can boast a large number of new, productive, and often innovative partnerships. These collaborative relationships produced the expected advantages of pooling resources and talent to advance objectives and reach initiative milestones. While judging whether these partnerships are resulting in economic transformation is impossible at this time, many early indicators are promising.

Furthermore, many partners reported that the new relationships they had formed through their initiatives had also yielded concrete, ongoing benefits to their own organizations. In fact, site visit respondents consistently identified these new partnerships as being among a region's most valued assets and most sustainable outcomes. As a consequence, staff members reported that they spend an enormous amount of time communicating with partners, keeping them informed of





the initiative's activities and accomplishments, seeking their input, inviting them to upcoming events, and soliciting their support.

The evaluation's second round of visits also revealed the strategies that respondents believed were most successful in fostering collaboration. These included: thinking creatively about common goals; allowing relationships to develop over time; building on personal relationships; and making expectations clear while expecting the best of collaborators. At least two of the regions laid out "ground rules" for their partners, emphasizing mutual respect and the commitment of the partners to the initiative and to each other. While empirical data are not available to draw conclusions about cause and effect, one may hypothesize that those who commit to these "simple rules of civic behavior" set a high standard within regions and facilitate the growth of a collaborative culture – and that culture in turn may well facilitate changes that enhance the region's economic progress on a sustained basis.

Activities and Funding

Between 2007 and 2008, the Generation I initiatives moved from start-up to an operational phase. While much of the strategic planning efforts necessary in the start-up phase have concluded, the regions continue to learn and adjust their programs accordingly. Some of the variation in activities occurred simply because of the passage of time, as initiative objectives and milestones are met. Regions were also learning what did and did not work, adapting over time. Still other changes were responses to the changes in the regulatory and economic environments in which the regions operate.

Only two regions changed the *types* of industries they targeted in 2008. Those regions expanded the types of industries with which they worked because of the economy's negative impacts on their primary industry partners. In both cases, the shift resulted in an increase in the number of workers being trained.

Economic development and regional transformation strategies employed across the 13 regions fall into four major categories, each of which encompasses a number of different types of activities:

1. Workforce development activities, including

- a. Developing new job training approaches,
- b. Creating credential and certification programs,
- c. Training underserved populations,
- d. Training incumbent workers, and
- e. Training workers for "green jobs;"

2. Entrepreneurship and businesses services, such as

- a. Providing training and technical assistance,
- b. Creating or supporting business incubators,
- c. Providing assistance for rural businesses,
- d. Training youth in entrepreneurship,
- e. Developing cluster initiatives,





- f. Providing small business assistance, and
- g. Providing help in accessing investment capital;

3. Talent development activities, including

- a. Promoting science, technology, engineering, and math (STEM) among high school youth,
- b. Developing and implementing career awareness programs, and
- c. Developing and implementing postsecondary programs; and

4. Data analysis and planning.

In year two of the initiative, Generation I regions increased funding for workforce training activities for several reasons. First, workforce training was a natural next step after the regions' initial planning and implementation efforts. Second, regions devoted more resources to training in order to bring their activities in line with the H-1B funding requirements. Finally, changes in policy emphasis at ETA increased attention to training underserved workers.

Many regions devote significant effort and resources to supporting entrepreneurs, and increasingly, to small rural companies. Research parks and business incubators are key facilities supporting regions' efforts to assist emerging entrepreneurs. At the same time, regions have also invested considerable energy in supporting mature businesses through cluster-based technical assistance.

The talent pipeline remains a chief concern in all of the regions. Several regions originally planned to offer STEM programs for students in grades kindergarten through 12 (K-12). Delayed or ambiguous guidance from ETA about H-1B requirements, particularly those limiting the use of these funds to youth age 16 and over, ¹⁰ presented significant challenges for several regions. To bring their programs into compliance, these initiatives had to either 1) redesign their STEM education programs to target older youth, or 2) find other sources of funding to provide services to younger students. As a result, regions have correspondingly increased career awareness activities targeting older youth.

During the 2008 fiscal review visits, ETA monitors used the OMB cost principle regarding leveraged funds, that is, that leveraged funds include only those non-grant funds that are used for costs that are allowable for the federal grant. Prior to the fiscal reviews, communications about leveraged funds had been inconsistent, and this definition is not how the regions understood the term. To differentiate between the definitions, and to capture the full range of funds available to the regions and their partners, the evaluation report uses the term *Initiative-connected investments* to refer to what the evaluation's 2007 Interim Report called "leveraged funds." The definition for both terms is the same: any funds other than the grants that are specifically supporting WIRED activities or any project within the region that is directly related to the vision and objectives of the region's initiatives. Using this definition, through the end of August 2008,

¹⁰WIRED is funded by revenue collected under 8 USC §1356(s)(2) (commonly referred to as H-1B funds), as authorized by the American Competitiveness and Workforce Improvement Act of 1998, Pub.L.No. 105-277 (codified, as amended, at 29 USC § 2916a). The legislation specifies that individuals must be at least age 16 to receive training paid for by these funds, unless the program obtains a waiver from ETA. See *WIRED Policy on Investments in Activities For Secondary School Aged Youth*. Memorandum dated November 19, 2007, signed by Assistant Secretary Emily Stover DeRocco.





the regions collectively raised over \$294 million in Initiative-connected investments. The majority of these investments were from federal sources; contributions also came from private industry, foundations, and state funds.

Measures of Progress

ETA developed the Initiative's Accountability Framework¹¹ to provide guidance to regions on how to approach measuring their success and to ensure that the grantees systematically capture their initiative's results and outcomes – both quantitative and qualitative. In addition to the national evaluation, components of the Framework include the Common Measures and region-specific metrics. Very few of the regions reported on the Common Measures in their December 2008 quarterly reports. The most likely reason is the time lag associated with using Unemployment Insurance (UI) wage records to document entering employment and wages. Other factors that could serve as barriers to reporting these measures are concerns about participant confidentiality associated with use of Social Security Numbers to access UI wage records, and the fact that the Common Measures were not designed to adequately capture information on the Initiative's networking strategies, or about training for entrepreneurs. As the regions approach the end of their grants, the data needed to calculate the Common Measures for their early years should become available. The evaluation team looks forward to discovering whether more of the initiatives are able to provide information about these metrics in their quarterly reports for December 2009.

The metrics used to gauge regions' progress are organized into three categories – education and training, capacity-building, and economic indicators. Several factors have contributed to poor consistency and quality of the metrics data that Generation I grantees have submitted to document their performance. These include: 1) the measures are "suggested," not required; 2) the measures were introduced a year after the grants started; and 3) ETA encouraged the regions to tell their stories by defining and adopting region-specific metrics to complement information gathered via the suggested metric framework.

The initiatives were most consistent about reporting on the education and training metrics. Across all of the regions, the total number of individuals who began education and/or training courses using Initiative funds was 31,499. Of those who started education/training courses, 61% had completed training by the end of 2008. Finally, 25% of those who completed training went on to be employed within a targeted industry. These numbers underestimate the influence of Initiative-funded training because of problems with data quality.

Among the capacity-building metrics, the grantees were most consistent in reporting on the number of educators prepared for instruction in identified industries, the number of new curricula developed, and the number of students projected to be trained as a result of these two activities. The nine regions that provided data trained a total of 5,429 educators, and estimated that these instructors would in turn train 88,146 students per year. The initiatives developed 207 new curricula, which they projected would be used to train 6,278 students. Again, these results are

¹¹ DeRocco, Emily. "WIRED Performance Reporting – Implementing Your Regional Accountability Framework (Generation I and II Grantees)," Memorandum to WIRED Regions, April 27, 2007.





likely to underestimate the influence of grant-funded activities and should be considered cautiously.

The evaluation team also gauged regional progress in fortifying partnerships, developing shared strategies, fostering innovation, and ensuring sustainability of these efforts. Most regions had established cohesive regional structures based on shared interest, assets, and goals by the time of the evaluation visits in Fall 2008. The innovations described in this report refer to many technological and business development initiatives, new creative policies and programs, and instances of transformative thinking about the alignment of talent and economic development. This report examines the sustainability of grant-funded programs beyond the grant period, as evidenced by: the extent to which the overall philosophy and goals of collaboration and transformation had taken hold among regional actors; the durability of the regions' collaborative networks; and the extent to which the initiative's programs and activities are being adopted and institutionalized within the organizations implementing them.

Transformation of the Workforce System

ETA has challenged the grantees to work toward two important nationwide goals: 1) to develop within their regions strong linkages between industry and the education, economic development and workforce systems; and 2) to transform the workforce system into an integrative, forward-looking talent development system. The evaluation team found that a number of the Generation I regions have taken important preliminary steps toward these desired goals. In some regions, clear signs have emerged that transformation is occurring in specific local areas, if not across the entire region, or in some components of the system. In other regions, state-level modifications of policy and structures have facilitated the regions' efforts. The changes observed, however, do not (yet) rise to the level of "transformation" of the full workforce system.

Next Steps

This report, like the evaluation's 2007 Interim Report, is a snapshot of the activities and achievements of the Generation I regions at a given point in time. This report thus represents the second set of "photographs" to be added to the initiative's "album." The evaluation team will continue to assess the regions' progress in moving toward regional transformation with a final round of site visits, analysis of data from third-party sources, and a comprehensive survey of regional partners to be conducted in 2009 and 2010.

As most regions come to the end of their federal funding in January 2010, the next steps for the regions are to continue expanding their partnerships, use the relationships and collaborative mechanisms that they have formed through the grant as a basis for collaboration in support of other activities, and continue their journey toward a new economy. As one respondent noted, "Transformation is continuous – the job is never done."





Chapter 1: Introduction

In most communities, the organizations and interests that drive economic development activities differ from the organizations and interests that drive workforce and talent development activities. The U.S. Department of Labor, Employment and Training Administration (ETA), has increasingly recognized that the typically separate, "siloed" resources of the business and economic development community and the talent and workforce development systems must come together for economic growth and transformation to occur. ETA has also recognized that while the services of these systems have traditionally been provided within narrow geographical and jurisdictional boundaries, recent research on economic growth and vitality suggest that both local economies and labor pools tend to cross such boundaries and are more typically regional in character. In response, ETA launched the Workforce Innovation in Regional Economic Development Initiative ("the Initiative").

For more than a decade, the U.S. Council on Competitiveness has focused increasing attention on innovation at the regional level as a key to economic competitiveness.¹⁴ Emphasizing regional action in a world where the Internet has virtually erased boundaries of space and time may seem paradoxical. Good economic research¹⁵ and experience have shown, however, that most innovations still come about through face-to-face interactions among highly skilled individuals with diverse knowledge and interests. At the regional level individuals and organizations can connect powerfully, build bridges across traditional institutional and industrial boundaries and, as a result, enable the sorts of "open systems"¹⁶ that enhance rapid flows of knowledge and new ideas. The integration of education and training providers with research and development (R&D) and economic and business development interests increases the chances that the management and workforce skills required by these knowledge transformations can be provided quickly and effectively.

Many regions have within their boundaries superb universities, research institutions, and even large multi-national corporations, but these assets often fail to yield the innovations that lead to new products, industries, or local jobs. When mechanisms are in place to communicate, integrate, and collaborate within and between these knowledge domains and professional competencies, however, a dynamic and highly productive process can be unleashed.

¹⁶ Chesbrough, Henry William. *Open Innovation: the New Imperative for Creating and Profiting From Technology*, Boston, Massachusetts: Harvard Business School Publishing Corporation, 2006.





¹² DOL/ETA, Workforce Innovation in Regional Economic Development (WIRED) Initiative Evaluation, http://www.doleta.gov/sga/rfp/DOL061RP20079.pdf
¹³ Walshok, Mary L. Knowledge Without Boundaries: What America's Research Universities Can Do for the

Walshok, Mary L. Knowledge Without Boundaries: What America's Research Universities Can Do for the Economy, the Workplace and the Community. San Francisco: Jossey-Bass Publishers, 1995.

¹⁴ See discussion of the Regional Innovation Initiative and the Regional Competitiveness Summit at www.compete.org.

¹⁵ Krugman, Paul. "First Nature, Second Nature, and Metropolitan Location." Journal of Regional Science 33(2): 129-144, 1993.

In launching the Initiative, ETA funded the regional initiatives¹⁷ to link previously siloed assets – specifically education, economic development, and workforce system resources – in order to achieve systemic change. The desired systemic change is no less than the transformation of the regional economy. Contributing activities include:

- Preparing workers (including those who are displaced, those currently employed and underemployed, and those entering the workforce) with the skills and knowledge they need to find employment in growth sectors and adapt to changes in increasingly science- and technology-rich workplaces;
- Stimulating the development of regional systems that effectively link previously separate assets, mobilize the shared resources needed to realize those opportunities, and ultimately contribute to sustainable economic prosperity in the region; and
- Supporting changes in existing workforce and economic development systems to assure their continuing contributions to the ecosystem of regional change and economic prosperity.

The 13 Generation I regions have addressed these issues in the initiatives they have been pursuing over the life of their grants. Together, they represent important case studies of how regions, in the face of dramatic economic and social challenges, can mobilize diverse institutions and assets to begin the journey towards renewed prosperity and full employment.

The data and stories presented in this second Interim Report on the progress of these regions offer insights into potential ways to rebuild the American economy. They represent innovative regional initiatives that are responsive to local conditions, leverage distinctive local and regional assets, and focus on the need to grow high-wage, high value-added businesses and jobs. As this report will reveal, macro-social forces – as well as changes within the U.S. Department of Labor, in state-level priorities, and among the regional collaboratives – have resulted in some slight shifts in direction moving forward. Nonetheless, the core guiding principles of regional collaboration focused on workforce and economic transformation still drive the 13 regions.

Generation I Regions and Goals

The premise of the Initiative is that national competitiveness and regional prosperity are possible if communities are able to link their varied knowledge resources with their business and innovation assets, and then train their workforce in the skills and knowledge required to work effectively in new and emerging industries. To this end, ETA used a competitive process to select 13 regions across the country (known as Generation I regions) to receive approximately \$5 million each per year in grant funds over the course of three years, as well as access to ongoing technical assistance.¹⁸

¹⁸ Ultimately, ETA funded a total of 39 regions in three generations of grants. Information about regions in all three generations is available at http://www.doleta.gov/wired/regions/.





¹⁷ This report distinguishes between the national and local efforts by using Initiative (with a capital "I") for the national effort and initiative (with a lower case "i") for projects and programs associated with local regions.

Figure 1.1 lists the 13 Generation I regions by state, provides a brief description of the area that each region encompasses, and lists the "nickname" by which this report refers to each the region. Figure 1.2 is a map showing the regions' locations across the U.S. Details on each region can be found in Appendix A, which describes site visit highlights from the evaluation team's second round of visits to the regions.

The process used to identify the geographic areas to be included in the Generation I regions varied. The boundaries of existing regional identities and entities defined some regions. For example, Northwest Florida, Metro Denver, Kansas City, and Finger Lakes all had existing regional alliances focused on regional economic development and growth and built upon those alliances in furthering regional collaboration.

State policies defined the boundaries of other Generation I regions. Michigan had already consolidated its economic development and workforce agencies and aligned the boundaries of its corresponding intrastate regions prior to the announcement of the grants. This policy defined the borders of the Mid-Michigan and West Michigan regions. Similarly, the North Carolina General Assembly many years ago designated the Piedmont Triad as one of seven economic development regions in the state.

Finally, new partnerships that were formed to apply for the funding from ETA resulted in newly created regions. Montana, the North Star Alliance (in coastal Maine), Wall Street West, Western Alabama/ Eastern Mississippi (WAEM), and the California Corridor are examples of this phenomenon.

Changes in Goals and Timeline of the Generation I Regions

As described in the evaluation's first Interim Report, ¹⁹ in working to increase their ability to respond to significant global economic challenges, the Generation I regions chose specific objectives that cluster under three distinct but interrelated categories:

1. Workforce and Talent Development – including goals such as:

- Assessing and addressing employer needs and worker skill gaps;
- Retaining workers in the region;
- Creating a high-skilled workforce;
- Providing entrepreneurial training;
- Increasing graduation rates and STEM competencies;
- Training teachers (K-12); and
- Mentoring high school math and science students;

2. Economic Development – including goals such as:

- Creating quality, high-skilled jobs;
- Increasing research and development (R&D) activity and innovations;
- Increasing the competitiveness of business partners;

¹⁹ Almandsmith, Sherry, et. al. *Early Implementation of Generation I of the Workforce Innovation in Regional Economic Development (WIRED) Initiative: 2007 Interim Evaluation Report*, ETA Occasional Paper 2008-03, June 2008.



₹UCSanDiego Extension always something new

Figure 1.1 Generation I Regions

State	Initiative Name	Location	Major Metropolitan Areas	Referred to in this report as:
Alabama/ Mississippi	WIRED Initiative for Western Alabama & Eastern Mississippi	18 counties in W. Alabama; 19 counties in E. Mississippi	Meridian, MS Tuscaloosa, AL	WAEM
California	California Innovation Corridor	13 counties from Oakland to San Diego	Los Angeles, San Diego, Silicon Valley	California Corridor
Colorado	Metro Denver WIRED	9 counties around Denver	Denver, Boulder, Ft. Collins	Metro Denver
Florida	WIRED Northwest Florida Initiative	16 counties in the Florida Panhandle	Tallahassee, Pensacola	Northwest Florida
Indiana	North Central Indiana WIRED	14 counties including Lafayette	Lafayette, Kokomo	NCI
Kansas/ Missouri	OneKC WIRED Initiative	Greater Kansas City (10 Missouri counties; 8 Kansas counties)	Kansas City, MO Kansas City, KS	Kansas City
Maine	North Star Alliance Initiative	12 coastal counties in Maine	Portland, Bangor, Augusta	North Star Alliance
Michigan	WIRED for Mid-Michigan	13 counties including Lansing, Flint, and Saginaw	Flint, Lansing	Mid-Michigan
Michigan	WIRED for West Michigan	7 counties in Western Michigan	Grand Rapids, Holland, Muskegon	West Michigan
Montana	Montana Agro-Energy Plan	32 counties in Northeast Montana	Havre, Miles City	Montana
New York	Finger Lakes Partnership	9 counties in Upstate New York	Rochester	Finger Lakes
North Carolina	Piedmont Triad Partnership	12 counties	Greensboro, Winston- Salem	Piedmont Triad
Pennsylvania	Wall Street West	10 counties in Northeast Pennsylvania	Allentown, Bethlehem, Scranton, Wilkes-Barre	Wall Street West

Source: ETA website, http://www.doleta.gov/wired/regions/ and BPA/UCSD Evaluation Team





FIRST GENERATION REGIONS

North Ster Allarce

Mortstan a Prod-Michigan

West Michigan

West Michigan

Wall Street West

North

Regions City

Pedmort Triad a

Water Plantia

Figure 1.2
Map of Generation I Regions

Source: ETA website, http://www.doleta.gov/wired/regions/

- Helping innovators commercialize their products;
- Identifying, assessing, and aligning regional resources;
- Increasing knowledge of global competitiveness;
- Sustaining and replicating collaboration and service models;
- Expanding current markets and creating new ones; and
- Increasing investment from external sources; and

3. Social and Community Development – including goals such as:

- Building new organizational relationships;
- Increasing a support network;
- Creating and adopting a regional identity and mindset;
- Changing employment expectations;
- Creating a leadership structure;
- Creating collaboration across business, education, and government sectors;
- Creating broad community engagement; and
- Creating an entrepreneurial culture.

Appendix B provides details on which regions have adopted each type of goal.





Only two of the Generation I regions – the Piedmont Triad and Wall Street West – have formally developed new goals since the evaluation's first visit (see Appendix B). In October of 2008, the Piedmont Triad drafted specific goals for each of its industry clusters (i.e., creative enterprises and the arts, advanced manufacturing, logistics and distribution, and health care), as well as for education and workforce development. These goals reflect the evolution of the initiative, since they were developed by each industry's roundtable and represent the group's goals and action plan for industry. They represent a further specification of (rather than a change in) the goals stated in Piedmont Triad's implementation plan.

In June 2008, Wall Street West anticipated the looming crises in the finance industry and shifted the emphasis of its goals and activities in several ways. First, the initiative broadened its targeted industries to include financial services, consistent with the Pennsylvania targeted industry cluster designations, and incorporated other industry sectors common across the five local workforce areas. Finally, Wall Street West incorporated the language of one of the original goals that promoted innovation and technology transfer into the other three goals. Chapter 4 will describe how these changes affected the region's activities.

All but two of the Generation I regions applied for and received no-cost extensions of their grants; in these regions, funded activity will continue through January 2010. California Corridor and West Michigan did not change their initial period of performance. At the time this report was written, funding for these regions was anticipated to end on January 31, 2009.

The evaluation's first Interim Report emphasized the extent to which the 13 regions began their economic transformation process at different starting points, both in terms of "readiness" for change and in terms of challenges and opportunities each faced. All shared the intention to address their goals in a regionally based, collaborative approach to growth and transformation in spite of the marked contrasts between those approaches and their geographies and particular regional histories. The first Interim Report captured the progress each region had made on their journey to transformation. This second Interim Report provides a look at their continuing progress as well as documentation of the specific activities and outcomes the regions have realized to date.

Evaluation of the Initiative

In October 2006, ETA contracted with Berkeley Policy Associates (BPA) and its partner, the University of California, San Diego Extension (UCSD), to evaluate the Initiative's 13 Generation I regions. The evaluation's objective is to provide a comprehensive understanding of the implementation and cumulative effects of collaborative and innovative strategies in the Generation I regions, including transformations in their regional economic and workforce systems. This report describes the implementation of the Initiative in its second full year.

The evaluation's study design includes: 1) reviewing all existing materials on the Initiative in general, and the Generation I regions in particular; 2) conducting annual visits to the Generation I regions; 3) surveying partners in each region; 4) gathering and analyzing information from existing databases on regional economic and other factors; and 5) analyzing information from all





of these sources together. The research design is, of necessity, iterative and changeable over time within the broad general structure originally laid out in the evaluation's design report.²⁰

This study is not simply an evaluation of workforce training or economic development activities. It is also a description of how regional organizations that are concerned with economic growth and building human capital come together in new social relationships through which shared goals, co-investment, and a renewed sense of regional purpose and confidence can develop. The evaluation, therefore, focuses on three critical aspects of regional economic transformation: 1) regional alliance-building across geographic and professional boundaries, along with development of a regional identity; 2) specific organizational and programmatic strategies, in terms of partners, governance, co-investment, and specific business and talent development initiatives; and 3) measurable progress toward sustainable economic transformation, as indicated by outcome metrics related to regional economic well-being and workforce preparedness. All three types of analysis contribute to the evaluation's assessment of the regions' success.

Figure 1.3 illustrates how the evaluation is collecting information to explore these three master themes. To assess collaboration, alliance building, and development of a regional identity, the research team is analyzing documents and plans, conducting site visits and interviews, and will be fielding regional partner surveys. The team is using the same methods to explore the specific organizational and programmatic strategies that each region is employing and will also use information from existing databases to analyze enrollment in training or education programs. Finally, to examine regional progress toward sustainable economic transformation, the evaluation is using information from documents, interviews, surveys, and existing data sources.

The original grant period of three years defines an extremely short timeline by which to effect regional economic transformation.²¹ The evaluation's study period extends nine months beyond the initially planned end of the Generation I grants.²² Still, changes in the regional economies that may ultimately be attributable to the Initiative can be expected to take ten years or longer to happen. Thus, the evaluation is designed to be sensitive enough to detect relatively small effects that represent leading indicators of progress in each region, and the study's Final Report will assess the progress that the regions have made toward transformation during the period of the Initiative.

²² Though funding for two of the regions (California Corridor and West Michigan) ended on schedule in January 2009, the evaluation will continue to monitor progress in these regions.







²⁰ Almandsmith, Sherry, Mary Walshok, et. al. Evaluation of Generation I of the Workforce Investment Regional Economic Development (WIRED) Initiative: Design Report, August 30, 2007.

²¹ Due to delays associated with start-up, in April 2007 ETA extended the period of performance for most of the Generation I WIRED grants through January 31, 2010.

Figure 1.3
Analytical Framework for the Evaluation

	Master Themes		
Research Tools	Collaboration; Building Alliances & Regional Identity	Specific Organizational & Programmatic Strategies	Progress Toward Sustainable Regional Transformation
Qualitative: Analysis of Documents & Plans	Activities planned and documented that build collaboration and foster awareness of the region as a cohesive economic unit; media reports about region	Specific steps planned and completed that foster innovation, new business development, improved workforce education and training	Reports of new businesses started, new products and markets developed; outside funding attracted to the region; lasting changes in education and training institutions
Qualitative: Site Visits & Interviews	Respondent reports about communication and decision-making, how collaboration affects their work lives; observation of the region; social network analysis showing new relationships among leaders in business, government, and intermediary organizations	Observation of meetings and visits to new or changed programs and organizations; discussions about defining and implementing various WIRED strategies	Extent of respondents' genuine optimism about the region's future; reports that outmigration of talent is slowing; reports that jobs are being created and institutions are changing
Quantitative: Surveys	Awareness among "non- leader" respondents of the region and its goals; reports of collaborative efforts and effects	Strategies used to communicate and strengthen collaboration and partnerships	Optimism about economy and converging beliefs that region is "on the move;" how collaboration has affected partners' activities, practices, and policies
Quantitative: Analysis of Existing Data		Workforce Investment Act Standardized Record Data (WIASRD) enrollments; data from education systems on achievements, numbers of graduations, numbers of faculty (with emphasis on STEM)	Quarterly census inventories of employment and wages from the Bureau of Labor Statistics; patents applied for, research and development activities; entrepreneurial activity and small business innovation research (SBIR) ²³ funding; labor force participation and average wage by industry; payroll

Source: BPA/UCSD Evaluation Team

 $^{^{23}}$ The Small Business Innovation Research (SBIR) Program is a highly competitive award system that provides small businesses with opportunities to propose innovative ideas that meet the specific R & D needs of the federal government.





Contents of this Report

This second Interim Report describes the implementation of regional approaches to innovation and collaboration across geographical and political boundaries from Summer 2007 through the time of the evaluation's second site visits in October, November, and December 2008. The report is based on information gathered during grantee conferences; from detailed review of quarterly progress reports from each of the 13 regions; from site visits to all regions; and through analyses of extant data on each region relevant to their goals and plans. The subsequent chapters of this report describe the observations made through these activities:

- Chapter 2 describes changes in the context and governance of the regions over the past year;
- Chapter 3 presents information on the evolution of partner roles, collaborative strategies, and social networking in each of the 13 regions;
- Chapter 4 summarizes changes in activities and the funding of the regions;
- Chapter 5 discusses the progress that the regions have reported in four areas training and employment, innovation transformation, regional identity and integration, and sustainability;
- Chapter 6 provides a brief update on the evaluation's quantitative measures of progress from baseline to date for the regions;
- Chapter 7 describes the interaction of the regional initiatives with local workforce systems and the extent to which WIRED has influenced local workforce development operations; and

9

• Chapter 8 presents the evaluation team's conclusions about the regions to date, and the evaluation's next steps.

Appendices to this report include:

- A. Site Visit Highlights from each of the Generation I Regions;
- B. Generation I Regional Development Goals;
- C. Social Network Analysis Data; and
- D. Supplementary Quantitative Data on Generation I Regions.





Chapter 2: Changes in WIRED Context and Governance

Any initiative focused on creating change and transformation is inevitably affected by a variety of factors beyond its immediate control, including those at the national – or macro – level, as well as unexpected developments at the local level. Such contextual factors can create challenges to achieving the initiative's original goals and objectives. This chapter first describes how changes outside the Generation I regions have influenced the initiatives and may affect their outcomes. It then discusses changes in the governance structures both at the national level and within the regions that also may influence the implementation and success of the initiatives.

The Evolving Context for Generation I Regions

The 13 regions have faced substantial developments at the macro level that have created crises – and in some cases, opportunities – that few could have anticipated. A number of developments at the regional and sub-regional levels also are shaping the priorities, programs, and outcomes of the Generation I regions evaluated in this report.

The most significant national trends affecting the regions include: 1) the broad and deep economic downturn affecting the entire nation; and 2) the shifts in priorities at ETA and in the guidance the agency provided. Key contextual developments at the regional level include opportunities presented by strong economies in localized areas in a few regions, and the emergence of new resources and partnerships in some regions. Each of these macro and micro contextual factors are discussed below.

Changes in the National Context of the Initiative

National Downturn in the Economy

When the Initiative was launched in February 2006, the global financial, business, and employment landscape was very different than at the time of the second evaluation site visits in Fall 2008. In February 2006, housing stock was rising in value, the stock market and the financial community were reporting robust gains, and the excitement about new technology companies – particularly in the life sciences – was widespread and supported by a multiplicity of state and regional initiatives focused on building new clusters of high value-added industries and jobs.

Less than three years later, the world had changed. Housing values were at their lowest point in decades and the building industry had been severely affected. The fragility of financial markets was exposed, and banks, lenders, and investors were fearful of the future. Traditional manufacturing was declining at precipitous rates, with tens of thousands of industrial workers laid off, not only across the United States, but also throughout Europe and most industrialized countries. Finally, the enthusiasm for the potential of new technology to create new wealth and new jobs waned as investment and venture capital support of R&D declined.





The 13 regions represented in this report developed their plans and aspirations at a moment in time when everything seemed possible. They are winding down their projects with an adjusted set of expectations. The failing economy affected these regions in several ways, including declining tax revenues and the subsequent decrease in availability of public dollars, and shrinking revenues in the private sector.

In several regions, declining tax revenues worried many site visit respondents, particularly as they considered funding sustainability plans with dwindling public dollars. For example, the California state budget deficit of nearly \$16 billion served as an impediment to sustaining regional economic efforts in the California Corridor. The initiative placed on hold projects like SEARCH, which trains engineers to be teachers, pending decisions about how many math and science teacher positions would be cut from school district budgets, and how many teachers scheduled for retirement instead decided to continue teaching due to the decrease in their retirement funds.

The state of Maine enacted a 10% cut in the budgets of all agencies, the second such cut since 2006. Two of the four NSAI Pillar managers – as well as the initiative's project manager – are senior staff from state agencies and covered by the grant. While the latest funding cut does not affect them directly, staff reductions in their agencies will make their jobs more stressful.

Shrinking revenues in the private sector hit the Wall Street West region particularly hard. Wall Street West spent considerable energies during the first grant year soliciting funding to build a fiber optic cable network that would enable synchronous back-up operations for financial companies in New York City. That initial

The Montana Agro-Energy Program was conceived as a way to diversify agricultural production when wheat prices were relatively low. The program encouraged farmers to grow potentially more lucrative oilseeds for bio-diesel production. The spike in oil prices during Summer 2008 sparked a demand for corn to produce ethanol. The decline in the amount of corn on the market increased the demand for wheat, a complementary good. The increased demand for wheat increased wheat prices, which served as a disincentive to growing oilseeds.

goal galvanized significant energy for collaboration, especially among economic development agencies. With the realization that this objective would not be achieved in the near future, the initiative expanded its target industries to include information technology, STEM (science, technology, engineering and math) occupations, and business continuity services. These industry clusters facilitated investment of the WIRED funds in the development of a 21st Century workforce development system that supports all sectors. Wall Street West also increased its focus on workforce training and talent pipeline development. The region faced a significant challenge in rebuilding enthusiasm among the region's original partners for a vision centered primarily on strengthening the existing and emerging workforce.

Private sector cutbacks affected the California Corridor as well. A partnership between an aerospace manufacturer and a university depends on the manufacturer's ability to stay in business. As of late Fall 2008, the aerospace company had no new launches under contract. Executive boards had become increasingly reluctant to let their organizations expand and innovate. Seeking to limit the exposure of their organizations, these stakeholders were asking,





"Why are you doing that? We can't afford it," or saying, "It's out of our area," increasing the challenge in moving forward towards transformation goals.

Finally, the decrease in wealth in the private sector affected the nonprofit sector. Reductions in donations and support created significant challenges for nonprofit partners.

Ironically, the economic downturn reinforced the strength of commitment to regional collaboration among North Central Indiana's (NCI's) economic development partners, which had been competing for years. In response to major white-collar layoffs in the western part of the region, Greater Lafayette Commerce (GLC) held a job fair that received the blessing of its counterpart in the eastern area of the region, the Kokomo/Howard County Development Corporation (KHCDC), because the latter recognized the fair's importance in retaining an important talent base in the region. Likewise, with the full support of GLC, KHCDC submitted a proposal to use NCI funds to seed an incubator concept, called "skunk works," aimed at retaining laid off engineers in the region.

Many respondents expressed hope that the new tools and partnerships developed by the regions would help them through the economic downturn. A respondent in the California Corridor said that, given the downturn in the economy, such innovations "would be harder to launch now, but it's a good thing we launched when we did, because I think it's going to help the region." A Kansas City respondent saw the principles of regional collaboration and transformative innovation as being key to the country's economic recovery. With the economic climate that prevailed in 2008-2009, he thought that policy makers might be finally willing to learn what it means to be competitive on a regional and even national level, and to embrace the concept that a diversified, strong workforce is the foundation of a strong regional economy.

Changing Leadership and Guidance from ETA

A second major contextual factor affecting all of the Generation I regions is the experimental character of the Initiative as originally conceived by ETA. As a result, the regions have been highly dependent on direction from ETA about objectives, implementation, and outcomes. The Initiative was the inspiration of the former Assistant Secretary, whose vision and enthusiasm allowed the Initiative to take hold across many regions in the United States, as well as within a large federal bureaucracy. While the Workforce Investment Act broadened the clientele of the workforce system to include employers as well as job seekers and incumbent workers, the Initiative pushed the envelope further with its emphasis on aligning the objectives of entrepreneurial, innovative business development with innovative forms of workforce development. In response to the challenges and opportunities that the original Solicitation for Grant Applications (SGA) presented, many of the Generation I regions chose economic development organizations to manage their initiatives and developed strategies in line with the Initiative's far-reaching goals. Over time, however, ETA's emphasis on the experimental nature of the Initiative has gradually given way to an emphasis on the need for accountability. This change has highlighted federal requirements and restrictions that have proven to be problematic, as regions have worked to implement their initial goals.

²⁴ In the high tech world, a "skunk works" is a small group of scientist and engineers tasked with "thinking outside of the box" to develop advanced technology. The term comes from the code name of the top secret aircraft development program at Lockheed Martin started during the Second World War.





During the second round of evaluation site visits, interview respondents described a number of ways in which changes within the Department have affected the clarity with which regions can move forward. ETA staff enacted some of these changes to ensure that the grantees were operating within the requirements of its funding source, H-1B visa fees authorized under Section 414(c) of the American Competitiveness and Workforce Improvement Act of 1998 (P.L. 105-277, Title IV). As the evaluation's first Interim Report described, few of the Generation I management organizations were familiar with the legislation, and thus they were caught off guard when concerns about allowable costs arose during the fiscal monitoring reviews. This situation was exacerbated by turnover in federal grant officers and monitoring staff, with regions sometimes receiving approval for particular approaches that was later rescinded when other, more experienced federal project officers interpreted the rules differently.

Some of the specific concerns raised by regional interview respondents included the following:

- While senior ETA managers had indicated early on that the grantees would be using the OMB Common Measures, the agency did not spell out more detailed performance metrics until a year and a half after the regions began implementing their grants. In a number of cases, the regions' original goals, objectives, and outcomes did not align closely with the ETA's performance metrics.
- The definition of allowable expenses continued to be refined through the second year of the grants. Many regions had objectives and activities that senior ETA leadership had initially endorsed, but that were subsequently identified as non-allowable expenses. During 2007, ETA clarified that activities such as marketing and promotion activities, purchasing equipment, and seeding start-up companies were not allowable expenses. In additional guidance, ETA further clarified that regions must request a waiver to serve youth under age 16, thus creating complications for regions that had been working extensively in K-12 education. In some regions, this involved many months of negotiation, and impacted multiple projects and the use of as much as \$1 million in grant funds. In addition, late in 2008, ETA staff conducted fiscal monitoring reviews of all Generation I grantees and subsequently questioned numerous cost items, including some that had been previously approved by ETA staff. As a result, regions were left to seek alternative funds, discontinue some activities related to entrepreneurship and technical assistance, withdraw support from youth programs, or, in some instances, de-fund activities that did not meet the proper competitive bid requirements for services.
- ETA guidance to the regions has gradually refocused on workforce development and the outcomes of training investments, and away from business and economic development metrics. As a result, a number of regions have reallocated funds and pursued different kinds of activities with different performance measures than they originally intended.
- Initiative funds flow through the state workforce investment agencies, and these agencies are usually responsible for ensuring that their sub-grantees (the initiative management organizations) are complying with both state and federal policies. Because ETA staff provided technical assistance directly to the initiative managers, however, initially the role of the state workforce agencies in monitoring compliance with federal policy was unclear. As ETA shifted its emphasis to accountability, federal staff clarified that the state agencies indeed were responsible for their usual monitoring tasks. Still, by the time this occurred,





- their direct contact with ETA staff led many sub-grantees to believe that the agency had approved their activities. Later, federal fiscal monitors informed several regions that large portions of their grants had gone to activities that were considered unallowable costs.
- During the Initiative Academy in the Fall of 2008, senior ETA managers emphasized the
 need for workforce services for customers with barriers to employment such as a work
 history in low-income jobs, lack of education, and a history of incarceration. Many regions
 interpreted this message as asking them to either steer their activities away from the model of
 regional job creation and new skill development originally articulated in the Solicitation for
 Grant Applications, or add services for these populations to their initiatives.

In sum, all regions were affected to at least some extent by: 1) delays in the development of performance criteria and expenditure approvals; and 2) changing messages about program emphasis and allowable costs from ETA. Several Generation I regions have had to shift their initiative's emphasis due to stop work orders and disallowed costs. This list of the concerns raised by respondents in the Generation I regions will be important to keep in mind because these factors will ultimately influence the ability of the regions to achieve the objectives that were built into their proposals. The shifting realities at the U.S. Department of Labor represent important contextual factors in understanding how these regions performed.

Changes in Context at the Regional Level

The context within many of the regions has also changed since the evaluation's initial visits. Despite the lagging national economy, a few regions – or subregions within the regions – have experienced growth. In addition, new resources and opportunities have emerged in a few regions, and these may help the initiatives move toward their goals despite a poor economy. This section explores both of these factors.

Localized Strong Economies

Not all regions have felt the adverse impacts of the current economic downturn. In the Mid-Michigan region, Midland – home to chemicals industry giants SC Johnson and Dow, as well as Hemlock Semiconductor, one of the largest raw silicon producers in the world – enjoys the reputation of being the "hottest hiring market in the state." In response, the City of Midland and Michigan Works (the workforce system) have partnered with Michigan State University and local economic development organizations to meet the labor demand. One interviewee pointed out that the region anticipated growth in the alternative energy sector (e.g., solar cells) and that they are also investing in wind energy, saying, "We saw it coming." While the region is still largely dependent on the automotive industry, many now feel that the future of manufacturing is new technology, diversifying and repurposing, and alternative energy.

Because of the high demand for trained workers from the petroleum industry in southeast Montana, a key partner of that state's regional collaboration now has difficulty recruiting and retaining employees. Oil companies can pay workers with the same skills significantly more than he can. This company has trained a number of workers using Initiative funds, only to lose the workers to more lucrative opportunities in the oil fields.





Buoyed by higher oil and gas prices at the beginning of the grant and increased investment in alternative energy, the energy sector workforce training programs in Metro Denver have enjoyed remarkable success, with active employer support.

New Resources and Opportunities

Despite the failing economy that many regions are experiencing, new resources and opportunities have emerged in two of the Generation I regions including West Michigan and the Piedmont Triad. In February 2008, the West Michigan Strategic Alliance (WMSA), which manages the West Michigan region, announced the launch of the West Michigan Green Jobs Regional Skills Alliance (RSA) to prepare workers for jobs in the burgeoning alternative energy industry. The RSA will focus on jobs needed to manufacture the components for renewable energy equipment – such as wind turbines – and on jobs for workers at alternative energy power plants.

Federal Express recently broke ground on a new sorting facility in the Piedmont Triad. This venture is expected to bring in significant job growth in logistics and distributions, industries that the region targeted in its grant proposal.

To adapt to the significant and often sudden shifts in national and regional context, and to make the most of new opportunities, leaders and managers within the regions have at times faced multiple simultaneous challenges. The next section describes the ways governance in the regions has evolved and responded to changing circumstances.

Governance

Staff and other leaders who came on board for the implementation of the initiative set the tone for each region's implementation plan. They shaped the initiative's goals and priorities, and they determine the action steps taken to implement the initiative. Their effectiveness in bringing together the regions' key partners and coalescing them around collaboration and innovation plays an important role in influencing the regions' future economic well being. While many of the aspects of governance are intangible and resist analysis, the evaluation nonetheless explores the regions' management and leadership, as site visitors observed them during the second round of visits to the regions in Fall 2008.

The first Interim Evaluation Report noted that the Generation I regions have extremely diverse organizational structures. ²⁵ The 13 management organizations remained essentially unchanged since 2007 when the evaluation conducted its first round of visits, as did the sub-units of those organizations responsible for day-to-day implementation of programs.

On the other hand, leadership and project implementation roles have evolved in several regions, in line with two recurring themes. First, many regions consolidated or streamlined their grantfunded structures and teams. Second, a number of regions made changes in their governance

²⁵ For an overview of management structures in Year One, see Almandsmith, Sherry, et.al. *Early Implementation of Generation I of the Workforce Innovation in Regional Economic Development (WIRED) Initiative: 2007 Interim Evaluation Report*, ETA Occasional Paper 2008-03, June 2008, pp. 30-33.



₹UCSanDiego Extension always something new

structures that supported sustainability to extend and institutionalize collaborative activities and structures after the ETA grant ends. This section first describes changes in staffing of the management teams and the governance structures of the regions. It then explores the importance of leadership roles in implementing regions' initiatives and the different patterns of leadership that have emerged within the 13 regions.

Changes in Regional Implementation Staff and Their Roles

While only one region changed its overall manager, a few regions added, subtracted, or changed staff functions over the past year. These changes most often occurred in response to changing needs. In some regions, staff roles were added or changed once initial planning and implementation were complete; in others regions, staff functions were no longer needed and positions were eliminated as the initiative looked forward to its final months of implementation.

Finger Lakes was the one Generation I region that changed its management. The original managing director was also the executive director of RochesterWorks!, the organizational home of the initiative. In April 2008, he resigned from both roles and became managing director of business development with an economic development organization, which was also a key partner. The initiative's Governing Board formed a nominating committee to lead the search for a new managing director and eventually decided by consensus that the best candidate for the job was its chair. The new managing director is also executive director of the Greater Finger Lakes Regional Planning Council. His two roles are complementary in their nine-county geographic scope, their focus on the long-term economic well being of the region, and their overlapping stakeholders. Because the new Finger Lakes managing director had been centrally involved as a partner and member of the Governing Board since the initiative's early months, he required only minimal time to settle into his new role. Some respondents in the region believed that this change in leadership might improve prospects for long-term continuity of the region's mission and work toward regional economic transformation.

Staffing changes at Wall Street West have resulted in management of the initiative being folded into the structure of the initiative's management organization. As noted in the evaluation's first Interim Report, the Wall Street West program manager departed at the end of 2007. Instead of refilling the position, the Chief Executive Officer (CEO) of Ben Franklin NEPA, the initiative's management organization, retained oversight of the initiative and remains involved in big-picture issues. For day-to-day activities, the organization hired a project coordinator who reports directly to the Chief Financial Officer (CFO). Her responsibilities include developing sub-grant RFPs, sub-grant monitoring, and reporting to the state. In April 2008, Wall Street West hired a director of communications to promote the initiative's sub-grants within the community. Since training and talent development have become the region's primary focus, the Director of Workforce Initiatives often now serves as the initiative's spokesperson.

Kansas City's Executive Director has moved from management of day-to-day activities to focus on promoting the initiative's vision. Between 2007 and 2008, the region added industry liaisons for its three key industry sectors – health care, biotechnology and advanced manufacturing. At the time of the second evaluation visit, Kansas City planned to hire an administrative assistant to work with the liaisons, and a public relations officer to facilitate outreach and education.





In 2008, West Michigan streamlined its management team by eliminating the position of assistant project manager. Most of the initiative's projects were well underway and no longer needed his support, and the region's funding was scheduled to end in early 2009. Oversight of activities was then to be shifted to the Michigan Department of Energy, Labor, and Economic Growth, the region's fiscal agent.

Such changes in staff roles reflect the evolution of the regions' needs as they moved past the initial implementation stage of transforming regional economies, or as they approached the end of the grant period. Staffing changes also indicate that the management organization used lessons learned from the initial months of operations to adjust roles or increase the efficiency of staff operations.

Changes in Steering Committees and Other Governance Groups

In addition to the key roles that initiative staff play, the major governance responsibilities and leadership roles are assumed by the regions' Steering Committees, implementation teams, and other groups responsible for guiding and overseeing the initiative. This section describes the changes in these governance groups since the evaluation's 2007 site visits.

In nearly all regions, the guidance and decision-making roles of the Steering Committee²⁶ changed between the 2007 and 2008 site visits. For the most part, however, Steering Committees have remained actively involved in shaping and remaining informed about the initiative's activities in their regions. As illustrated in Figure 2.1 below, some of these committees have become less "hands on" in their involvement, while at least one (Finger Lakes) has become more active as the months have passed.

Respondents in several regions noted that as their initiatives moved from the design and start-up phase of implementation to one of steady-state operations, their Steering Committees became less active and assumed more of a "big picture" policy oversight role than they had when their activities first began. Examples of such regions included:

- The West Michigan Policy Council met less frequently during the second year of the grant than they had during the first year. At the time of the second evaluation visit, the majority of activities defined by the original grant proposal were already well underway or even completed, since the initiative was in its final months of funding.
- Montana's initiative also required less oversight by late 2008 than it did during its start-up phase, and its Executive Steering Committee meeting schedule changed from regular to occasional, in response to specific needs.
- Similarly, WAEM's Goal Committees were discontinued since the initiative did not need such a complicated structure once the projects relevant to each goal were underway.

²⁶ This report uses the term "Steering Committee" to designate the group responsible for governing, overseeing, or setting overall guidance for the region's initiative. Individual regions use a variety of names for this group: Governing Board, Executive Committee, Action Committee, Leadership Team, Governance Council, Leadership Council, Governing Commission, and Policy Council.





Figure 2.1 Changes in Governance Structures Since Summer 2007

Region	Change in Steering Committee Roles	Other Changes in Governance Roles
WAEM	No changes	Goal Committees discontinued, as functions completed
California Corridor	No changes	No changes
Metro Denver	High Skills Leadership Council changed to new Leadership Council; more workforce system representation and more talent development focus	Supply-Side and Demand-Side Panels work completed, panels discontinued. Four Solutions Teams created: Connection to Industry (job seekers); Metro Denver 2010 (sustainability); Growing Our Own (talent development); Optimizing Today's Workforce (incumbent workers). Work completed in Summer 2008
Northwest Florida	No changes	No changes
NCI	Policy Advisory Team less active	Core Team shifted from implementation to advisory focus
Kansas City	Steering Committee evolved into a more effective guidance role than previously; increased workforce system focus	Executive Committee's organizational membership constant; some individual changes
North Star Alliance	Executive Committee was expanded	Steering Committee discontinued, allowing partners to focus on work of the Pillars
Mid- Michigan	MMIT Board expanded to include additional stakeholders to promote sustainability	Prima Civitas Board continues to play a leadership role
West Michigan	Policy Council less active than previously	No changes
Montana	No changes	No changes
Finger Lakes	Governing Board expanded to include more representatives from rural counties; members increasingly "own" initiative and take leadership roles	Implementation and Operations Teams discontinued; Nominating Committee and RFP Committee were time-limited; Steering Committee (subset of Governing Board) functions as Executive Committee
Piedmont Triad	No changes	Logistics and Health Care Roundtables are increasingly a source of leadership for the region
Wall Street West	No changes	Human Capital Committee is more active than previously; Industry and Community Engagement Committee and Legislative Affairs Committee are inactive; Sustainability Committee now active; Business Advisory Group newly established

Source: BPA/UCSD Evaluation Team interviews, site visits, and document review





• The composition of NCI's Policy Advisory and Core Teams remained relatively consistent over time; however, the level of engagement of these groups shifted beginning in late 2008. At the start of its initiative, the Policy Advisory Team set the vision and agenda for the region. The Core Team was then responsible for implementing that agenda. While these groups met monthly during the initiative's first year, their schedule evolved to include less routine meetings, as the program staff increasingly managed the day-to-day operation of the initiative. The Core Team changed from being a hands-on implementation team to being more of an advisory body. Nonetheless, one respondent reported that the Core Team partnerships continued to be important and the team would live on, if only on an ad hoc basis.

All but a few regions added and subtracted subcommittees or implementation teams as the functional needs of their initiatives shifted. Some added advisory or similar groups to expand input from stakeholders, while others created subcommittees to explore strategies for sustainability. Like the changes in staff roles described above, these structural changes were made to address the initiatives' evolving needs and often reflected lessons learned over time.

In contrast to the regions described above, Finger Lakes saw an increase in its Governing Board's leadership in shaping their initiative's future. A bottom-up strategic planning process resulted in the creation of two ad-hoc committees: a Nominating Committee to search for a new Managing Director; and a Request for Proposals (RFP) Committee to shape the region's final major initiative-funded investments. The RFP Committee was pleased with the quality of the two successful proposals submitted by separate coalitions consisting of 1) the region's WIBs and 2) the region's community colleges. The committee took the additional step of instructing the new sub-grantee groups to work together to assure that their respective projects were well aligned with, and complementary to, each other. This process resulted in increased "ownership" of the initiative among many of the Governing Board members, especially some of those representing rural counties who had previously expressed concern that a small Rochester-based group was driving the initiative.

The Wall Street West 17-member Executive Committee has changed minimally, but the roles of standing committees evolved considerably after the initiative's first year. The Human Capital Committee became extremely active because it was responsible for developing the sub-grant process for grant funds. A new Sustainability Committee was formed in Fall 2008 to focus on perpetuating the vision of transforming regional economies through collaboration beyond the grant period. A Business Advisory Group held its first meeting at the time of the second evaluation visit and was recruiting new members to address the region's need for more representation from senior executives in the targeted industries. The Legislative Affairs and Industry and Community Engagement committees became inactive, largely as a result of the initiative's evolution from a focus on economic development and business attraction to an emphasis on workforce and talent development.

In another example of streamlining, the North Star Alliance dissolved one of its two oversight committees. The region originally had an Executive Committee, made up of the heads of the participating state agencies and industry representatives, and a 30-person Steering Committee, composed of most of the partners involved in the initiative. Over time, the partners realized that





the number of meetings (including Executive, Steering, and Pillar committee meetings) was becoming burdensome and interfered with their ability to participate in the day-to-day work needed to achieve each Pillar's goals. In response, they added a few key players to the Executive Committee²⁷ and disbanded the Steering Committee.

The committee changes in Metro Denver stand out because of the breadth of restructuring. The initiative shifted from a focus on well-researched design, with heavy industry involvement, to more action-oriented planning that required expertise from many different sources. The change was included in Metro Denver's original plan for the region and is summarized in Figure 2.2, below.

Management in Generation I Regions

Overall, the Generation I regions faced most of their challenges related to management structure early in their implementation process. Several initiatives were slow to bring all staff on board and begin actual program operations. During the second grant year, management changes demonstrated a more nimble approach and indicated responsiveness to the emerging needs of their initiatives.

The evaluation's first Interim Report provided an assessment of the extent to which regions had either flat management structures, with few "layers" in the chain of command, or more hierarchical organizations. The report characterized the extent to which regions' decision-making appears to be consensus-based or staff-driven (top-down). These judgments were sometimes difficult, as several regions – especially the California Corridor – have multiple organizations in key roles, each with its own management style. The evaluation team updated these assessments based on information gathered during the 2008 site visits, and the results are shown in Figure 2.3, below.

Compared to similar assessments made a year earlier, management and decision-making structures appear to have evolved in at least one region to become flatter and more consensus-based. Furthermore, several regions have moved from the "staff-driven" end of the spectrum to a middle ground, or more democratic form, of decision-making. Such changes may be a natural result of moving from initial implementation to full-scale operation of the initiative.

Additionally, changes in several regions may also reflect an increase in trust as key partners become more accustomed to working with one another. The apparent changes in operating style may also be a natural outgrowth of the consolidation and streamlining that has taken place as the Generation I regions have moved beyond initial implementation to the mature operational phase.

Another important aspect of program governance is the role of key leaders at the regional level. Leadership takes many forms and includes multiple functions, and only rarely is a single individual able to perform all those functions. Leadership in the Generation I regions is discussed below.

²⁷ NSAI's Executive Committee now consists of representatives from: the Governor's office; the three state agencies of education, labor, and economic and community development; the four Pillars; three industry associations representing the private sector; regional workforce boards; and the university and the community college system.





Figure 2.2 Metro Denver Initiative's Transition to "Phase 2"

The structure of Metro Denver's initiative in its first year was designed to facilitate research and analysis. Eight panels composed of representatives from industry, education, and the workforce system examined talent shortages, identified employer needs, and crafted recommendations. The 16 co-chairs from the panels formed the High Skills Leadership Council, which set the policy direction and vision for the initiative.

The Council held a retreat in Fall 2007 to prioritize the panel recommendations for the next phase of the Metro Denver initiative. The initiative formed four cross-disciplinary Solutions Teams to take action on research, recommendations by the Leadership Council, and findings from industry, education, and workforce panels. The teams were comprised of representatives from the initiative's four key industries (aerospace, bioscience, energy, and information technology/ software), K-12 and higher education, and the workforce system. Each team was supported by a convener and led by team chairs. The four Solution Teams and their goals were:

- Connection to Industry Increase information and access to internships, externships, apprenticeships, and
 work-based experiences for students, teachers, incumbent workers, and other job seekers. Recommended
 activities included: 1) creating a single point of contact for internships and industry/education; 2) developing
 career awareness/STEM capacity-building in high schools; and 3) fostering topical/industry cluster
 networking ideas.
- Metro Denver 2010 Develop a sustainability plan to continue Metro Denver's work after grant ends. This
 team recommended funding a consultant to identify examples of talent development models to be used postgrant.
- Growing Our Own Focus on talent development, emphasizing STEM skills. Recommendations for
 funding were: 1) convene Colorado implementers of career academies to share learning, develop an asset
 map, form a career academy association, develop a best practices compendium and an action plan; and 2)
 host a facilitated, strategic communications planning conference for top stakeholders across the region and
 STEM sectors to develop common messages.
- Optimizing Today's Workforce Focus on programs to train and place incumbent workers in the target industries. This team recommended pilot testing a Career Booster Academy to provide short-term training programs designed to meet industry's needs for skilled workers and to help workers acquire high-demand skills quickly. This training would result in a portable certificate and be based on the needs of multiple industries. It would support occupational clusters (e.g., technicians with electrical, mechanical, clean room skills) and include paid work experience as part of training. Finally, training schedules would be flexible to accommodate the needs of underrepresented populations, such as working adults who need evening or weekend classes.

Overall, the Solutions Teams were responsible for building partnerships, identifying best practices or developing new approaches, securing resources (including grant funding leveraged with funding from other sources), identifying measures of success, and implementing programs or projects through its partners. All activities proposed or undertaken by Solutions Teams were designed to enhance talent development in the nine-county region well beyond the end of the grant on January 31, 2010, and to transform the current workforce development system into a regional talent development system.





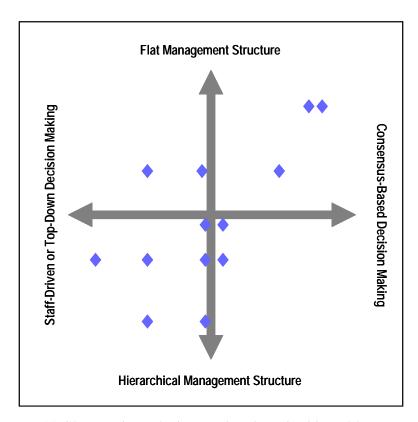


Figure 2.3
Generation I Regions' Structures for Management and Decision-Making

Source: BPA/UCSD Extension Evaluation Team interviews, site visits, and document review

Leadership in Generation I Regions

Any initiative that aims to mobilize business, industry, government agencies, education, and social service institutions, as well as individual citizens, will place great emphasis on finding appropriate economic, political, and civic leadership. The question arises as to whether the presence of a "sparkplug," i.e., one particularly talented and influential leader, is a major factor facilitating a strategy's implementation and contributing to the initiative's success. While answering such a question with certainty may not be possible, the evaluation team explored the components of effective leadership and the ways they are manifested in the Generation I regions.

The types of leadership that appeared to make a difference to the Generation I regions are related to the challenges these regions faced, and to the following three, specific leadership mandates:

- 1) Championing the initiative's vision and mission;
- 2) Catalyzing the mobilization of collaborative efforts across a number of siloed geographic, economic, and institutional boundaries; and
- 3) **Integrating** plans and programs in a way that leverage complementary assets and distribute needed resources in an equitable and efficient manner.

22





While these three components of leadership are interrelated, they are nonetheless distinguishable. In very few cases does a single individual or institution provide leadership across all three types of activities. In many instances, a single leader is more effective in one of these roles than in others. In most Generation I regions, the evaluators noted that different individuals played different leadership roles. To understand the role of leadership in furthering the goals of the Generation I regions, dissecting where individual regions fall across these leadership dimensions is useful.

In both Montana and the North Star Alliance, the governor plays a leadership role, primarily in catalyzing collaboration across agencies. In both places, championing the mission of regional collaboration is the role of the regional leads/project directors. Beyond these staff, both regions use partners from other state agencies, colleges and universities, and industry to lead the initiative's integrative functions.

- In Maine (North Star Alliance), the various Pillars managers provide leadership for the integrating function, based on the budget priorities that the Executive Committee established. The Pillar managers come from both state agencies and the community: Department of Labor staff lead the Workforce Development Pillar; university staff chair the R&D Pillar; and staff from the Department of Economic and Community Development manage the Market Development and Capitalization/ Investment Pillars.
- In Montana, leadership for the purpose of integrating plans and programs is also diffuse. The project director assumes some of that leadership, but much of it also falls to the managers of the sub-grants within the Departments of Commerce, Agriculture, and Education.

NCI is another example of dispersed leadership, where three distinct aspects of leadership manifest in the following three people (see in Figure 2.4, below):

- The Principal Investigator is the keeper of NCI's expertise and plays the role of **champion**. He was the primary author of the initiative and continues to provide the vision and leadership for NCI. The policy consultant reports to him, and he also directs the activities of the project administrator.
- The Economic Policy Consultant is an expert in regional economic development and was the chief author of the region's implementation plan. He is the "intellectual and philosophical compass" of NCI; at a crucial point in the development of the initiative, he served as a catalyst. In his current role, he continues to provide expertise to NCI but as a consultant rather than a leader. His perspective is relatively abstract; he leads the civic leadership initiatives but otherwise is not involved in implementation.
- The Project Administrator is the initiative's **integrator.** His role is strictly management. His background in business and aviation as a commercial pilot appears well suited for implementing plans, following instructions, and troubleshooting problems.





Provides overall vision and expertise

Project Administrator

Provides overall "philosophical" vision

Project Administrator

Provides management of day-to-day activities

Figure 2.4 North Central Indiana's Three Leaders

Source: BPA/UCSD Extension Evaluation Team interviews, site visits, and document review

The principal champion in the Piedmont Triad is the CEO of Piedmont Triad Partnership, although members of the initiative's team (such as the project manager and the chair of the Action Committee) also share that role. Implementation leadership comes from the project manager, with help from a strong internal team. Catalyst roles are even more widespread and are played by at least three key staff (including directors of some of the Industry Cluster Roundtables) and one or two members of the Action Committee.

The Finger Lakes initiative's momentum was sustained since the beginning by an extremely capable implementer, who unfailingly "got things done" and served as an integrator of the efforts and energies of the region's partners. Some stakeholders in the region felt the absence of a "spark plug" leader, a visionary and catalyst. They report that with the selection of a new managing director for the initiative, a champion is emerging.

Only two regions – WAEM and Kansas City – are led by individuals who are regarded as the kind of influential leader who serves as both a catalyst, mobilizing collaborative efforts, and as a champion of the collaborative vision. In other regions – such as Mid-Michigan and Northwest Florida – members of the Steering Committee and other partners have taken on a combination of those roles. California Corridor's leadership is split among several individuals, including: the consultant who pulled together the original, collaborative proposal-writing effort and continues to play important facilitating roles throughout implementation; and a strong project lead who combines integrative leadership with a champion role. The Executive Director of the California Space Authority is a powerful advocate for the aerospace industry as a whole but has not played a strong leadership role in the initiative.





While effective leadership of innovative initiatives such as those funded by this grant requires a combination of roles –champion, catalyst, and integrator – evidence from two rounds of site visits suggests that no magic formula exists for finding or "growing" an individual who has the talent to perform all of these roles. Leadership spread among several individuals is far more common; indeed, such an arrangement may prove most effective in assuring that the initiative will have a lasting impact. Dispersed leadership may multiply the opportunities for sustainability, as any one of the individuals who has "taken on" leadership may prove effective in catalyzing post-grant collaboration and economic progress.

Conclusion

The individuals leading and managing these collaborative partnerships in the Generation I regions – however diverse their stories and styles – have much in common. They share a commitment to building opportunity across their regions, pulling together the disparate cities, towns, and rural areas within the regions, and convincing other leaders of the advantages of working together. They have encountered the difficulties brought on by a faltering economy, such as reluctance to take risks or invest within the private sector, tightening purse strings and budget deficits within the public sector. They have adapted to changes within ETA leadership and the associated shifts in messages about what they should be accomplishing. Finally, they have assembled a large number of talented individuals and key organizations within their regions – all with time constraints and conflicting priorities – to create common missions, action plans, and the partnerships needed to bring those plans to fruition.

The next chapter explores the roles of key partners, some of whom have taken on leadership responsibility in designing, overseeing, and carrying out the work of transforming their region. The chapter then examines the ways partners collaborate. Finally, the chapter discusses the social networks that foster communications among partners, initiative staff, and governance groups.



Chapter 3: Partnerships and Collaboration

One of the most remarkable achievements of the initiatives is the development of a large number of new, productive, and often innovative partnerships. The move toward partnership was already underway at the time of the evaluation's first site visits; it continued and often had accelerated by the time of the second site visits. In fact, respondents in many regions cited new and unexpected partnerships as among the chief benefits of participating in a regional approach to economic development. This chapter describes the changes in partner roles and collaborative strategies reported by interview respondents during the evaluation visits. The discussion on collaboration continues with the results of a second round of social network analysis.

Partnerships and Partner Roles

Grantees do not share a common definition of "partner." The term is used in many different ways, even within a single region. Partners may be one of at least four types:

- **Decision Maker** partners include the individuals (or the organizations they represent) who serve on the management team, the Steering Committee, and other key committees that are part of the governance structure.
- Inner Circle partners tend to be members of the group that developed the grant proposal, along with individuals or organizations that contributed ideas or letters of support at the proposal stage. Others in this category may be members of advisory groups and leadership groups that contribute in important ways to the content of initiative-funded work, but are not responsible for making decisions.
- **Program** partners are usually the organizations that operate and manage projects funded by the initiative.
- **Stakeholder** partners may include a host of organizations regarded by initiative leaders as "key players" in the region. These may include local government entities, economic development organizations, industry associations, foundations, workforce investment boards, organized labor, universities, colleges, school districts, R&D centers, training providers, angel networks, Chambers of Commerce, and a variety of civic and not-for-profit organizations.

A region typically has partners that meet several of these descriptions, and a single organization or individual often plays more than one of the above roles.

A group of partners may be relatively homogeneous and have a well-defined set of goals. An example would be one of Piedmont Triad's Industry Cluster Roundtables, in which most members are inner circle partners, i.e., owners or managers of businesses in a particular industry, such as health care. In other instances, a relatively heterogeneous group of partners may share a particular interest, such as assuring that the region's young adults are well prepared to enter the workforce; its members may include educators, workforce system professionals, employers,





labor organizations, non-profits focused on youth development, parents, and social service agencies. Such a group may serve in an advisory capacity, or it may be central to the region's decision-making (such as Metro Denver's Solution Teams).

Site visit respondents consistently identified partnerships developed as a result of participation in the initiative as being among a region's most valued assets and most sustainable outcomes. As a consequence, staff members spend an enormous amount of time communicating with partners, keeping them informed of the initiative's activities and accomplishments, seeking their input, inviting them to upcoming events, and soliciting their support. Some regions – such as Wall Street West and Kansas City – have dedicated a full-time staff position to the role of communicating with partners as well as with the general public, who are considered potential partners.

The discussions that follow define "partners" as the individuals and organizations that have some involvement in a funded activity. This chapter discusses the ways partnership arrangements have changed between the first and second site visits, the evolution of partnerships involving previously competing organizations, partnerships involving the workforce system, and the roles that different types of partners play. The second part of the chapter describes strategies regions have used for building and nurturing collaboration.

Expanding Partnerships Beyond the Initial Inner Circle

Partnerships tended to change most dramatically in regions where a previously well-defined group of organizations collaborated in creating the grant proposal or were chosen at the proposal stage to operate pre-designated projects. Some regions found that to accomplish their goals, they needed to make efforts to expand their partnerships; others needed to reallocate unspent grant funds, and this process allowed them to bring new partners on board.

All of the Generation I regions had to identify and enroll partners on a very short timeline in order to meet the RFP deadline. This impacted the degree to which the proposal writers were able to engage their partners in the process of creating a vision for the grant. For example, the California Corridor was one of the regions in which decision-making partners and program partners were defined during the proposal stage. The California Space Authority (CSA, the initiative's organizational home) gathered all partners early in the project to lay out the 25 projects identified in the California Corridor proposal, and so, most of the partners did not participate in the process of identifying the initiative's mission, goals, and philosophy. Several respondents said that while they understood CSA's intent to get funded projects underway quickly, the quick launch also meant that CSA lost the benefit of time to develop a common vision among its more than 70 partners.

The early iteration of the California Corridor project included few of key stakeholders from the workforce system and partners from education/academia at the decision-making level. Over the past two years, CSA has addressed this by convening several advisory panels and steering committees to focus on the needs of specific funded projects. The Supply Chain Industry Advisory Group, the STEMCAP Steering Committee, the Project Pipeline Advisory Group, and the UC Santa Clara Advisory Panel brought in numerous company representatives – along with





high-level government and education stakeholders – to broaden stakeholder engagement in specific projects and, by extension, the initiative. Respondents frequently cited service on these and other committees as a valuable path to forming new and lasting partnerships that have benefited their own organizations.

Much of the Finger Lakes funding was also allocated to partners included in the grant proposal before the grant began. Many respondents in that region noted that important changes in partnerships occurred between 2007 and 2008. In 2007, the decision-making group appeared to be dominated by Rochester organizations, and representatives of the region's rural counties saw themselves as outsiders. As the Governing Board took on the challenges of finding a new Managing Director and designing an RFP process to spend recaptured funds, members from rural counties took on active roles in the process.

The need to spend unallocated and recaptured funds presented an opportunity to expand partnerships in Kansas City as well. The region initially defined its partner organizations as those included in its proposal and allocated the entire grant at the time of application. During the first round of evaluation visits, several respondents noted that this arrangement limited expansion of the network to new partners. During 2008, Kansas City undertook an RFA process to reallocate \$800,000 in funds recaptured from unspent grant allocations to WIBs. Several of the region's Executive Committee members described this process as an opportunity for the initiative to look at new partners and projects and to leverage their other investments. While only current sub-grantees were invited to apply, these groups were encouraged to include other partners in their proposals. The RFA process provided an opportunity "to look at new partnerships with evidence of synergistic connectivity."

WAEM has adopted a very broad definition of partnership that encompasses the more than 500 individuals and organizations that are involved in implementing the region's activities. In addition to its contracted partners, WAEM partners in the region include municipal governments, business and industry, local economic development organizations, university/college coalitions, regional commissions, the Mississippi Band of Choctaw Indians, business associations, and regional foundations. Many new partners were added in the past year, including the University of Alabama's (UA) Center for Community-Based Learning, the UA Rural Entrepreneurship through Action Learning (REAL) program, members of the WAEM region's Mayors' Network, and the Area Health Education Center (co-located at The Montgomery Institute). These new partners have played a variety of different roles in the partnership. For example, the business faculty and students at the UA Center for Community-Based Learning have assisted in creating and maintaining the MyBiz website, while the members of the Mayors' Network – in addition to championing economic development in their own towns – have joined forces with each other and with WAEM to promote a regional vision and take action on regional issues.

Forging Partnerships among Traditionally Competing Organizations

Working together has allowed organizations that previously regarded themselves as competitors to recognize the extent to which they share goals. Many discovered that they are stronger working together than in isolation or in competition with each other. The most notable examples of these new-found symbiotic partnerships are those between economic development





organizations and post-secondary education institutions, many of which have learned to deemphasize rivalries and jurisdictional boundaries in order to meet common challenges.

Economic Development Organizations

Local economic development organizations, whether private or public, traditionally have seen each other as competitors rather than collaborators. Contrary to this tradition, NCI has been able to foster a working relationship between the local economic development organizations (LEDO) for the 14 counties in the region. Together they have developed a Regional Marketing Packet that includes regional workforce and industry profiles and a catalogue of available manufacturing sites. Through an NCI-sponsored advisory committee, the LEDOs jointly provide input into planning how to strengthen the regional economy. They are now sharing advice and assistance and pursuing joint endeavors. Several local projects – such as a wind farm in Howard County, a business park in Miami County, and a job fair in Tippecanoe County – have benefited from this regional communication and cooperation. During the grant's second year, turnover among leaders of these partner organizations meant that NCI staff had to spend time building new relationships. NCI leaders continue to seek ways to build deeper relationships with the LEDOs, including networking with individual board members of each of the organizations.

The initiative in Northwest Florida served to strengthen and support existing partnerships between LEDOs that had been forged by Florida's Great Northwest, Northwest Florida's home organization, prior to the grant.

Midland, Bay, and Saginaw counties in Mid-Michigan had always been considered a region, but the local counties' economic development organizations traditionally did not work together before the initiative. Economic development leaders from all three counties are now collaborating on a new photovoltaic study for the initiative. Furthermore, the Center for Entrepreneurship and Commercialization at SVSU, created by the grant, has worked to develop lateral connections across economic development organizations, with a focus on fostering "high expectation entrepreneurship."

Economic development organizations in the Wall Street West region began collaborating in 2007 to attract New York-based financial firms to invest in the region. The collapse of the financial sector in 2008 made that goal no longer feasible in the short run, however, and economic developers retreated from what had appeared to be promising partnerships.

Post-Secondary Education Institutions

Post-secondary education institutions, particularly community colleges, compete with each other for enrollments and funding because they are based in different jurisdictions and often funded by separate and distinct tax districts. Many regions report that community college systems, while appearing to cooperate, have not yet formed genuine partnerships. Other regions report significant progress in this direction. For example:

• Several regions (e.g., Piedmont Triad, Finger Lakes, and Metro Denver) made the formation of new partnerships a requirement or priority for funding in their competitive RFP processes. The result has been the creation of partnerships to operate specific projects. Some of these





partners have institutionalized the projects into their ongoing structures, 1 so that outside funding will not be required to keep them in operation. Such partnerships and projects are likely to persist beyond the end of the grant.

In the NCI region, Purdue University, Ivy Tech, and Indiana University, Kokomo, had a history of competition before the grant. By collaborating on initiative projects, IU-Kokomo and Ivy Tech are recognizing the strong similarities between their two institutions; and while Purdue excels in

A respondent in the North Central Indiana region noted that, before the initiative, the last meeting between the chancellors of Ivy Tech, Kokomo and Indiana University, Kokomo was nine years ago.

They now meet monthly.

- technology transfer, entrepreneurship resources, and policy innovation, the smaller institutions are recognizing their suitability to provide vocational training. Wall Street West's Higher Education Consortium helps the region's education institutions
- better understand industry needs and design appropriate training and educational curricula to meet those needs. The consortium's industry members benefit from becoming knowledgeable about the region's educational resources and thus can assist in shaping resources to be more responsive to changing talent needs.
- The community colleges in the Finger Lakes region partnered to respond to a 2008 RFP, thereby creating the Regional Center for Workforce Excellence. This Center was still being formed at the time of the 2008 site visit, but appeared promising as a mechanism for breaking down pre-existing barriers among the colleges. On the other hand, the anticipated collaboration could be limited to staff operating workforce-focused programs within the colleges and may not pervade the colleges more broadly. Respondents believe that a real test of the ongoing impact of these activities will be to observe the progress of the community colleges, to see if they sustain the Center over the long-term and partner to create related initiatives.
- From the beginning of the grant-funded collaboratives, partnerships among community colleges have been central to the structure of WAEM's initiative. WAEM developed partnerships among community colleges that had previously not collaborated with each other even within their respective states, much less across the state line. The community and junior college systems in the two states are very different: Mississippi colleges are operated locally and are very different from each other. Alabama colleges are centralized under a state Board of Education and have common reporting requirements that tend to standardize the way the colleges are organized. Thanks to the introduction of regional collaboration activities, WAEM was able to "marry the top-down system in Alabama with the bottom-up system in Mississippi." At the same time, however, numerous changes in personnel at the top levels of the community colleges in Alabama have complicated these partnerships. Two of the four Alabama colleges "are now being led by their third president since the grant began." Upcoming retirements at the other two colleges and at several of the Mississippi colleges will mean still more change in the near future. Bringing new partners up to speed is time-consuming and may be especially difficult when the changes in personnel are the result of upheavals in the partner organizations. Nonetheless, WAEM staff members are pleased to

¹ Examples include several of the health care programs undertaken by community colleges in the Piedmont Triad.





report that "some of the newer presidents have really become engaged in workforce development and community development" and are now becoming more active in collaborating with each other and in the initiative's efforts to transform the region's economy.

- Three of the Piedmont Triad's community colleges partnered to develop the first Associate Pharmacy Technician program in North Carolina. Pharmacists employed by a local health care facility are interested in contributing to the program by teaching special lessons in advanced pharmacology. These professionals have offered to coordinate educational on-the-job training sessions within the Wake Forest University Baptist Medical Center's pharmacy.
- In Montana too, the initiative has fostered closer collaboration between the region's community colleges, and between the colleges and state universities. Colleges that have been in competition for many years now cooperate on events, share expertise and coordinate course offerings. The new emphasis on collaboration has also led to joint projects between the community and tribal colleges and programs with MSU, Billings. Some of these connections are subcontractual; others take the form of more frequent informal contact and information sharing.
- One of the most interesting collaborations between post-secondary institutions is an alignment of the programs in heavy truck diesel maintenance offered at both Montana State University Northern (MSU-Northern) and Mid-South Community College (MSCC) in West Memphis, Arkansas, in the Arkansas Delta, which received grant funds as a Generation II region. MSU-Northern is providing mentoring and training to MSCC faculty so that Mid-South students will have a more seamless path to a four-year education in this field.

Solidifying Partnerships Among Workforce Investment Boards

Local Workforce Investment Boards (WIBs) in several regions have formed new partnerships, formal and informal, by undertaking collaborative efforts in response to funding opportunities.

A **Montana** Job Service manager jokingly referred to collaboration as *The Miracle of the Pies:* "As the pies shrink, everybody brings their pies to the table. When they do, they find there's an extra pie that no one noticed before."

In at least a few regions, WIBs have strengthened their pre-existing partnerships through joint efforts to operate initiative-funded projects. This section presents several examples of collaboration between workforce system partners.

Wall Street West added an additional county to the region so that its boundaries would be contiguous with those of its local workforce system area partners. The three WIBs in the Finger Lakes have joined together to create a Regional Skills Alliance and are jointly creating a regional website for job seekers.

The Piedmont Triad used grant funds to increase the scope of region-wide WIB activities that now include periodic "virtual job fairs" in which employers host an online "booth" to advertise vacancies and take online applications from job seekers. Respondents from WIBs in this region differ in their opinions about the extent to which this initiative has strengthened partnerships that pre-date the initiative. Their regional partnership, TriadWorks!, has state support and will definitely continue since the WIB directors believe that collaborating across jurisdictional lines strengthens their ability to respond to employers' needs.





Some California Corridor WIBs have learned that by forming partnerships, they can eliminate duplicative efforts or undertake projects that would have been impractical for a single WIB to undertake alone. Collaboration is not region-wide, but rather driven by the advantages that particular WIBs see in working together on specific initiatives. Several funded projects required WIBs to undertake extensive data collection efforts. While these usually took longer than anticipated, respondents noted that the collection process itself proved to be a valuable tool for nurturing partnerships and collaboration. The great majority of the respondents saw data collection, both in terms of results and process, as one of the most valuable outcomes of these activities. One respondent remarked that the initiative's goals "brought about collaboration," and "led to asking 'why everybody is doing the same thing, why there is so much duplication of effort." Another respondent reported that key relationships had been formed at the staff level, where things really get done, and not just among leaders. This respondent noted, "Having interlocking boards doesn't get you there."

In West Michigan, WIBs have worked together – and with school districts, community colleges, and businesses – to promote and implement WorkKeys, a skills assessment program that is the basis for the National Career Readiness Certificate (NCRC). One-Stop Career Centers have been very active in promoting WorkKeys and some companies are now including a related credential level in their job postings. The success of their efforts has been noted statewide; legislation passed in August 2008 requires Michigan high school students to take all three WorkKeys tests annually, giving them the opportunity to earn the NCRC credential. Another region-wide effort – the Health Care Regional Skills Alliance – brings together five of the region's six WIBs, along with health care employers and other advocates to develop and retain the health care workforce in the region.

Building region-wide workforce partnerships is not always easy. In Kansas City, the goal of regional collaboration motivated the Regional Workforce Council to move toward integrated services across the region's WIBs, with mixed results. The focus has been on creating a common brand – defined as a consistent customer experience – throughout the region, the logic being that if employers and job seekers are consistently satisfied with their experience regardless of which jurisdiction they contact, WIBs region-wide will benefit. WIB respondents saw some value in being able to share information with their peers from other WIBs through the Regional Workforce Council, but enthusiasm for the partnership has waned due to differences in opinion and lack of ongoing communications. Furthermore, as one respondent noted, belonging to multiple overlapping regional bodies is difficult in the absence of a single universally defined and accepted region. Another respondent, however, believed that the Regional Workforce Council facilitated information sharing and fostered many informal connections, thereby facilitating collaboration on future grant proposals by having a pool of established partners from which to draw.

In most of the regions mentioned here, a new approach to regionalism has at the very least enabled WIBs to undertake collaborative efforts. For some, these efforts will continue beyond the end of the grant. WIB respondents believe that their experience collaborating will ultimately strengthen their partnerships.





Building Boundary-Spanning Partnerships

The evaluation's first Interim Report focused on partners' *structural* roles in creating and implementing their regions' initiatives – roles such as grantee, fiscal agent, project management organization, and Steering Committee. In the 2008 site visits, the evaluation team found that partnerships and roles that have emerged as important are those related to *accomplishing the regions' missions*. Many of those efforts have been described in the sections above. What is in common among many of these efforts is that they required partners to reach beyond their accustomed "turf" and become knowledgeable about – and respectful of – the capabilities, priorities, funding constraints, and even vocabularies of organizations with which they previously had little in common or shared only a few interests. For many partners, this was a substantial journey. This section offers examples of partnerships that cross professional boundaries.

In several regions, partnerships between economic development organizations and the workforce investment system were virtually unknown prior to the initiative. Through participation in grantfunded committees and activities, economic development organizations have been exposed to workforce system partners and, as a result, have become even more aware that companies looking for possible new sites pay close attention to the skills and readiness of the workforce in the local areas they are considering. These economic development organizations have sometimes introduced "prospect" companies to WIB personnel, who can explain to the companies how WIBs can assist with recruiting and screening workers.

Montana's Business Expansion and Retention (BEAR) teams are a way to link up new, expanding, or troubled businesses with a coordinated set of public and private resources at the local level. BEAR is a partnership of the Governor's Office of Economic Development, Department of Commerce, Department of Labor, and the Montana Economic Developers Association. Locally, the program is supported by staff time and resources donated by the organizations that make up the network. Although BEAR predates the grant, it is very much in the collaborative spirit and its teams include organizations that now are initiative partners. The teams play an especially important role in remote rural areas. The BEAR team's membership will vary, but generally includes banks, business associations like the Chamber of Commerce, local government and economic development corporations, Small Business Development Centers, community colleges or universities, and Job Service representatives, including grantfunded consultants. Any organization in a BEAR network can be the point of first contact and referral. Once a business has expressed interest in BEAR services, two team members will do a detailed business needs assessment. The team then meets and makes recommendations for appropriate services and resources, including employee training. Team members follow up with business-level case management, helping to make specific connections to public, private and non-profit assistance (including other BEAR teams) as needed. Initiative-funded staff members are active players in several existing BEAR teams and have been instrumental in getting new teams started in several parts of the region. Some respondents see BEAR as a key to sustaining transformative-type operations in the longer term.

Another type of cross-functional collaboration begun in many areas around the nation prior to the grant is business-education partnerships. Such partnerships often focus on the connection





between what young people are learning while enrolled in K-12 schools and the talent of workers who will be available to the business community several years in the future. Several such partnerships have become active, often joining as advisors to specific funded projects. One very active business-education partnership is the Finger Lakes Advanced Manufacturing Enterprise (FAME). While FAME was in place before funding, the grant's funding has facilitated its growth, and its leader – the president of a manufacturing company – is a staunch partner and advocate for the initiative.

Finger Lakes is home to another type of partnership involving educators and private business, specifically in the area of technology commercialization. Over the past year, the university-based R&D centers, entrepreneurship education centers, operators of incubators, and entrepreneurship experts have come together to create the Technology Commercialization (TC) Project. TC Project partners include High Tech Rochester, University of Rochester, The Technology Farm (Cornell Agriculture & Food Technology Park), Infotonics, and Rochester Institute of Technology. The project trains researchers, students, faculty, and entrepreneurs in ways to increase skills and realize success with technology commercialization. The TC project also provides an integrated approach among partners to improve business development, and demonstrates how to integrate research and new product design with the benchmarks associated with key industries. The project helps start-up companies develop business plans and raise capital. Participants in this grant-supported project believe it may well be key to the future revitalization of the region as a nationally known center for innovation and business success.

WAEM's partner colleges have become an important tool for attracting large manufacturers to the region, a role typically filled by economic development entities. From a business standpoint, WAEM's credentialed training removes many concerns about labor force quality; thus, companies are more likely to accept the "local first hires" policies that states typically attach to their industry attraction subsidies. The more progressive colleges have helped employers organize their initial screening and hiring programs and have provided other forms of relocation assistance as well. The community colleges have also become more proactive partners in Rapid Response activities, working closely with the WIBs and local government in providing assistance to workers affected by large-scale lay-offs.

West Michigan's Health Care Regional Skills Alliance (RSA) brings together five of the region's six WIBs, along with health care employers, local universities, and other advocates to develop and retain the health care workforce in the region. The RSA formed a Health Care Workforce Employer's Council, which held its first meeting in July 2007. The Health Care RSA identified strategies to meet employer needs in six key occupations and initiated a career ladder program between Montcalm Community College and Ferris State University that allows nursing students to move seamlessly from an Associate degree to a Bachelor of Science degree in nursing.

The California Corridor partnership that formed between the workforce system, economic development agencies, and higher education to develop 21st Century Job Profiles gave all of the partners a more complete understanding of the skills the future workforce needs. The profiles revealed that technicians in the high tech industries soon will be required to have higher education and skill levels; they will need a combination of conceptual and applied knowledge and skills and will need to bring business skills to the workplace. Employee candidates need the





ability to obtain high security clearances, which means that prospective job seekers in high tech (at least aerospace and defense) will need to focus greater attention on lifestyle choices and decisions.

These sorts of boundary spanning partnerships represent an important platform for the future. Groups that have had the experience of working together on these activities are well positioned to work together beyond the grant period. Most are having positive experiences based on new forms of respect and trust as well as evidence that sharing resources can enhance and even enlarge their success. In sum, during the evaluation's second visits to the regions, the evaluators found that partnerships were evolving in a number of ways. They were 1) expanding beyond the original inner circle; 2) being forged among traditional competitors; 3) solidifying among workforce investment boards and 4) building boundary-spanning activities.

Strategies for Fostering Collaboration

Of the many possible strategies for building collaboration that emerged from this experience, regions report the most successful approaches included: thinking creatively about common goals; allowing relationships to develop over time; building on personal relationships; and making expectations clear while expecting the best of collaborators. This section discusses each of these strategies.

Think Creatively About Common Goals

Many of the regions began their initiatives successfully by beginning slowly. After a group of "insiders" determined initial and specific goals and strategies, they invited other stakeholders to participate in early planning and then made noticeable changes between the initial proposals and the implementation plans. Regions that skipped this early "visioning" or extensive planning process, (e.g., the California Corridor) reported that their initiatives might have benefited from the teambuilding that naturally occurs during the slower process.

The most notable example of a group that spent considerable time thinking about the goals of the regional economy, and how they might be achieved, is the Piedmont Triad Leadership Institute (PTLI), an initiative-funded activity that encompassed both an intensive leadership course and development of projects to improve the region's economy. The Leadership Council, a group of more senior regional leaders, identified "up and coming" leaders within the region and invited them to participate in PTLI. The first step was a four-day session delivered by the Center for Creative Leadership that consisted of individual development and team-building exercises based on action learning in a no-boundary, no leader setting. PTLI teams then explored the needs of the region and, over eight months, identified projects aimed at reinvigorating the region's furniture and global logistics industries. The resulting PTLI report went to the Leadership Council and became the basis for subsequent planning within the region's broader initiative. Key respondents believe that the cohesiveness of this group bodes well for continuation of region-wide collaboration after the end of the grant.





Allow Relationships to Develop Over Time

The gradual process of increasing collaboration that took place in the California Corridor is an example of the value of recurring face-to-face contact over a period of time. The California Corridor's most ambitious STEM project was developing the STEM Collaborative Action Plan or STEMCAP, in which 19 collaboratives across the state brought together schools with

community colleges, four-year universities, businesses, and community-based organizations. STEMCAP faced major challenges within the education system, including an entrenched spirit of competition among education stakeholders, inexperience in collaboration, a perception that education/academia and industry have different agendas, the misperception that the chief role of industry should be to provide funding rather than input, the shift in DOL directives regarding use of funds for K-12 activities, and finally, political issues around the potential systemic changes needed. CSA addressed these challenges through a carefully facilitated, extensive collaborative planning process. The result is a STEMCAP that is now receiving positive attention at the highest state policy levels.

Almost all of the California Corridor forum participants cited new partnerships as among the greatest benefits of participating in the Initiative, pointing out that the partnerships helped organizations meet their own goals in unexpected In the California Corridor's STEMCAP project, traditional stovepipe fiefdoms – education and industry – became partners through recurring face-to-face meetings, called forums. One CSA respondent described the interactions: "Education was saying, 'just give us more money, more teachers, more resources,' and industry was saying, 'No, no, and no.""

To overcome this mutual resistance, CSA staff carefully planned where the meetings would be held, which potential partners would be invited, and who would speak. The goal of the forums was to create trust. "Creating forums to get to know each other, that was the biggest value of the communication piece." The lesson learned, according to one respondent, was: "Trust. Can't force it; can't rush it; can't regulate it; can't mandate it."

ways. Most respondents added that the forums were helpful in forming partnerships, primarily because the grant guidelines did not *mandate* collaboration, as do some initiatives. Instead, the initiative brought together "lots of people in lots of venues." The result, according to California grant participants, was that "the unknown became the known" and partnerships began to form naturally.

Build on Personal Relationships

In the Metro Denver region, relationships formed over the first two years of the grant were important in facilitating success in the initiative's transfer to a major new structure (see Figure 2.2, above). During the initiative's first year, Metro Denver convened eight panels representing the region's key industry sectors – aerospace, bioscience, energy, information technology, and K-12 school districts, higher education, the workforce system, and local small businesses. The panels: 1) conducted an employer needs assessment; 2) identified existing education and training programs that prepare students for high tech jobs; and 3) identified and addressed gaps in these programs. The High Skills Leadership Council consisted of the 16 co-chairs of the eight panels. Once the work of the panels was done, that structure gave way to a new set of Solutions Teams. Some members remained from the previous leadership group, and new faces were added. The





collaboration that started in the High Skills Leadership Council continues with the current Leadership Council. Making such a major shift in Metro Denver's structure would have been difficult without the relationships built over the two previous years of work.

Several respondents in Montana noted that the policy of encouraging staff to attend conferences has been invaluable for promoting collaboration. Said one, "Conferences are such an obvious tool that we sometimes forget how important they are for improving relations with other folks face-to-face. It's not that people don't try to communicate by other means, but phone and email only gets you so far. With our distances, face-to-face opportunities are essential. That's where you build personal bonds that pay off in real action. That's where you share the excitement that keeps you going."

Making Expectations Clear – Expecting the Best of Collaborators

At least two of the regions laid out their expectations of how partners should behave. The North Star Alliance crafted a set of ground rules called the Partnership Principles² that clearly expressed the commitment of the partners to the Alliance and to each other. These include:

- 1. Maine's North Star Alliance Initiative is industry-driven, industry-led.
- 2. Maine's North Star Alliance Initiative's partners all have an equal voice.
- 3. Maine's North Star Alliance Initiative's partners will be treated respectfully and professionally and be shown due courtesy.
- 4. Maine's North Star Alliance Initiative's partners will make every attempt to resolve conflicts where they occur and accordingly be responsible for their actions.
- 5. Maine's North Star Alliance Initiative's partners will be encouraged to actively participate in all Initiative activities by bringing forth pertinent and creative thought while demonstrating a "universal" and open approach to new information, and by a demonstration of positive support of the Initiative, both within the partnership structure and to the State of Maine as a whole.

These guidelines – along with the region's commitment to decision-making by consensus, clearly stated roles and responsibilities for key players in the initiative, and a conflict of interest policy – helped shape a highly collaborative initiative.

Similarly, NCI leaders created a collaborative framework for the region – a Regional Compact – designed to serve as ground rules for working together in the region (see Figure 3.1, below). The Compact is one component of NCI's strategy of developing civic habits of collaboration through leadership training offered in various communities across the region.

As described earlier in this chapter, the collaboration of local economic development organizations across county lines was a significant "win" for NCI, particularly as the LEDOs now pursue joint projects and exchange information. In addition to collaboration across

37





² Maine's North Star Alliance. "A Partnership to Transform the Workforce and Economy of Coastal Maine," (WIRED implementation plan), September 2006.

Figure 3.1 The NCI Regional Compact

We are dedicated to leaving our region more prosperous than we found it. To do that, we need to encourage innovation and entrepreneurship by following these simple rules of civic behavior:

- 1. **Tell the truth and build trust and mutual respect**. We are committed to behavior that builds trust and mutual respect.
- 2. **Do not steal, poach, or plagiarize**. We will not behave in ways that a reasonable person would consider deceitful or dishonest.
- 3. Commit to learning and sharing information. No one can predict our future. Our economy depends on our collective ability to learn and act quickly. We learn more quickly when we share information and insights.
- 4. Focus on new ideas, our assets, and our opportunities. We will build our future prosperity on the foundation of our current assets. We will appreciate and invest in new ideas to develop and connect our assets.
- 5. **Listen, link, and leverage.** We will find the new opportunities in our region by listening to each other and then "linking and leveraging" our assets in new and different ways.
- 6. Collaborate and cross boundaries. We are dedicated to building an inclusive region with people who value diverse viewpoints. We are committed to crossing organizational, ethnic, social, and political boundaries.
- 7. **Disclose conflicts of interest**. We agree to disclose any personal or professional conflict of interest that may compromise our objectivity and damage the trust others have in us. We share a responsibility to avoid even the appearance of impropriety.
- **8. Resolve controversies quickly.** Controversies are inevitable in our communities and region. We are committed to working through these controversies quickly by focusing on our underlying interests, not personalities. We are dedicated to finding solutions that promote mutual benefits.
- **9. Concentrate on outcomes, not activities.** We will focus on our outcomes. While we will take responsibility for completing our activities and tasks, our outcomes will teach us "what works".
- 10. Teach our next generation. Our children are messages we send to a world we will not see. We have a responsibility to pass on simple rules of civility to the next generation. Civility is strategic. It fosters trust, and trust accelerates the speed with which we can learn and act in a complex world.

geographic and political boundaries, collaboration among the region's higher education institutions has increased significantly over the past year.

While the evaluation team does not have enough data to draw conclusions about cause and effect, one can hypothesize that committing to these "simple rules of civic behavior" set a high standard within both regions and facilitated the growth of a collaborative culture.

The next section of this report describes the evaluation's analysis of the social interactions that make up collaboration within the regions.





Social Network Analysis

The evaluation's 2007 Interim Report provided a first look at social network data to explore ways of analyzing and characterizing the interactions among each region's partners. This first effort to adapt social network analysis methods to the Initiative laid the groundwork for a more comprehensive social network analysis that the research team will conduct through partner surveys and will present in the evaluation's Final Report.

Social network analysis is based on the assumption that relationships among interacting units are important. The unit of analysis is not the individual, but the network that consists of a collection of individuals and the linkages among them. The evaluation explores the hypothesis that regions that build strong collaborative networks with many connections will be more competitive in the new economy than those with weak networks. By mapping these networks, the evaluation team can better understand the connections that make up the networks, and their overall strength. A network map shows the nodes (e.g., people or organizations) and links (e.g., relationships or flows) in the network. Social network analysis can help answer many key questions in the collaboration-building process, such as — Are the right connections in place? Are any key connections missing? Who is playing leadership roles in the community? Are there facilitators who are linked with a very large number of people, and/or isolated people who are only linked with one or two others? How do patterns of association among entities evolve over time?³

Two approaches can be used when conducting a social network analysis –a personal (egocentric) network assessment or a group (bounded) network assessment.⁴ Under the personal network approach, a person is asked to identify other people who are important for a given function or task; the nature of these relationships are then explored through a series of additional questions. The drawback of such an approach is that creating accurate network maps is difficult because no defined, closed network exists. The bounded network approach first defines a network of interest. For example, for the purposes of the Initiative, the network would be anyone who is involved in each region's initiative. Each person in the network would then be surveyed about their relationship with every other member in that group.

In order to produce accurate network maps, the group (bounded) network approach is the most desirable, yet it is the most challenging approach for the evaluation. Typically, a group (bounded) network assessment is appropriate for analyzing a closed system in which the total universe of respondents is easily identified (e.g., a single organization). The regions, however, do not have closed systems; furthermore, the universe of players is constantly changing over time. To capture the most complete network possible for each region, the evaluation team planned to administer a survey in 2008 that would include a much more comprehensive set of respondents than is interviewed during any single site visit. The survey would have mitigated the challenges and potential limitations to the kinds of analysis that can be done with the data.

⁴ Cross, Robert L. and Parker, Andrew. *The Hidden Power of Social Networks*, Boston, MA: Harvard Business Press, 2004.



₹UCSanDiego Extension always something new

³ Krebs, Valdis and June Holley. "Building Smart Communities through Network Weaving," http://www.orgnet.com/BuildingNetworks.pdf

Unfortunately, the research team just received OMB approval for the evaluation's survey of initiative partners and collaborators in late July 2009, after this report was drafted.

Thus, the second round of social network data collected during the 2008 site visits shares the same limitations as the first round of data – the evaluation team collected social network data only from those individuals interviewed by the evaluation team during site visits. The team calculated the proportion of individuals from each region who were included in the social network analysis data sets from both 2007 and 2008. In all of the regions, this percentage was under 50%, which serves as a reminder that the evaluation team captured different portions of the actual network in each year. For this reason, this report does not compare the social network responses or maps from 2007 and 2008. The extent to which the any differences are due to changes over time versus differences in respondents from one year to the next is impossible to assess. Instead, like the 2007 maps, the 2008 social network maps should be interpreted as "snapshots" of a portion of the network that the evaluation was able to capture for each region.

Once the evaluation team collects survey data from a much larger number of individuals involved in the regions, a more complete picture of the social networks in the regions will be apparent. Nevertheless, given that these networks are constantly changing over time, these interim glimpses of the regional networks provide a valuable tool for beginning to look at change over time.

Collection of Social Network Data from the Regions

The evaluation team asked each site visit respondent to identify "five individuals with whom you have significant contact in the context of the Initiative, outside of your own organization," and to provide the contact's organization, job title, and frequency of contact. (The term "significant" was defined to include meaningful and important contact, but not necessarily the most frequent contact.) Thus, the social network dataset consisted of the name, type of organization, and level within organization for a respondent and his or her five important contacts, plus the frequency of contact that a respondent reported for each contact.

Several important limitations in this data collection are worth reiterating here:

- Only site visit respondents were asked to name contacts. The contacts named by the
 respondents were not in turn asked to name their contacts, so the data does not include
 reciprocal information;
- Respondents were asked to name only five individuals, which for some was too few to accurately reflect their significant interactions; and
- Although the quality of the data collection was improved for this Interim Report, unfortunately members of the evaluation team were inconsistent in how hard they pressed respondents for complete data.

In collecting social network data throughout the remainder of the evaluation, the study team's emphasis will be on identifying and securing responses from as many relevant individuals as possible in order to provide a more accurate picture of the regions' collaborative networks.





Overview of the Social Network Data

This section summarizes the overall results for the key variables of interest (organization type, level within organization, and frequency of contact) across all of the regions for the 2008 data collection. Because of concerns about the quality of the data collected, however, the evaluation team did not calculate measures of statistical significance for these comparisons.

Appendix C includes a set of tables that break out results by region. Social network maps for the regions can be found beginning on page 52 at the end of this chapter. The maps provide a visual display of the networks and linkages among collaborators interviewed during the evaluation's second round of site visits.

Organizational Type

In 2008, the evaluation team refined the organization categories to decrease the number of organizations categorized as "Other." In 2008, the code formerly called "business and industry" was separated into two distinct codes – "business and industry association" and "for profit business." A code for business incubators was added and economic development agencies were classified into three distinct codes – local, state, and regional economic development agencies. The decrease in the number of individuals from "Other" organizations in the data from 2007 to 2008 suggests that the refined typology of organizations improved the quality of the data collected. The organization codes from 2007 and 2008 are presented in Appendix C, Table C.1.

Figure 3.2 shows the organizational affiliation of **all** the individuals in the regional networks reported during the evaluation's second round of site visits, including both the respondents and the individuals with whom they have contact. The largest numbers of network members are from business and industry (29%), followed closely by those from education (26%) and then workforce investment (14%) and economic development (14%).

While the figures in this chapter summarize data across regions, tables in Appendix C show the variations between regions in the values for each data item. Table C.2 shows that the proportion of collaborators of each organizational type varied significantly across regions:

- Business and Industry from 18% to 42%;
- Education from 11% to 33%:
- Workforce Development from 5% to 19%;
- Economic Development from 7% to 21%;
- Research from 0% to 12%;
- Government from 1% to 16%; and
- Other⁵ from 1% to 20%.

⁵ The "Other" category includes media, foundations, and faith- or community-based nonprofit organizations.





9% 14% Econ. Dev.
Workforce
Industry
Research
Education
Other Govt.
Other

Figure 3.2
Types of Organizations in Regional Networks

Source: BPA/UCSD Evaluation Team site visit interviews

As Figure 3.3 illustrates, the frequency distribution by type of organizations for respondents as a group differs somewhat from that of all individuals in the 2008 sample. For example, while only 19% of the respondents themselves are from business or industry (Figure 3.3), 28% of all individuals in the regional networks are from industry organizations (Figure 3.2). This difference is consistent with regions' reported efforts to reach out and engage increasing numbers of business and industry partners in their initiatives. Table C.3 in Appendix C breaks out the respondents' type of organization by region.

Level Within Organization

In order to learn more about how partnerships work, the evaluation team collected data on a simplified indicator of organizational roles categorized into three levels:

- **Tier 1** Leaders, Strategists, Visionaries, Decision-Makers (i.e., initiative leadership, company presidents, CEOs, upper level managers, executive directors, members of boards of directors, benefactors and foundations, civic leaders, and chancellors of academic institutions);
- **Tier 2** Implementers, Managers, Administrators (i.e., individuals with the authority to make things happen, such as initiative program managers, partner organization managers, directors of operations, mid-level management, division heads, and college deans); and
- **Tier 3** Day-to-Day Staff (i.e., individuals who conduct the day-to-day business of the organization, including front-line employees, clerical and supporting staff, professors, project service providers, instructors, and trainers).

42





27%

27%

23%

Econ. Dev.

Workforce

Industry

Research

Education

Other Govt.

Other

Figure 3.3
Types of Organizations of Site Visit Respondents

Source: BPA/UCSD Evaluation Team site visit interviews

Although the sample size is not sufficient to perform an extensive analysis by organizational level, a brief look at this dimension is worthy of note and should be more interesting once the evaluation team collects data from the larger survey sample. As Figure 3.4 shows, the individuals in the social networks (both respondents and contacts) in 2008 split fairly evenly into those at the most senior levels in their organizations and those at mid-level positions. Only 13% of the individuals in the social networks held positions at the day-to-day level in their organizations. The results suggest that the networks continued to secure the significant participation of leaders, strategists and decision-makers.

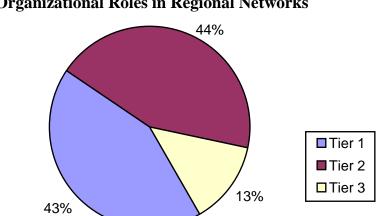


Figure 3.4
Organizational Roles in Regional Networks

Source: BPA/UCSD Evaluation Team site visit interviews





The site visit respondents were slightly more likely to be mid-level staff than were their contacts (Figure 3.5), reflecting the importance of the mid-level participants in implementing the local initiatives. While 45% of the whole 2008 sample worked at the mid-level of their organizations, 49% of respondents played such roles in their organizations.

Organizational Roles in Site Visit Respondents ■Tier 1 ■ Tier 2 13% ☐Tier 3 38%

Figure 3.5

Source: BPA/UCSD Evaluation Team site visit interviews

The distribution across organizational roles of individuals in the regional networks varies significantly by region. Table C.4 in Appendix C presents the distribution for each region. Proportions vary within the following ranges:

- **Tier 1** from 25% to 55%;
- **Tier 2** from 32% to 56%; and
- **Tier 3** from 3% to 29%.

Appendix C also includes data on the organizational roles of the site visit respondents alone (see Table C.5).

Who Interacts with Whom?

Figure 3.6 explores the extent to which respondents at particular levels within their organizations communicate with contacts at the same organizational level. Respondents at the top-level in their organizations were most likely to communicate with partners at the same level (58% reported contact with a collaborator in a top-level position). The results differ for individuals at the mid-level and day-to-day level in their organizations, however. Among respondents at the mid-level in their organizations, less than half (47%) of the contacts they reported were at the same level while almost as many of their contacts (43%) were at the top level in their organizations. For respondents serving at a day-to-day level in their organizations, the largest group of contacts was at the mid-level within their organizations (46%), followed by 32% at the

44





top-level. These findings reinforce the importance of the role of leaders in driving the initiatives, not only within their own organizations, but within their partners' organizations as well.

Figure 3.6
Proportion of Contacts at Each Organizational Level within Collaborating Organizations

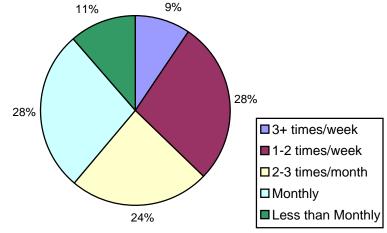
	Respondent		
Contact	Tier 1	Tier 2	Tier 3
Tier 1	58%	43%	32%
Tier 2	37%	47%	46%
Tier 3	5%	10%	22%

Source: BPA/UCSD Evaluation Team site visit interviews

Frequency of Contact

As Figure 3.7 illustrates, across the regions respondents reported that they are in contact with their most important partners several times per month. More specifically, 28% of collaborators have contact monthly, 28% are in contact once or twice per week, and 24% two or three times per month. Only 9% communicate with these partners more than three times per week, and only 11% are in contact less than monthly.

Figure 3.7 Frequency of Contact in Regional Networks



Source: BPA/UCSD Evaluation Team site visit interviews





Table C.6 in Appendix C shows the variation in frequency of contact across regions:

- Three or more times per week proportion of responses ranged from 2% to 25%;
- One to two times per week from 21% to 39%;
- Two to three times per month from 15% to 33%;
- Monthly from 14% to 44%;
- Six to 11 times per year⁶ from 0% to 8%; and
- One to five times per year from 1% to 16%.

This variation is also apparent in the average frequency of contacts across the regions. In nine of the regions, respondents estimated being in contact with partners less than two or three times a month overall. Respondents from WAEM, Metro Denver, Mid-Michigan, and West Michigan reported being in contact with partners more frequently, on average two or three times a month.

Social Network Mapping

Social network mapping is a powerful analysis tool that allows a closer look at the nature of the linkages between people or groups. The maps provided here are illustrations of how these graphics can be used to analyze the social network data. They are not offered as accurate maps of the social networks in the regions. A more complete and refined dataset is needed in order to accurately characterize the regions' social networks. Nonetheless, these illustrations do shed light on some interesting variations in networks among regions.

This section first describes the measures used in analyzing social networks. The rest of the chapter consists of a discussion of how those measures might apply to the maps of the regions' networks generated from the evaluation's 2008 data.

Social Network Measures

This preliminary analysis provides some observations about how the following four measures of social networks might apply to the regions:

- **Centrality** The count of the number of ties to other actors in the network. Those with more ties are considered to be more "central" to the network.
- Centralization The extent to which a small number of nodes have a large number of links. A centralized network will have many of its links dispersed around one or a few nodes, while a decentralized network is one in which there is little variation between the number of links each node possesses. Networks with fewer centralized nodes are more dependent on a small number of individuals for the success of the network. One can hypothesize that decentralized networks that disburse activity across a wider range of individuals are less vulnerable in cases of staff turnover and may be more stable and long lasting than those dependent on the relationships of fewer individuals.

⁶ The frequency of contact boundaries of six to eleven times per year and one to five times per year were collapsed into a single category - less than monthly - in Figure 3.7.





- Strength of Relationships The extent and nature of interactions. Often social network analysis is limited to a binary measure the ties exist or do not exist. For a richer description of the nature of networks, however, documenting variation in the strength of the relationships is helpful. The strength of relationships is usually defined as the extent and nature of the interactions. In-depth analysis of a smaller or closed social network might include a range of measure of the extent, duration, and nature of relationships and whether they are reciprocated. Given the size and scope of the regions, for this analysis the evaluation uses frequency of contact as a proxy for the strength of a relationship. This variable is relatively easy to collect with minimal burden on respondents, and while it does not give a full picture of the extent and nature of the relationships, it does provide descriptive information about the networks beyond the simple presence or absence of linkages. This is especially valuable where the full universe of potential members of the network is not bounded or defined, and where reciprocation is not being captured, and absence of linkages is not identifiable.
- **Between-ness** The degree to which an individual lies between other individuals in the network; the extent to which a node is directly connected to nodes that are not directly connected to each other, i.e., intermediaries; liaisons; bridges. A node with high betweenness has great influence over what flows and does not flow in the network, and if that individual leaves the network, these connections might be broken.

These measures can be calculated statistically, however, the discussion below of their relevance to the regions is not based on statistical analysis. Once the samples are more comprehensive, these statistics, while of interest in and of themselves, may also turn out to be analytically interesting in terms of their relationship to regional success.

Observations on the Regions' Social Network Maps

The following are observations and possible explanations for the portion of the social network map captured in 2008 for each region. These observations are purely qualitative and do not reflect rigorous quantitative analysis, rather they are based on observations and interpretation of the diagrams themselves. Like the 2007 maps, the 2008 social network maps should be interpreted as "snapshots" of a portion of the network that the evaluation was able to capture for each region. For confidentiality reasons, names of individual respondents or their contacts are not included.

The subset of the social network map captured in 2008 for **WAEM** displays a center composed of just one node, reflecting The Montgomery Institute's continuing role in overall leadership and coordination. Its "reach" demonstrates expansive partnerships, particularly with business and industry involved in the workforce training programs developed as part of the initiative. Community colleges are central to the initiative and are well represented throughout the network; in a number of places, the colleges are at the center of local collaborations with industry and economic development organizations. At the edges of the network, the WIA-funded workforce system is connected to the initiative mainly via the colleges. Efforts are now underway to increase collaboration between WAEM and the workforce system, so this will be something to watch for in future network maps.

The portion of **California Corridor**'s network shown for 2008 features a high frequency of contact but appears to lack an obvious center or hub. This observation is consistent with the





initiative's experience in covering a large, complex geographic area where one would expect to see multiple "mini-hubs," as illustrated in the network map. A substantial number of interconnections exist among clusters, drawing them closer to the center of the map. The region's key partners are from business, industry, and education.

Between 2007 and 2008, **Metro Denver** underwent major structural changes that represent the most visible shift in focus from research to implementation among the Generation I regions. Denver's 2008 social network map shows many complex connections among clusters. The subset of the region's network shown in the map includes a sizable representation of education partners, which reflects the region's increased focus on education. The map also has several links between education and industry, reflecting industry's interest in the talent development pipeline.

The **Northwest Florida** initiative has a large and extremely engaged Governance Council, many of whom were respondents in 2007, resulting in a network map showing a dense, tightly connected center with many two-way connections. In 2008, the evaluation team made an effort to meet with new partners and with individuals with whom site visitors were unable to meet the previous year, and thus obtained social network data from a new set of respondents. The 2008 map shows a wide-ranging network that expands far beyond the central organization. This subset within the region's network also appears to be relatively decentralized, which may be a result of the evaluation team obtaining responses from a much smaller number of Governance Council members than in 2007. Most of the individuals in the network are top-level executives, business owners, decision-makers, and managers, consistent with the Northwest Florida initiative's vision of regional collaboration for economic development.

In 2007, some **NCI** respondents reported concern that little collaboration occurred outside of key educational partners. The portion of its network depicted in the 2008 map demonstrates, however, that although education remains well represented, partners from this field are dispersed throughout the network and serve as bridges to collaboration among many different types of organizations. The map shows a substantial amount of collaboration taking place, nonetheless a few education partners still do not appear to be connected to the rest of the network. One possible explanation for the presence of these outliers may be the fact that several of these partners are located in the largely rural area outside of Lafayette/West Lafayette. Local economic development organizations appear to act as bridges to outside clusters, which is consistent with their role as "networkers" offering services across county lines.

In 2007, **Kansas City** had a very small and centralized group of key players who mainly collaborated among themselves. In 2008, however, the initiative took on the role of convener, hiring four liaisons to build bridges among post-secondary institutions, high schools, and industry. These bridges have translated into a broad and decentralized network in the map for 2008. Various bridges appear between the clusters, which is a sign that Kansas City is succeeding in bringing various sub-networks together to facilitate collaboration.

The network subset captured in **North Star Alliance** for 2008 demonstrates an initiative in which businesses are well represented, as they are central to the initiative. Coastal Maine's hub is very well connected to outside clusters, demonstrating that many key players are successfully





acting as liaisons or bridges by bringing outside clusters into the network. The evaluation team anticipates that next year the map will capture an increase in collaboration between clusters, especially among businesses.

The **Mid-Michigan** network subset captured in 2008 shows a broadly dispersed center, as key partners from across the region have become more central to the operation of the initiative. Several cross-profession and cross-industry networks exist, reflected in the numerous connections in clusters outside the hub. The map shows that education nodes – such as universities –appear to act as bridges that link the center to outside clusters. Several clusters centered on these educational institutions (and not the network's center) have the most frequent contact local business and industry.

The evaluation interviewed slightly different groups of partners in **West Michigan** during the 2007 and 2008 social network analyses, due partly to the fact that several projects had already been completed by the time of the second visit of the evaluation team, and the individuals leading these projects were no longer involved in the initiative. The region's 2008 network map shows that partners from business and industry are both central to the initiative and well represented at the edges of the network. With a few exceptions, education partners are well represented on the edges of the network and do not serve as bridges to other partners. Interestingly, this map includes two disconnected clusters, one centered on a business partner, and the other on workforce partners.

In 2008, the evaluation team interviewed a larger sample of respondents in **Montana** than in 2007, resulting in a more comprehensive partner map with many more complex interconnections than the one included in the last Interim Report. The network subset captured in 2008 includes a large number of diverse key players, reflecting the initiative's structure of contracting with the State Departments of Agriculture and Commerce, and its Office of Continuing and Higher Education (OCHE). As a result, the map includes quite a number of partners from other government agencies (e.g., agriculture and the State Department of Environmental Quality) as well as partners with other affiliations, such as tribal programs. Day-to-day staff members from most of these agencies serve as nodes and bridges, as do their peers from the workforce system. Industry partners are leaders and mid-level managers, but, with a few exceptions, tend to lie at the edges of the network.

The network subset collected in 2008 for **Finger Lakes** has a large and dispersed center reflecting the "flattened" governance structure that many respondents commented on during the 2008 site visit. Throughout the network, communications are durable, which is evident in the many cross-connections among the outside clusters. Some industry and education outliers still do not appear to be connected to the rest of the network, which may change in the future as the initiative recently made some effort to increase private sector involvement. The map reflects that the initiative has been a catalyst for university and private sector collaboration. Collaboration between education and workforce development is also shown, perhaps because of the two new region-wide grants awarded in 2008 – one awarded to a collaborative among WIBs, and another that involved collaboration among community colleges.





The subset of **Piedmont Triad's** network obtained in 2008 features frequent contact throughout – and many bridges among clusters. Many respondents attributed Piedmont Triad's initial successful collaboration to their pre-initiative Vision Plan, which gave legitimacy to the grant's goals and activities. The Piedmont Triad Partnership is an established and recognized region-wide organization that facilitates collaboration and breaks down barriers to collaboration. This is reflected in the many economic development nodes that act as bridges in the 2008 map. A few industry outliers still exist, which may speak to the large diversity of sectors in the region and a disproportionate representation of certain sectors over others. In addition, the initiative has increased its outreach to minority and underrepresented workers over the past year, and relatively new partners may not yet be connected to many other members of the network. Several workforce development respondents are centrally located on the 2008 map, perhaps reflecting the initiative's efforts to include the workforce system in its activities.

In 2008, the **Wall Street West** initiative created new partnerships with education partners, as reflected in the education nodes appearing centrally in the 2008 network map. Lines connecting the nodes are relatively thin in the 2008 data, suggesting a low frequency of contact. This may be consistent with a site visit respondent's comment that the first year was about "planning the work" and the second year was "working the plan," indicating less need for frequent contact in the implementation stage than the planning stage.

Conclusion: Partnerships and Collaboration Foster Global Competitiveness

The 13 regions have worked diligently for three years to build partnerships and develop habits of collaboration. As they and other regions around the country confront the seemingly overwhelming uncertainties that accompany the current recession, many of the lessons the regions have learned will benefit them. Lessons related to partnerships and collaboration include:

- Collaborating with organizations unlike one's own creates learning opportunities. Collaborators have learned by necessity to see and be open to perspectives other than their own. The collaboration between industry and the private sector in the Finger Lakes region is an example of boundary spanning partnerships that have given both university and private sector players an opportunity to bring additional perspectives to bear on their planning efforts. The Health Care Regional Skills Alliance in West Michigan brings together the workforce development expertise and perspective of five of the region's six WIBs, with the expertise of health care employers and other advocates to develop and retain the health care workforce in the region.
- Collaborative groups enjoy the benefits of a readily available and diverse base of expertise, and they have learned to call upon that expertise when needed. For example the key role of the workforce system in the California Corridor has brought a whole new range of knowledge and expertise that industry and economic development partners knew little about prior to WIRED. The Northwest Florida initiative has assembled experts from among its partners in each of its target industries to create Industry Advisory Councils that provide expertise and resources to support the regional economic development efforts.



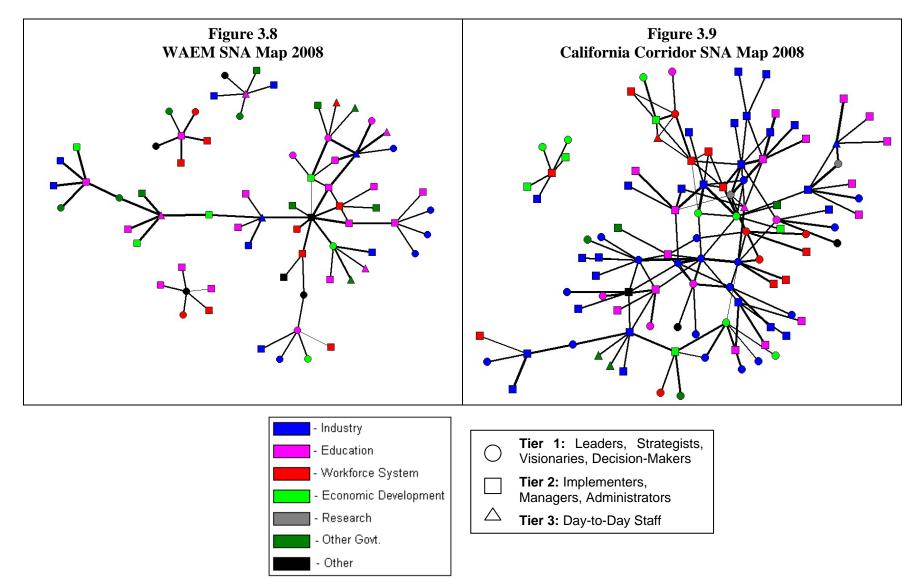


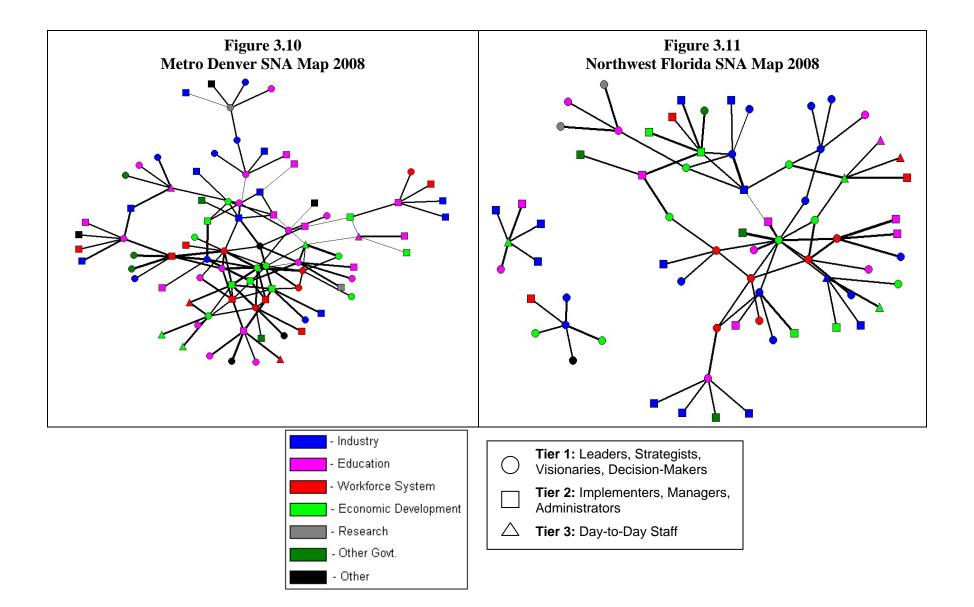
- Effective collaboration requires time for partners to develop trusting relationships by working together on joint activities and common goals. Having invested considerable time in identifying and building collaborative relationships over the past three years, the regions are primed to grasp future collaborative opportunities quickly. For example, as mentioned earlier, the collaborative work on identifying common goals in Piedmont Triad seems to be enhancing a potentially sustainable group cohesiveness. The governing bodies of both the Northstar Alliance and NCI established common ground rules for working together that have provided a structure for developing trust between partners.
- Working together has allowed organizations that previously regarded themselves as competitors to recognize the extent to which they share goals. Many discovered that they are stronger working together than in isolation or in competition with each other. For example, WAEM developed partnerships among community colleges that had previously not collaborated with each other even within their respective states, much less across the state line. In Mid-Michigan, economic development organizations in Midland, Bay, and Saginaw counties are now collaborating on a new photovoltaic study for the initiative.

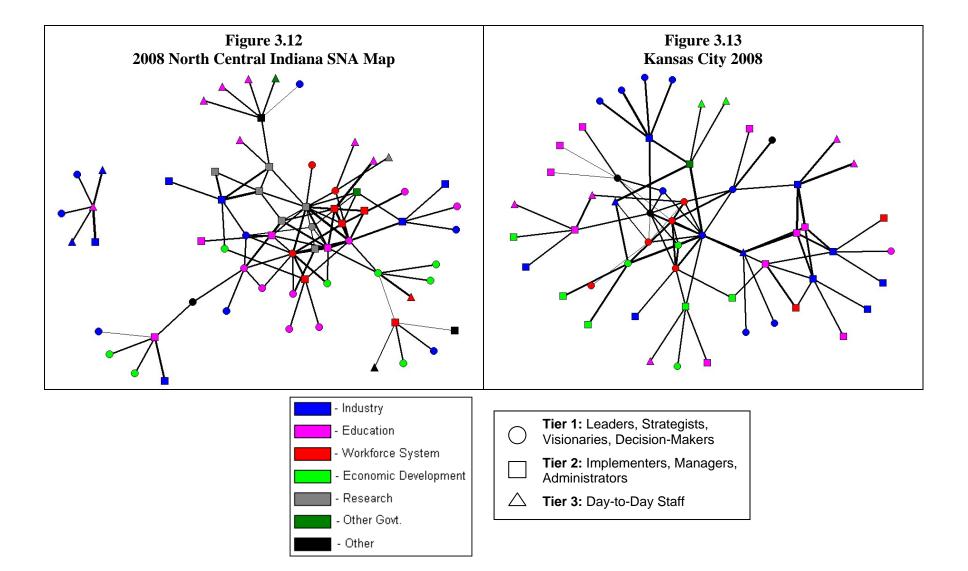
The experience of the past year suggests that while effective collaboration is not ubiquitous in the regions, the regions have worked hard to prepare themselves for projects that will serve their local economies well. The next chapter details some of the specific activities in the regions that have also helped them learn, grow, and begin to develop resilient economies.

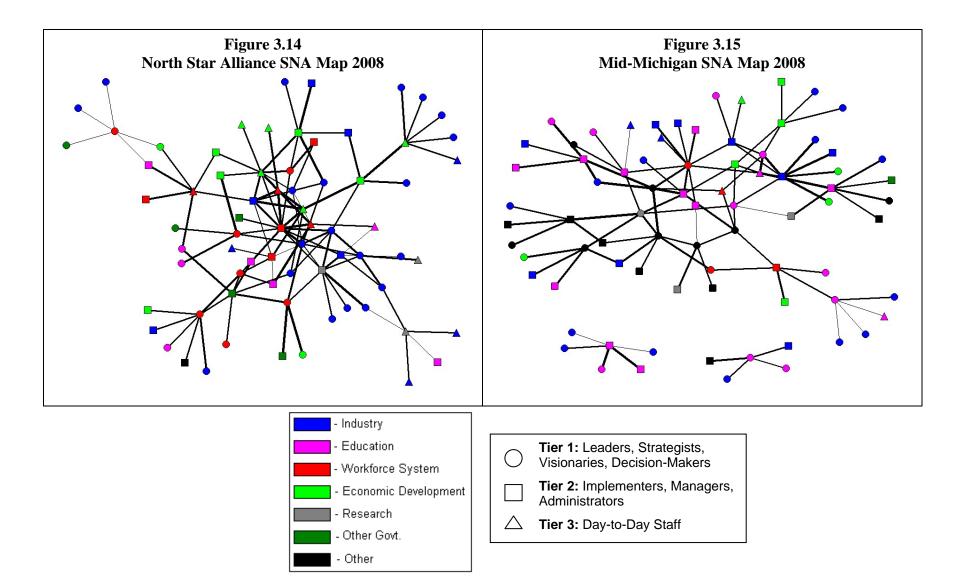


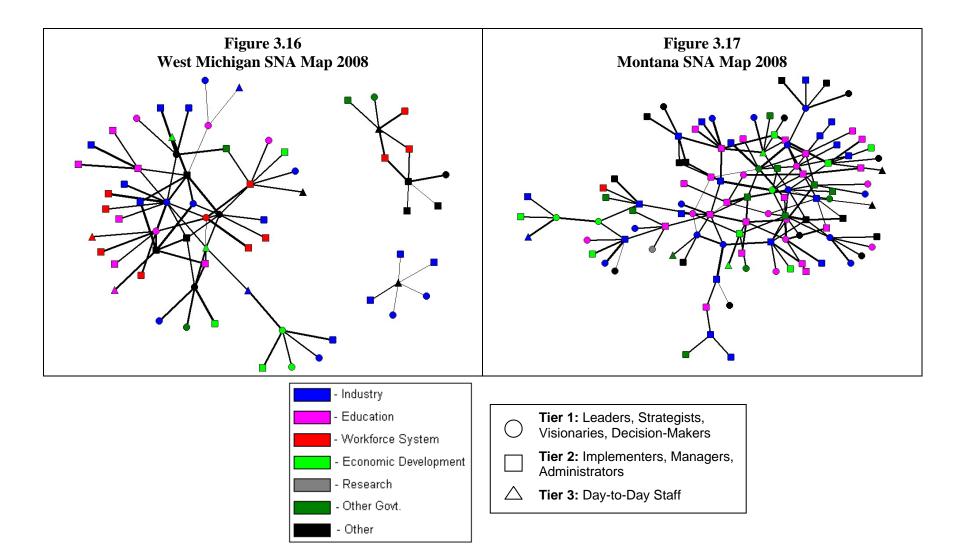
Generation I Regions' Social Network Maps

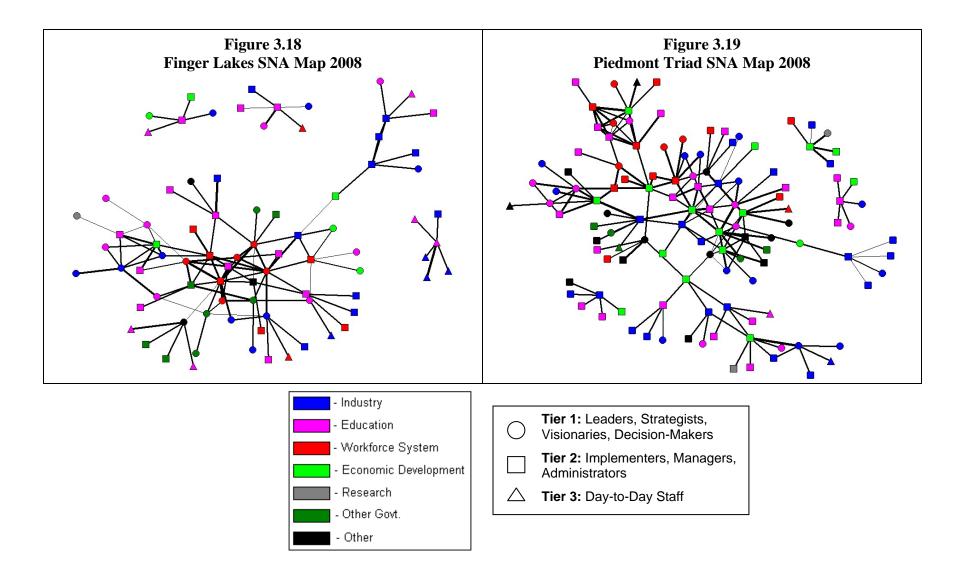


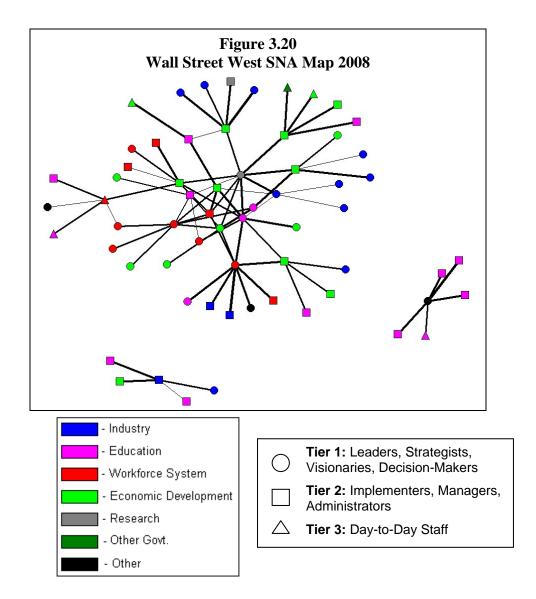












Chapter 4: Strategies, Activities, and Funding

This chapter reviews the policies, programs, and resources of the regions as they were in late Fall/early Winter 2008, the time of the second round of evaluation visits. The first section presents an overview of the on-going and new projects in the regions, but is not intended to be a comprehensive catalogue of each and every undertaking of the regions. Instead, it offers examples of the different types of key activities conducted by the initiatives, with an emphasis on how those efforts have evolved over time as the regions learned what did and did not work. The second part of this chapter discusses the funding of these activities and the challenges faced by regions in implementing their visions within the H-1B funding restrictions.

Regional Strategies and Activities

The regions are implementing activities designed to grow and develop their identified industry clusters. These target industries can be grouped into four main categories:

- 1) Advanced manufacturing, and related research and development (including aerospace, defense, automobiles, and shipbuilding);
- 2) Energy (including alternative energy, biofuels, and extractive fuels);
- 3) Life sciences, health sciences, and agricultural science (including medicine, pharmaceuticals, food processing, and animal health); and
- 4) Information technology (IT) applications, software, and telecommunications.

In addition, a number of regions target industries outside of these categories. For example, WAEM's target industries also include tourism and wood products, while the California Corridor includes transportation/logistics and business management services among its industry targets.

Only two of the regions – Wall Street West and Montana – changed the *type* of industries they targeted in 2008. In both cases, the shift resulted in an increase in the number of workers being trained.

In June 2008, Wall Street West submitted to ETA a grant modification request to expand the region's target industries to include: life sciences and health care; advanced materials and diversified manufacturing; logistics and transportation; and STEM occupations. In diversifying the targeted industries, Wall Street West recognized that its plan to attract investment from financial services firms depended on completion of a fiber optic cable linking Northeastern Pennsylvania to Lower Manhattan, and that that link was unlikely to be completed within the initiative's timeframe.

Montana broadened its target industries beyond a narrow focus on biofuel production. Because this initiative is facilitating the birth of a new industry in the state and is contending with economic factors that have impeded its growth, the initiative added target industries related to





Montana's initiative is not targeting an industry; it is seeking to create one. Montana's Agro Energy Plan has expanded its focus to include the construction and transportation (trucking) trades. In order to support a biofuels cluster, policy makers in Montana realized that investment is needed in infrastructure (construction) and supportive services (transportation), to supplement current investments in valueadded agriculture and biofuels. and supportive of its original focus on biofuels and lubricants. The initiative now also targets value-added agriculture/bioproducts and energy industries, along with industries that support these sectors such as transport and construction. The idea was to create a bridge between the existing economy and the alternative fuels economy of the future, particularly since many of the relevant skill-sets are the same.

The remainder of this section focuses on strategies and activities that have emerged in the 13 regions since the evaluation's last visit. Those strategies and activities fall into four categories: 1) workforce activities; 2) entrepreneurship and businesses services; 3) talent development activities; and 4) data analysis and planning.

Workforce System Activities

The initiatives adopted a range of activities aimed at improving the education and occupational skills of their regions' workforce. These strategies may include worker "re-skilling," continuing education, apprenticeships, and on-the-job training, as well as any supportive services provided to trainees to supplement their ability to complete a program or acquire and hold employment. This section first discusses job training approaches, followed by credential and certification programs, training for underserved populations, incumbent worker training, and "green jobs."

Job Training

As other chapters of this report describe, worker training has become more prominent in the portfolio of activities throughout the regions over the last year. Examples of the types of job training programs that the Generation I regions are funding include the following:

- Metro Denver built on the success of its first-year JumpStart grant program by funding two more rounds of grants in its second year. The Workforce Innovation Grant Program addresses specific industry needs by funding innovative workforce development, training, entrepreneurship, and other industry-specific education and training partnership projects. In March 2008, the region funded nine projects for a total of \$2.7 million, and then awarded another \$1.2 million to six grantees in June 2008.
- In the California Corridor, a Bay Area-based WIB worked with industry and education partners to train software engineers laid off from jobs in Silicon Valley so that they can qualify for the more plentiful jobs in the aerospace-focused software engineering field.
- Montana's shift in target industries resulted in an expansion of the range of occupational skills training offered to include truck driving, operation of heavy equipment, and welding.
- The North Star Alliance worked with both industry and the State of Maine to create the new Maine Marine Trades Association Maine Apprenticeship Program. The program represents a change to the established apprenticeship program from one that requires a person to attain a credential from a community college to achieve journeyperson status, to one that requires attainment of an industry-recognized certificate. Trainees can apprentice in six occupations –





marine tradesperson, marine engine service technician, marine electrician, marine-certified composites technician, boat builder-wood, and marine joiner.

Credentials and Certifications

Many of the regions' workforce training programs include assessments, certifications, and credentialing. In particular, programs that result in career readiness certification have proven popular in the regions, and a number of the regions have implemented – or adapted – WorkKeys,[®] a job skills assessment system that provides certification of an individual's competence in basic skills. WAEM's Career Readiness Credential (CRC), for instance, is based on WorkKeys. Adoption of such credentials throughout a region provides recognizable "proof" to employers of the existence of a qualified workforce. In the Kansas City region, the same tools assess the skills and readiness of job seekers – whether in Independence, Missouri, or Leavenworth, Kansas – and employers such as Harley Davidson (in Missouri) and Garmin (in Kansas) can rely on the validity and usefulness of the assessments. Other examples of career readiness certification found in the regions include:

WorkKeys[®]

WorkKeys is a well-established and validated assessment system for the workplace that is used by companies to assess and certify individuals' job skill levels and overall employability. A product of ACT (formerly, The American College Testing Program, Inc.), WorkKeys can be used not only to certify an individual's skill level in ten foundational workplace skills, but also to identify skill gaps so that he or she can receive training to develop the needed skills. A key component of the WorkKeys system is a database with information on thousands of jobs and the skills (and skill levels) required for each. Using these job profiles, ACT has identified three skills important to most jobs -Reading for Information, Applied Mathematics, and Locating Information - and developed the National Career Readiness Certificate (NCRC), which uses WorkKeys test results in these three areas to certify that an individual has the job skills needed for up to 90% of the jobs in the WorkKeys database.

- WAEM developed the Modern Multi-skill Manufacturing (M3) credential a regional performance-based credential based on national standards for entry-level and advanced skills in advanced manufacturing. Administered by the WAEM Alliance, training and assessment for the M3 is organized around a series of virtual training laboratory modules developed by Amatrol, a provider of learning systems for technical education. By late 2008, about 1,200 students had enrolled in training leading to an M3 credential.
- In order to develop a pipeline of qualified workers with the skills needed in today's advanced
 manufacturing setting, NCI supports the Manufacturing Skill Standard Council Certification
 (MSSC), a national certification recognized by employers. Workers with the MSSC
 certification are recognized as meeting industry standards for excellence and possessing
 cutting-edge skills needed for manufacturing firms to be competitive.
- A collaborative effort initiated by the West Michigan region led to the State of Michigan
 enacting the School Aid Bill, SB-1107, which implements a statewide career readiness
 credential, the National Career Readiness Certificate (NCRC), based on ACT's WorkKeys
 system. The annual NCRC assessment will be mandatory for high school students
 throughout the state.
- The North Star Alliance provided start-up funding for the new Marine Systems Training Center (MSTC) in Thomaston. The MSTC provides a venue for high quality training in





marine systems and specialties, including courses that lead to certification in various skills by the American Boat and Yacht Council and other organizations related to the boatbuilding industry. Courses at the MSTC complement training provided at the Maine Advanced Technology Center (MATC), which this grant also partially funded. MATC provides courses in composites, including those providing certification from the American Composites Manufacturers Association.

Incumbent Worker Training

In addition to training new and prospective employees, the regions also funded training for current workers of their business partners. In addition to the range of mechanisms that regions used to provide this training, the degree to which regions emphasized the training of individuals who were already employed varied across regions. For example:

- The Montana Department of Labor and Industry, the home organization for the state's initiative, contracted with the Department of Commerce to provide incumbent worker training. Workers across a range of industries participated in training that, in most cases, occurred at their usual work places with the employer's in-house trainers providing the training.
- The North Star Alliance provides incumbent worker training via several mechanisms, including through: 1) the two training centers started with grant assistance; 2) no cost conferences and day-long topic specific seminars designed for current workers; and 3) reimbursing employers for the cost of skills upgrade training that they provided to their workers.
- Northwest Florida's Employee Skills Training Grant Awards address the immediate training needs of businesses and allow for development and implementation of customized skills training.
- Mid-Michigan has funded a number of initiatives that train incumbent workers, including a project in which the region partnered with organized labor to provide skills upgrade training to employees of a manufacturing company. Another effort is the Greater Flint Health Coalition, which offers career exploration and advancement services for current health care workers. A third example from Mid-Michigan is an advanced manufacturing project at Mott Community College that provides training to the employees of five companies in using advanced technology tools.

Green Jobs

Interest in "green" jobs has increased steadily over the last few years, and several of the Generation I regions created programs that train workers for employment in some aspect of environmentally conscious business sectors. Some of the programs – like the Green Workforce Development in NCI – seek to develop workers trained and ready to work for environmentally responsible companies across industries. Other programs train workers for specific green industry jobs, such as windmill construction and solar panel fabrication in Metro Denver, or recycling in West Michigan.

• The energy sector is one of Metro Denver's targeted industries. The Clean Energy Manufacturing and GIS Technology Manufacturing project will develop and implement two state-of-the-art courses in clean energy manufacturing and GIS technology industries for 50





high school students, and develop workforce skills booster lessons for an estimated 120 students. The program will assist these students to enter internship programs or entry-level employment. In addition, Front Range Community College developed a program to train entry-level workers for a windmill manufacture and wind power company.

Green Jobs

A green-collar worker is employed in the environmental sectors of the economy. Green collar workers include professionals such as workers in the conservation movement, environmental consultants. environmental or biological systems engineers, green building architects, holistic passive solar building designers. solar energy and wind energy engineers and installers, nuclear engineers, green vehicle engineers, "green business" owners, green vehicle manufacturers, organic farmers, environmental lawyers, ecology educators, ecotechnology workers, and sales staff working with these services or products. Green collar workers also include vocational or trade-level workers: electricians who install solar panels; plumbers who install solar water heaters: construction workers who build energyefficient green buildings and wind power farms; construction workers who weatherize buildings to make them more energy efficient; or other workers involved in clean, renewable, sustainable future energy development.

Source: http://en.wikipedia.org/wiki/Green jobs

- In Montana, training for emerging alternative energy industries is at the core of the regional collaboration effort. Grant-funded training covers a wide range of occupations associated with alternative energy production and distribution. For example, students at Montana State University, Northern are learning how to conduct the tests necessary to determine whether biofuels meet ASTM standards, a certification needed before the fuel can be sold commercially.
- A variety of interesting "green" initiatives are taking place across Mid-Michigan, all related to the promise of alternative energy sources such as biofuels, wind energy, and construction remediation in order to assure that public buildings and infrastructure are certified according to the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. Two opportunities inspired job training projects in these areas: construction of 40 new wind farms in northern Michigan; and new requirements for LEED-certified paint on the Mackinaw Bridge involving a year's work for 600 painters. Michigan had no qualified

machinists, craftspeople, or painters to fill these jobs. Mott Community College developed workforce training and certification programs to assure that Michigan workers who had lost their jobs in automobile manufacturing or the construction trades would be qualified for jobs in these new sectors.

Underserved Workers

The focus on training underserved workers has intensified between 2007 and 2008 in response to changing ETA priorities described in Chapter 2. Below are descriptions of some of the growing number of programs in the regions that provide supportive services to workers, reach out to minority businesses, or target hard-to-serve populations.

• Piedmont Triad created a minority advisory committee tasked with identifying options to engage the region's minority communities. The committee funds pilot projects that increase the number and capacity of minority-owned businesses and help identify business

⁷ American Society for Testing and Materials





opportunities that support success and growth. Piedmont Triad's Director of Outreach has made communicating with diverse community groups about grant funding opportunities a priority this past year. The region's 2008 Transformation Grants similarly included a focus on reaching out to rural and underserved communities.

- Metro Denver has two new projects targeted at ex-offenders. First, the Turnabout Project is a prisoner reentry employment program that provides training in solar panel installation, wind power equipment, OSHA certification, and a commercial driver's license for the energy sector. This program also provides ongoing support for six months after employment. Second, the Colorado Division of Corrections is making available to prisoners who are about to be released a grant-supported seven-week, computer-based training program for production line workers and technicians in the renewable energy industry. Ex-offenders who complete the program will be placed in four-year paid apprenticeships with industry partners.
- The Piedmont Triad funds Career Start, which aims to increase graduation rates among atrisk students. Teachers help students see how course content is useful in the real world by incorporating illustrations, examples, and vocabulary from real-world jobs and careers into their lesson plans. Evaluations of the program have found a high correlation between career relevant content and improved academic performance, and future studies will also track graduation rates.
- The West Michigan TEAM program, a successful collaboration between the public, private and nonprofit sectors, assists small businesses by: 1) providing a state social worker for case management services to employees leaving welfare; 2) connecting employees with social services to assist with transportation, housing, and other potential barriers to work; and 3) helping workers when they are ready to advance to new positions. The project has received national attention and was highlighted at a Workforce Innovations panel on outreach to TANF recipients, moderated by the Assistant Secretary of DOL/ETA. This region also funds a recycling program for ex-offenders that provides transitional employment, cognitive behavioral therapy, and job search assistance.
- Through its grant, Montana's Job Service has made special efforts to build lasting partnerships on the Crow reservation. Virtually no businesses exist on the reservation, and the tribal Chair made a request for training in technical skills and entrepreneurship. The Montana staff coordinated a course in heavy equipment operations held on the reservation with the collaboration of the Tribal Transportation Department and Employment Rights Office. Grant-funded outreach was a key element in bringing about a closer relationship between the Crow Nation and workforce/economic development organizations in the surrounding area.

Entrepreneurship and Business Services

Many regions pay substantial attention to developing and supporting entrepreneurs, whether they are dislocated automotive engineers, farmers, or high school students. The regions support a range of services for entrepreneurs including training and technical assistance, business incubators, assistance for rural businesses, youth entrepreneurship training, cluster initiatives, small business assistance, and help in accessing investment capital. This section presents examples of each type of services.





Entrepreneur Training and Technical Assistance

- Mid-Michigan supports an entrepreneurship certificate program at Lansing Community
 College (LCC). Program participants can take courses that range from a two-hour workshop
 to a 22-credit hour certificate sequence. LCC assists participants in launching new small
 businesses through its Small Business Technology Development Center (SBTDC). In Spring
 2008, LCC and the SBTDC celebrated the start of more than 80 businesses, 20 of which
 resulted directly from the grant.
- The Center for Entrepreneurship and Commercialization at Saginaw Valley State University is another important effort in the Mid-Michigan region. The Center's mandate is to encourage diversification in both customer base and products, and to help entrepreneurs develop internal capacity. In addition to the technical assistance in entrepreneurship provided by the Center itself, more than 20 partners and subcontractors offer training and technical assistance throughout the region. Important partners include: Delta College, which provides skills training in advanced manufacturing; the Michigan Manufacturing Technology Center (MMTC), which trains businesses in how to find new customers (and is part of the Manufacturing Extension Partnership system); the Mid-Michigan Innovation Center (MMIC), a business incubator and networking resource; and the WIB for the Thumb Area of the state, which is a regional leader in training, technical assistance, and networking for entrepreneurs.
- The Finger Lakes region invests heavily in entrepreneurship training delivered by the two major Rochester-based universities. The initiative also sponsors The Entrepreneurs Network (TEN), a six-month intensive program designed to bolster economic growth by supporting life sciences, early stage technology, and scalable, high-revenue potential start-up companies. Based on best practices of leading entrepreneurial training, education, and networking programs, TEN promotes job growth and business creation and provides its members with access to national experts and funding resources. Its maximum class size of 20 allows for maximum interaction and mentoring.
- In Montana, Miles Community College has developed a 30-credit hour, two-semester certificate course in entrepreneurship. It can be taken in person at the MCC and partner college campuses, or through a combination of online and ITV (interactive TV) courses. Apart from the hybrid delivery system, the innovative aspect of this course is that it is being developed in partnership with two tribal colleges: Chief Dull Knife College (Cheyenne) and Little Big Horn College (Crow). Classes from any of the partner colleges will be accepted towards certification and the certificate can be awarded from any of the colleges. The online version not only serves to make the training accessible to remote locations, but also provides a common base of expertise for all partner colleges.

Business Incubators

Business incubators are designed specifically to support start-up companies and firms. Many of the regions have business incubators affiliated with or subsidized by the grant. For example:

When layoffs at the Delphi Automotive Plant in Kokomo, Indiana, resulted in the loss of 800 engineering and technical jobs, NCI created a "Skunk Works" business incubator targeted to unemployed white-collar workers from the Delphi plant. The NCI Skunk Works is located in the Inventrek Technology Park where the NCI operations office is located, and is one of two research and technology parks in the region associated with the grant. The other, Purdue

65





Discovery Park, is home to NCI projects related to training, technical assistance, and technology transfer in the areas of nanotechnology, energy, supply chain innovation, and health care costs.

- The Mid-Michigan Innovation Center (MMIC) requires that prospective tenants have the ability to create new jobs in the Mid-Michigan region, especially for individuals who are unemployed or underemployed. Tenants must also agree to partner actively with the other tenants in the incubator, and "graduate tenants" are encouraged to serve as mentors. MMIC is unusual in having "virtual tenants" who have access to services without a physical presence in the facility.
- Kansas City leveraged a small investment of \$30,000 into a \$3 million dollar grant from the U.S. Department of Commerce for a Regional Technology Transfer Network biotech business incubator with wet lab facilities, located on the Kansas University Medical Center Campus.
- Over the life of its grant, Finger Lakes has developed a highly complementary and integrative approach to incubators and research parks across the region that enables each to serve particular business development challenges and encourages referrals and resource sharing. These include an incubator at Rochester Institute for Technology, Infotonics (an effort to work with large employers such as Corning, Kodak, and Xerox), the Cornell Tech Farm (agriculture-based and food-processing companies), and the High Tech Research Park (begun as a collaborative between Monroe County and two universities). In 2008, representatives from incubators and research parks met with university-based experts to share approaches to innovation that are increasingly complementary, rather than competitive.

Rural Business Programs

Many of the regions also target mature small businesses and, increasingly, small, family-owned enterprises in rural areas.

- Montana operates several rural small business and entrepreneurship programs. Annie's Project offers management and financial training for farm wives who traditionally serve as the farm's business manager. The project holds seminars at the four Bio Products Innovation Centers (or by teleconference), providing training in estate planning, financial software, business ownership structures, and banking for small businesses. A second type of rural business management course, designed for farmers and existing small businesses, combines practical business management fundamentals (balance sheets, cash flow, cost-benefit analysis) with entrepreneurial "how to grow a business" skills. Along with weekly night classes over two semesters, each participant gets 40 hours of one-on-one consulting time at his or her home or business to develop individual business ideas. The goal is to get farmers to think beyond mere commodity production and recognize value-added opportunities, including diversification into biofuels crops.
- West Michigan recently launched two programs geared towards entrepreneurship in rural areas. The Rural Initiative provides technical assistance and training to local farmers to get their produce into major local markets such as Whole Foods and Meijer. Agriculture is one of the major industries in the rural parts of the region, and this initiative is notable for its consideration of agriculture as an engine of economic development for rural areas. The other rural initiative is Rural Prosperity and Enterprise Development, run out of the Newaygo

66





County Economic Development Office. This initiative offers business counseling, training, and skills development to new and existing small businesses in four rural counties.

Youth Programs

Young people are an important target group for entrepreneurship programs throughout the regions. The following programs seek to motivate the next generation of economic pioneers:

- Several of NCI's entrepreneurship education programs, including the Entrepreneurship Youth Institute and the STEM-focused Entrepreneurship Summer Camps, are geared towards high school students.
- Finger Lakes offers in-school and extra-curricular high school entrepreneurship instruction. The grant also sponsors the Young Entrepreneurs Academy (YEA!), an innovative program for high school students in which students start their own businesses during an intensive nine-month course of project-based, hands-on entrepreneurial education. The program guides students through developing a business plan, pitching to an investor panel, obtaining funding, launching the venture, managing media campaigns, and managing e-commerce and web activities, sales events, and trade shows. The end result is a fully formed and functioning business that can be carried on by students after graduation.
- WAEM offers several types of youth entrepreneurship programs. One of the Mississippi community colleges hosted "How to Become an Entrepreneur in One Week," a one-day youth entrepreneurship camp that 94 participants from both Mississippi and Alabama attended. In conjunction with the University of Alabama's REAL (Rural Entrepreneurship through Action Learning) program, WAEM has offered high school teachers in rural communities training on how to incorporate entrepreneurial concepts into science, social science, other classes, or after-class activities. Additionally, a section of WAEM's website for entrepreneurship, MyBiz.am, is being designed for young people.

Accessing Investment Capital

In addition to skill and inspiration, entrepreneurs' most important need is for investment capital. Often these financial (as well as technical and motivational) resources reside within the entrepreneurs' own communities. Many of the regions attempt to connect entrepreneurs to these sources.

- In the California Corridor, the Los Angeles Economic Development Council developed an *Innovation Resources Guide* to help entrepreneurs and business operators access the wide range of resource agencies that can help support commercialization of innovation.
- The California Corridor also held entrepreneurship/venture capital forums and events that provided the opportunity for entrepreneurs to pitch their ideas to investors, and developed a guide to conducting these kinds of events, *Holding a Venture Capital Pitching Event* or *Starting an Angel Investor Network.*8

⁸ An angel investor is an individual who invests in start up firms. As opposed to venture capitalists who invest from a pool of funds, angel investors provide their own money as capital.





- WAEM's approach to entrepreneurship in its largely rural region has been to focus more on building local and regional resource networks for business than on individual entrepreneurship training. The initiative's emphasis has been developing the MyBiz website and entrepreneur network, and training local Connectors and Navigators to help entrepreneurs access and make best use of the website and its resources. The website features links to resources and information at the community level, a Resource Navigator with region-wide links, and calendars of training and events offered by community colleges and other providers. A key element of this effort has been the creation of Start It! cards that list local resources for business start-ups. By late 2008, the MyBiz website had logged over 240,000 unique hits and Start It! cards had been developed for more than 140 communities in the region.
- Purdue University's Krannert Management and Economics Library in the NCI region contains invaluable information resources for existing and emerging entrepreneurs.
 NCI, in partnership with Purdue Extension

As part of the California Corridor grant, the Los Angeles Economic Development Council (LAEDC) developed a new online interactive real-time database system to support targeting high technology growth clusters and outreach to the county's innovative business base. This "innovation support architecture" was designed to be replicable throughout the state and the nation as part of a regional economic development toolkit. The underlying premise of the project is that innovative companies make a greater positive impact on the economic vitality of the region than other businesses. (Using the Pollack Retention and Relocation model, California Corridor calculated that the economic impact of jobs created by small and medium aerospace manufacturing firms is more than 4.5 times greater than the return on investment in hotel jobs.) By integrating and enhancing the various database tools into one integrated county-wide database, regional managers can now track and monitor not only the results of their region's business surveys and contacts, but also management data needs for all of the high tech industry clients they serve. LAEDC reports that this effort has provided them with a valuable tool to identify business trends and effect positive change on the Los Angeles County economy.

and the regional Small Business Development Center, is making available computer terminals connected to the Library that are located in each county in the region, at Purdue's County Extension Offices, and other facilities.

Business Cluster Initiatives

The discussion that follows highlights the supportive activities targeted to the *industry* and not the *business owner*. These endeavors also differ from entrepreneurship support because of their focus on process – how to streamline manufacturing or bring new products to market – while entrepreneurship programs tend to focus on managerial issues such as how to write a business plan or attract angel investment. The following are examples of technical assistance programs that engage clusters of similar businesses within a given region, instead of one-on-one services.

• A major focus of the California Corridor initiative has been to improve the international competitiveness of the region's supply chain by developing and executing a "Smart Supplier Strategy" that supports small businesses, manufacturers, and entrepreneurs in adapting to global manufacturing transformation. "No region can successfully compete in the 21st century global economy with 20th century suppliers." In this effort, the California Space Authority, along with Antelope Valley and El Camino Colleges, joined forces with other supply chain project partners to develop and deliver "Introduction to Supply Chain





Management" sessions. The seminars featured: suppliers and the global supply chain perspective; dynamic complex networks; compliance issues around International Traffic in Arms Regulation (ITAR) and other regulations; systems engineering; project management; life cycle support along with high performance computer modeling; and product/process simulation.

• NCI funded the start-up of the Indiana Energy Systems Network (IESN), which aims to catalyze Indiana as a global leader in the energy industry. IESN facilitates business creation, market expansion, and talent development in energy conversion, power storage, distributed power generation, and alternative energy. The project's approach is to leverage the existing intellectual capital – people and technology – of the automotive industry in Indiana. IESN actually extends beyond the NCI region and throughout the state of Indiana. An IESN respondent commented that currently people are "stuck in vertical pillars and do not talk to others outside this sphere," and stressed the importance of business and individuals connecting outside their regular spheres to encourage the innovation necessary to change the economic course of Indiana's future.

Small Business Services

Small businesses are a vital element of the national economy. Several regions engaged in services to support small companies, with a focus on technology and process versus operations and management.

- Finger Lakes' Small Business Innovation Research (SBIR) services provide training and assistance to regional technology companies to improve their success with SBIR and Small Business Technology Transfer (STTR) programs. SBIR training services assisted regional firms to win five SBIR/STTR awards of almost \$1.3 million in federal dollars. High Tech Rochester (HTR) provided hands-on training to 33 companies in the region. HTR drafted and edited proposals and reviewed proposed budgets for ten proposals submitted for SBIR/STTR grants.
- The grant-funded Finger Lakes Scholarship
 Grants program provides direct assistance to
 small companies and has outperformed all
 expectations. The maximum award of \$25,000
 must be matched on at least a one-to-one basis.

In early 2007, Mastro Graphic Arts (MGA) might have been described as an "average" small family-owned printing company. With the help of the Finger Lakes Scholarship program, MGA has become a specialized, sophisticated, and highly efficient company that now competes nationally and globally. The company's first grant-funded training covered lean manufacturing to improve overall efficiency and quality control. Subsequent grants have allowed the company to train employees who operate a new specialized machine - a highspeed digital lenticular printer. Grantfunded training has helped MGA land new multimillion-dollar accounts, compete "on a new playing field," and create additional jobs.

By late 2008, the program had provided businesses in targeted industries with over \$3 million, funding worker training and skills upgrade for more than 5,000 workers. Training is short-term and leads to industry-recognized certifications/credentials, supervisory and managerial skills training, process/productivity improvement, and/or in-demand technical and occupational skills. The training has made a critical difference in the sustainability and future of the grant recipient companies.





- Montana funds the Bio-Products Innovation Centers (BPICs) to assist farmers and other agrobusinesses. The BPICs provide a range of services, including identifying what is needed for a venture to move from idea to implementation, reviewing business plans, assisting businesses to find suitable sites, and linking them to funding and worker training. For example, if a farm housewife wants to grow and market herbs, BPIC staff members provide technical assistance to address markets, financing, and commercial-scale production. One of the BPIC contractors also operates a revolving loan fund with non-grant capital.
- The North Star Alliance and its partners recently began the Marine Industry Owner Operator College, which uses the agricultural cooperative extension model to provide access to local expertise in specific topics at centrally located venues. The long-term goal of this effort is to provide and promote ongoing continuing education to owners and operators to enhance their management skill levels and to ensure the long-term health of their firms and subsequently the industry. The College's first set of courses focus on upper-level management training, and later will expand into training for mid-level managers and supervisors.

Talent Development Activities

Talent development activities include any projects that largely focus on training future entrants to the workforce. This strategy includes science, technology, engineering, and math (STEM) education in both K-12 and postsecondary schools, internships, curriculum development, and teacher training and professional development. This section presents examples of programs for youth in high school, career awareness programs, and postsecondary programs.

Programs for High School Youth

Several initiatives began STEM education programs targeting students in secondary and even primary schools. In response to clarification of funding requirements from ETA, regions curtailed or revised some talent pipeline activities, and received waivers allowing them to continue others. Several programs in the regions targeted or included secondary school-aged youth; eight of these requested waivers and five received exemptions. Figure 4.1 presents examples of the youth programs that the regions offered, identifying those for which a waiver was granted. More detailed examples of youth programs are described below.

- Project Lead the Way a nationally recognized pre-engineering program with hands-on activity-based components and rigorous technical content operates in several regions, including the California Corridor, Metro Denver, Kansas City, and NCI. This program received a blanket exemption from ETA's restriction on youth activities.
- WAEM's youth focus is on dual high school/community college enrollment and dual credit
 vocational courses, bringing access to the Career Readiness Credential and introductory
 advanced manufacturing skills to high school juniors and seniors. The courses cover auto
 technology, computer-assisted drafting, machine tool trades, telecommunications, and
 electronics.
- Piedmont Triad's advanced manufacturing cluster is funding FIRST Teams. These teams, each of which works after school for several months to build a robot using advanced manufacturing techniques, have been established in at least one high school in each of the 12 counties. The teams enter their robots in regional and national competitions that generate





Figure 4.1 Generation I Youth Programs and Approved Waivers

Region	Project Type	Age	Waiver Status
	Rural Entrepreneurship through Action Learning (REAL)	16+	Approval not needed
WAEM	Dual credit/dual enrollment agreements between high schools and community colleges	16+	Approval not needed
California	Project Pipeline/California Troops to Teachers – Scientists and Engineers – Alternative Routes to Certification and Hiring (SEARCH)	N/A	Approval not needed
Corridor	STEMCAP – Build common vision for STEM around which California workforce stakeholders can unite to transform STEM teaching and learning while developing leadership	Over 14	Approved
Metro Denver	Project Lead the Way: Provide development of career skills training and interest in accelerated math and science training	16+	Approved
Northwest	CHOICE Replication Projects: Replication of model through secondary school system	14-18	Approved
Florida	Project Lead the Way, et al: Provide development of career skills training and interest in accelerated math and science training	16+	Approved
NCI	Project Lead the Way: Provide development of career skills training and interest in accelerated math and science training	11-18	Approved
Kansas City	Kansas City Science Initiative: Prepares teachers to deliver curriculum through hands-on, inquiry-based learning environment. Combined a number of projects, including STEM, PLTW	K-5	Approved with modifications
North Star Alliance	Building Bridges (Teacher): Develop curriculum on boat building Building Bridges (Student): Career awareness about target industries	16+	Approval not needed
Mid-Michigan	LCC Entrepreneurship Curriculum; Healthcare Initiative with MMIT to provide EMT training; National Career Readiness Certificate (NCRC)	16+	Approval not needed
West Michigan	Grand Rapids University Preparatory Academy; Global School Model/Replication of Detroit Urban Preparatory Academy Model for Curriculum Development		Approved
Michigan	West Michigan Global Education Network	Grades 9 - 12	Approved
Montana	A World In Motion: Curriculum joins teachers, students, industry to bring engineering design into classrooms; the initiative covers teacher professional development workshop on curriculum	N/A	Approval not needed
Finger Lakes	Young Entrepreneurs Academy	16+	Approval not needed
Piedmont Triad	FIRST Teams: robotics team	16+	Approval not needed
Wall Street	Multiple programs under umbrella academy; Summer Bridge Program, career exploration & mentoring activities, girls' summer camp, LeHigh County Career Pathways, Jr. Achievement	14+	Approved for Ages 14+
West	Financial Literacy Institute: Teacher training and Internet training of students	13-18	Approved

Source: ETA and BPA/UCSD Evaluation Team





- considerable excitement among students. Teams present their work and robots within their own and other high schools, and at meetings of Scout troops and other local youth groups.
- Metro Denver's Jumpstart grants focused on the talent development and education pipeline for the region's target industry sectors. For example, the Innovative Partnership for Educating Colorado's Aerospace & Bioscience Workforce grant to the University of Denver combined teacher training, summer camp, and high school classes to develop engineering skills relevant to aerospace engineering and bioengineering. The "Making of an Engineer" summer camp theme of *Engineering in Extreme Sports* introduced material science, robotics and other engineering concepts to participants. A sub-grant to the Denver School of Science and Technology (DSST) expanded an internship program in aerospace, bioscience, energy and IT/software sectors for its high school students, 60% of whom are minorities, and 40% are low-income.

Career Readiness

Along with STEM education programs, activities that increase young people's awareness or preparation for employment in targeted industries were quite common across the regions.

- Wall Street West plans to create a website with tools and resources for career education. The site includes Career Cruising, a software-based tool for middle and high school students that allows every student to develop and maintain an individualized electronic career portfolio containing records of academic achievements, interest inventories, assessments, skills, and career exploration. The site also describes opportunities for mentoring, job shadowing, apprenticeships, service learning, and volunteer experiences.
- Piedmont Triad's Promoting Logistics to Youth project markets logistics to kids with appropriate "give-a-ways" at industry events. A summer institute at the North Carolina Agricultural and Technical University invites rising high school juniors and seniors to spend five weeks learning about logistics and visiting businesses. One institute activity for students, teachers, and guidance counselors is a tour of career opportunities in logistics at the Wilmington and Charlotte ports. Another Piedmont Triad program

A "hybrid" between talent development and workforce training are internship programs. Internships provide actual work experience but are targeted to students, not workers. Many regions have used internships as a means of developing young talent and creating awareness of careers in targeted industries. West Michigan funds a statewide Internship Initiative, which intends to create 3,000 internships in West Michigan by the end of 2011. The Internship Initiative plans to launch a website portal to help match college students with internship opportunities. West Michigan also developed a public education plan to promote the internship concept to employers, students, and educational institutions. Components of the plan include an employer needs assessment survey and the use of oncampus student interns to promote internships to their peers.

is the Elon Academy, in which high school juniors and seniors spend time on the Elon University campus, both after school and in a summer residential program. The program combines academic improvement programs, mentoring, and placement in internships with local companies. Supported primarily by local business, the Academy targets youth with good records of academic achievement who lack the resources to continue their education.

 Northwest Florida awarded grants to fund the development of career skills programs in high schools. The Wakulla County High School Medical Academy has fostered new partnerships





between education and the region's medical community. Nearly a third of the school's 1,200 students are enrolled in Academy courses and another 400 potential students attended a recent Academy open house. Grant funds supported the launch of an Aerospace and Flight Academy in the Jefferson County School District. The Gadsden County School District is working with the Banner Center of Excellence for Career Academies Secondary Education to create an information technology institute at West Gadsden High School.

Postsecondary Programs

Several regions funded the development of curricula that resulted in a new degreed program. For example:

- In Montana, Miles Community College has created two-year Associate of Applied Science (AAS) degrees in Biofuels and Energy Technology, and a two-year Associate of Science degree (AS) degree with a biofuels emphasis. The AS is designed so that students can transfer credits toward a four-year Bachelor of Science degree. The biofuels programs are partnered with MSU-Missoula College of Technology's (COT) online Renewable Energy program. Dawson Community College is designing a wind energy and maintenance course. The school has purchased a wind monitoring tower, two small wind generators, and Amatrol electronics and hydraulics teaching modules.
- The California Corridor secured the approval of the state's Community College Chancellor to establish two new A.S. degrees an A.S. in Electronics Technology, Emphasis in Mechatronics and an A.S. degree in Engineering Technology, Emphasis in Mechatronics.
- Very recently, Northwest Florida funded the University of West Florida to implement an Executive Master of Science program in computer science/software engineering. Students will earn a master's degree through an accelerated, on-line curriculum. Students will also have the option of simultaneously earning a Certificate of Medical Informatics.
- Metro Denver's initiative supported Front Range Community College's (FRCC) Research Animal Technology, Care and Management program that trains participants in Laboratory technology. Students can prepare for the American Association of Lab Animal Science (AALAS) certification exam, receive entry-level job skills training or work towards as associate degree program. The associate degree will transfer to a future new baccalaureate degree in Colorado State University's animal science department, creating a new career ladder.

Data Analysis and Planning

The regions conducted a host of research activities that continue to guide the implementation of the initiatives, such as asset mapping, gap analysis, employer surveys, and other strategic planning efforts. During the second evaluation visits, site visitors observed less emphasis on research and planning than during the first round of visits. As the regions' programs continue to

⁹ An asset map can be defined as an inventory of the resources in a given geographical area. In the context of regional transformation, the asset-mapping concept has been used to identify stakeholders and partners, enumerate facilities and programs, or assess regional economic conditions.





mature, however, they undertake new and more targeted data analysis tasks to support the planning needed for their next projects.

All of the 13 regions revisited their Implementation Plans since the evaluation's first Interim Report was released. Generally, the reviews resulted in minor changes that refine existing tactics, and not in tectonic shifts in philosophy or method. For this and other efforts, the regions have taken on a variety of types of workforce research, including the examples discussed below.

- In at least two regions, data collection provided real insight into the needs of industry, both for talent development and workforce training. In both Florida and California, data clearly indicated that employers put a high priority on training workers in non-technical skills, i.e., written and verbal communication skills. The employers considered these soft skills equally important whether they were hiring a systems engineer or a manufacturing technician.
- The Piedmont Triad conducted a survey of the working poor, interviewing 13,000 people who receive state childcare subsidies to determine their need for social services.
- Wall Street West made several investments in assessing the region's assets and needs. The Workforce and Workforce Development Gap Analysis identified gaps in the workforce and workforce system in the skills needed to grow the financial services industry. Respondents said the gap analysis was very important in identifying occupations within clusters and the level of demand, and helped the region develop better and more appropriate training. The Regional Innovation Asset Map compiled data on regional innovation assets to grow financial services and other industries; compiled a TORO report (summary of transferable skills) for financial services occupations; and identified educational programs leading to employment in financial services. The initiative also awarded a grant to develop competency

Initially, many workforce system partners in the California Corridor were leery of participating in some of its labor-intensive, data-gathering projects. "There was a bit of resistance there, because the money went to somebody none of us knew," one workforce partner said." But after completing projects ranging from a survey of 21st century skills to profiles of 21st century employers, workforce partners reported that: "Sometimes EDD (the state employment service agency) data is just data with no meaning; they're still saying roofers is a top occupation. WIBs can now give meaning to data; we can say, 'this is what we found here and we know it's true, so take a look at it." Another WIB director added: "It's easier to get people jobs if you can focus on the jobs out there -doing research on projects told me: "This is what employers are saying they want or need. I learned so much."

models with definitions and behavioral indicators for managerial, non-managerial, and information technology (IT) positions. They have also contracted for a Wall Street West Impact Analysis to be completed at the end of 2009.

• Northwest Florida conducted a comprehensive data collection and analysis effort to drive policy, moving over the past two years from identifying the region's needs to identification of programs to fill those needs. A target industry occupational analysis of the anticipated workforce demand for 118 target industry occupations – along with face-to-face interviews conducted by the collaborative's economic development and workforce board partners – provided the foundation for the award of new employee skills training and entrepreneur grants, as well as skills training at regional high schools. The University of West Florida's





Haas Center for Business Research and Economic Development recently completed a grantfunded gap analysis of the educational credentials required for the identified target occupations and the region and state's current output of those credentials. The gap analysis data is being used to inform the initiative's final round of grant funding in post-secondary education. One contractor recently collaborated with the U.S. Forestry Service to map the sources of renewable energy in the region, information that the region's Renewable Energy Advisory Council is using to solicit grant funds to determine the availability of woody biomass feedstock and an efficient means of harvesting the forest product.

• The California Corridor's 21st Century Workforce Profile project defined future workforce skill needs and facilitated effective planning by workforce training providers by creating advanced technology job profiles and a skills matrix for technology fields. The project also developed strategies to identify training and education gaps and share best practices across the region. The region's new Regional Economic Development Toolkit calls for a collaborative and interactive approach to collecting and using data. One-on-one surveys of industry are increasingly difficult to administer, as companies are overwhelmed with survey requests from multiple stakeholders. Collaborative data collection and analysis efforts between the economic development and workforce development agencies have been very successful in securing industry cooperation and improving the accuracy of the resulting information.

Summary

The industries targeted by the regions have not changed substantially since the inception of the initiatives. As projects evolved and as new opportunities arose, several regions shifted their focus to the emerging alternative energy sector. The result has been increased support for entrepreneurship and business development in environmentally friendly companies, as well as an overall increase in training for green jobs.

The regions now fund more workforce training activities than previously, due in part to H-1B funding requirements, but also because workforce training was a natural next step after the initial planning and implementation efforts. WorkKeys®, a job skills assessment system, has become a critical tool for many regions.

Many regions devote significant effort and resources to supporting entrepreneurs, and increasingly to small rural companies. Research parks and business incubators are key facilities in regions' support for emerging entrepreneurs. At the same time, regions have also invested considerable energy in supporting mature businesses through cluster-based technical assistance and the small business sector.

The talent pipeline remains a chief concern in all of the regions. Given the H-1B funding restrictions on serving youth, fewer regions are offering STEM programs for K-12 students, and regions have correspondingly increased career awareness activities targeting older youth.

Between 2007 and 2008, the initiatives moved from start-up to an operational phase. While much of the strategic planning efforts necessary in the start-up phase have concluded, the regions continue to learn and adjust their programs accordingly. Some of the variation in activities is





simply a function of the passage of time, as initiative objectives and milestones are met. Other changes are responses to the changes in the regulatory and economic environments in which the regions operate.

Funding of the Initiative

The evaluation's first Interim Report described the progress of the regions in spending their grants and detailed the mechanisms by which the regions distribute their grant funds, as well as the regions' ability to bring in additional resources to support the goals of their initiatives. This section provides updates on the progress of the regions in these areas, as well as an overview of the fiscal monitoring issues that have arisen for many regions during the last year.

Expenditure of Grant Funds

The ETA awarded each of the regions approximately \$5 million in grant funds per year for up to three years, with grant awards per region ranging between \$12.5 and \$15 million. Figure 4.2 illustrates the regions' progress towards spending out their total grant as of the end of 2008. Unfortunately, a thorough accounting of the regions' spending to date by type of activity is not feasible at this time because consistent data are not available across all regions.

Figure 4.2
Progress in Grant Expenditures
December 2008

Region	Percent of Funds Expended	Percent of Funds Obligated	Percent of Funds Remaining
WAEM	56	25	19
California Corridor	78	5	17
Metro Denver	46	14	40
Northwest Florida	38	20	42
NCI	51	31	18
Kansas City	34	66	0
North Star Alliance	59	10	31
Mid-Michigan	55	45	0
West Michigan	82	18	0
Montana	52	46	2
Finger Lakes	50	23	27
Piedmont Triad	37	20	43
Wall Street West	30	30	40

Source: Generation I Regions' Quarterly Financial Reports to ETA





Three regions – Mid-Michigan, West Michigan, and Kansas City – have either spent or obligated all of their grant, while Montana has spent or obligated nearly all of its funds. At the other end of the spectrum, Metro Denver, Northwest Florida, Piedmont Triad, and Wall Street West have at least 40% of their funds remaining. As their grants wind down, some regions may find that they have more unspent funds than they anticipated. For example, as the California Innovation Corridor prepared its final report, staff projected that approximately \$600,000 of grant funds remained. Recent project reviews, however, indicate that unspent funds across all of their subgrants could total more than \$3 million. CSA submitted for ETA approval a new Sustainability Plan expanding their sustainability activities to take advantage of these remaining funds.

Changes in the Distribution of Funds within Regions

As described in the first Interim Report, the regions use a range of mechanisms for distributing grant funds to their partners, including sole-source contracts, memoranda of understanding (MOUs), and competitive RFP processes for grants or contracts. Notable changes in the last year include both adjustments in distribution mechanisms and reallocation of funds to reflect changed priorities within the regions and at the federal level.

Several regions have introduced new programs for distributing funds. For example, Piedmont Triad is now awarding Transformation Grants, and Northwest Florida developed Workforce Innovation I grants, awarded to local workforce boards, and Workforce Innovations II grants awarded to post-secondary institutions and their business partners. Both of these programs are described in more detail earlier in this chapter.

As mentioned above, although the California Corridor was writing its final report at the time of the second evaluation visit, no agreement has been reached between the region's program management and DOL on how to best distribute the region's unspent grant funds. The grant program manager wants to use these funds for projects that best demonstrate the institutionalization of transformational principles. In some cases, that will mean forming new partnerships among current California Corridor partners.

Other regions have redistributed existing funds or made new distributions to address shifts in funding priorities. For example, West Michigan issued a new RFP in August 2008 and funded two different projects addressing the workforce needs of ex-offenders. Staff in West Michigan stated that these projects were selected in part because they wanted to fund more projects for this population after the ETA leadership emphasized the importance of integrating this population into the workforce system. In Finger Lakes, on the other hand, the Steering Committee reallocated funds and initiated an RFP process to encourage applications for workforce investment initiatives from a more diverse range of providers.

In its original grant proposal, the Mid-Michigan region pre-allocated their resources to nine partners. When the grant was awarded, however, the funded partners decided that the newly created Prima Civitas Foundation (PCF) should manage the grant, and each agreed to contribute a proportion of their funding to PCF for that function. Other than this "give-back" to PCF, the original pre-allocations stood for the first two years of the initiative. Over time, the partners





realized that the initiative needed more flexibility than the pre-allocated budget allowed. The opportunity arose to take over a research and production facility that Pfizer, Inc. had closed down in the city of Holland. Mid-Michigan received approval from ETA to shift \$500,000 of the funds allocated to Michigan State University for training to "re-purpose" the Pfizer facility into an R&D and educational facility centered on the bioeconomy. The region also obtained permission from ETA to use additional funds allocated to MSU for other purposes such as the National Career Readiness Certificate (NCRC) initiative, on-the-job training, and continued funding for PCF.

Finally, some regions have reclaimed previously allocated funds. For example, Northwest Florida funds grants to businesses in its target industries to train employees for new positions that meet specific wage and benefit requirements. As of August 2008, the region had awarded \$1.1 million in Employee Skills Training grants. Some sub-grantees will be returning the funds, however, because the companies cannot create the jobs that are required, find enough skilled applicants, or have lost revenue as the economy declined. Similarly, NCI has also recaptured over \$255,000 in unused funds from sub-grantees.

Montana's Executive Committee reclaimed funds from the Department of Commerce in order to increase the funds flowing through the Office of Continuing and Higher Education (OCHE) to Montana State University, Northern. The university operates the Bio-Energy Innovation and Testing Center, which required additional testing equipment for certifying biodiesel fuel. Furthermore, at the time of the evaluation visit, the Montana project director was planning to reevaluate the need to reclaim and reallocate funds in January 2009.

At the time of its initial grant award, ETA notified the North Star Alliance that a number of the initiative's planned activities were unallowable uses of H-1B funds. As a result, some funds originally budgeted for the Capitalization and Marketing Pillars were reclaimed and reallocated into training activities. This process continued over the second year of the grant, as the deteriorating conditions in the finance industry interfered with implementing projects under these Pillars that involved allowable costs.

Issues Related to DOL/ETA Guidance

The evaluation team previously found that a larger than anticipated proportion of implementation efforts among the grantees during the first grant year centered on complying with federal regulations governing the grant. The source of the grant funds is the fees paid by employers for securing H-1B visas for foreign workers needed in the U.S. As such, the use of the funds is restricted to covering: the costs of training; curriculum development and dissemination; other career and labor market information; outreach and recruitment; tools, equipment and supplies used for training purposes; and other related costs. Grant funds cannot be used to pay for product R&D; public infrastructure improvements; inventory acquisition; or general business capitalization or expansion, even though these activities may result in the creation of new jobs. ¹⁰

¹⁰ WIRED Initiative: Uses of the H-1B Funding Revenue, updated June 2007.





Particularly for regions in which the grantee and/or fiscal agent was not familiar with ETA regulations, the Department's clarifications of the allowable uses of these training funds required regions to redirect funds from some of the uses they anticipated during the proposal phase. For example, the restriction against using grant funds as investment capital for entrepreneurs has required several regions to seek other sources of support for their entrepreneurship efforts, while at least one region had to find sources of funding outside the grant to support development of a regional marketing plan.

Subsequently, ETA released additional guidance to the grantees further delineating allowable costs. The first memorandum, released in November 2007, 11 required regions to obtain approval from ETA leads for any activities targeted to youth under the age of 16. The second was a Training and Employment Guidance Letter (TEGL) 12 released in December 2007 that clarified that grant funds could not be used for economic development activities "not directly related to training for eligible individuals." While this guidance aimed to clarify the June 2007 memo, and while ETA did offer a webinar to address the regions' questions about the implications, many regions had already planned, funded, and even begun to carry out activities that were deemed unallowable under this guidance.

Since the release of the memorandum on services for youth under 16, regions have applied for and received waivers from ETA to either continue existing activities or execute planned activities involving youth under age 16. Not all submitted waiver applications were approved, however, and some projects had to be cancelled or modified; for example, the Wall Street West Academy was only approved for youth over age 14. Furthermore, some regions expressed frustration at having to wait while ETA reviewed applications for projects that had previously been approved and were now on hold.

ETA also issued a fiscal monitoring report on each region's use of funds in late 2008. Whether or not actual problems were uncovered, these audit investigations caused grantee staff to "go into a tailspin," as a respondent in Maine described it, largely due to the fact that ETA had not provided much guidance in the beginning of the grant, and regions were concerned that they may have undertaken unallowable activities unintentionally. While some regions had only minor compliance issues, these audits posed significant concerns for other regions, and the implications of audit findings for some of the regions are not yet clear at the time of writing this report. In West Michigan, for example, the audit questioned \$8 million of grant spending, several million of which appeared to be fully disallowed.

During the evaluation's second round of visits, respondents noted that this challenge continues to be an issue in executing their original vision for regional transformation. Specific concerns included:

¹² Stover DeRocco, Emily. *Use of Workforce Investment Act (WIA) Funds for Workforce Development Activities in Support of Economic Development,* December 11, 2007, TEGL #13-07, http://wdr.doleta.gov/directives/corr doc.cfm?DOCN=2560





¹¹ Stover DeRocco, Emily. WIRED Policy on Investments in Activities for Secondary School Aged Youth, November 19, 2007

- Loss of stakeholders due to funding restrictions. Metro Denver, for example, reported a decline in employer interest in the initiative after ETA released its guidance on provision of services to youth. Many of the employers involved in the collaborative efforts are interested in the long-term talent pipeline and wanted to focus on interventions that targeted students as early as the fourth grade.
- The ability to address regional priorities within the funding restrictions. In both Piedmont Triad and NCI, respondents stated that the restriction on serving youth under age 16 missed the main concern of regional stakeholders high school dropouts, who are harder to reach after age 16. Wall Street West has had to review costs and priorities related to the economic development components of the region's implementation plan. Given the region's initial emphasis on attracting investments from New York-based financial services firms, a great deal of effort was expended on business outreach, and the uncertainty about how to cover the costs of supporting these efforts remains a critical concern.
- Inconsistent guidance from DOL/ETA. Many regions were upset to find that projects that had been approved and even championed by ETA leads were later deemed unallowable under the H-1B restrictions. Some regions also had to delay issuance of funds and subcontracts because they had not received sufficient information on the regulations governing grant funds. In California, one program staff member reported that writing justifications for projects ETA had originally approved and getting approval for those projects took another six months, and still the confusion over what was allowed under H1-B funds brought some projects to a halt and limited what could be accomplished in others.
- Grantees who had had previous experience with WIA funds stressed that they were encouraged to think of funds as a "different animal," only to later discover that they were subject to the metrics and restrictions that DOL funding usually entails.

Other Funding Issues

In addition to planning and operational funding challenges that resulted from H-IB regulations, respondents in the regions also reported funding concerns related to delays and under-expenditures caused by slow and complex procurement procedures for capital equipment. ETA must approve the purchase of equipment costing at least \$5,000, even if the Department has already approved the region's budget containing a line item for equipment purchase. Inefficient procurement procedures within the regions have added to processing time. Delays in receiving crucial equipment often created a snowball effect on other expenditures; for example, teachers were not hired, and courses were not held until the required equipment arrived.

- In WAEM, procurement hold-ups for Amatrol equipment delayed the full implementation of M3 training for an advanced manufacturing credential in several community colleges. As of late 2008, several sub-grantees projected that they would not be able to spend out their grant amounts, and without extending their period of performance may not have time to train as many individuals as they had projected.
- In Montana, procuring equipment for the Bio-Energy Innovation and Testing Center took a year and a half. Mobile demonstration equipment is crucial for biofuels, hazardous materials, and similar training in this large region. Programs at the Montana State University, Billings College of Technology, and at Miles City Community College had been held up for months





awaiting needed equipment. As a result, staff had to cancel some commitments at both colleges.

Initiative-Connected Investments

Another issue that affected planning and ongoing operations was leveraged funding. ETA did not require applicants to secure matching funds, or propose cost-sharing or cost participation, in order for a region to be eligible to receive a grant. Nonetheless, the original SGA encouraged applicants to leverage the resources of all strategic partners whenever possible. ETA subsequently made clear that the grants were to be considered seed money, and that regions should secure other sources of funding to cover the full range of activities needed to transform their local economies. The Department did not define "leveraged" for the regions, however, and the grantees varied in the definitions that they used.

In 2008, ETA clarified that leveraged funds were defined in OMB cost principles: leveraged funds are those non-grant funds that are used for costs that are allowable under the federal grant. This definition is not how the regions had understood the term. For example, Metro Denver defined leveraged funds in its quarterly reports as "any resources that Metro Denver or partners provide to support the initiative in the implementation of grant activities. Leveraged resources include cash or in-kind donations and may include federal funds such as WIA, TAA, as well as other public or private investments." In the California Corridor, CSA program managers reported that the region actually stopped reporting leveraged funds to ETA during the fourth quarter of 2008 because ETA and the state have yet to provide formalized guidance to CSA about the definition of funds that can be counted as leveraged, thus CSA has been unable to provide guidance to their partners on reporting leveraged funds.

In order to capture the full range of funds available to the regions and their partners, this report uses the term *Initiative-connected investments* to refer to what the evaluation's 2007 Interim Report called "leveraged funds." The evaluation's definition for both terms is the same: *any funds other than the grants that are specifically supporting grant-related activities or any project within the region that is directly related to the vision and objectives of the region's initiative.* This report uses the last version of ETA's leveraged funds report that conforms to this definition, compiled in August 2008. Because the data are not recent, the numbers may be artificially low, as regions may have secured additional resources that are not reflected here and may also be in the process of raising more funds. Nonetheless, these data include funds used for unallowable costs, which have enabled many regions to support planned activities that cannot be paid for with the grant.

By August 2007, the regions had raised over \$186 million in Initiative-connected investments (see Figure 4.3). Collectively through August 2008, the regions had increased their Initiative-connected investments to over \$294 million. Northwest Florida, Montana, and Mid-Michigan reported the largest amounts of non-Initiative funds available; in total, these three regions represent 69% of the Initiative-connected investments that the regions reported. The Northwest Florida Initiative has the most Initiative-connected investments, largely because it is structured as a grant-making organization that expends most of its funds in grant awards and requires grantees to match their award amount 100% (i.e., every dollar that is awarded to an Initiative-





Figure 4.3
Initiative-Connected Investments Reported to ETA

	Cumulative Through August 2007			Cumulative Through August 2008			
Region	Initiative- Connected Investments	% Total Investments All Regions	Initiative- Connected Investments	% Total Investments All Regions			
WAEM	\$550,000	0.3%	\$1,202,765	0.4%			
California Corridor	\$1,500,000	0.8%	\$686,217	0.2%			
Metro Denver	\$11,175,347	6.0%	\$11,213,165	3.8%			
Northwest Florida	\$6,700,000	3.6%	\$138,438,674	47.0%			
NCI	\$4,203,015	2.3%	\$9,651,456	3.3%			
Kansas City	\$8,811,000	4.7%	\$9,150,000	3.1%			
North Star Alliance	\$7,200,000	3.9%	\$9,200,000	3.1%			
Mid-Michigan	\$27,475,493	14.7%	\$30,693,755	10.4%			
West Michigan	N/A	N/A	\$528,000	0.2%			
Montana	\$33,988,782	18.2%	\$34,196,166	11.6%			
Finger Lakes	\$58,079,900	31.2%	\$21,214,400	7.2%			
Piedmont Triad	\$1,750,000	0.9%	\$2,868,958	1.0%			
Wall Street West	\$25,000,000	13.4%	\$25,448,501	8.64%			
TOTAL	\$186,433,537	100.0%	\$294,492,057	100.0%			
Average	\$15,536,128	9.10%	\$22,653,235	7.7%			

Source: ETA, current as of 8/4/2008

funded grantee results in an Initiative-connected investment of one dollar). Its Initiative-connected investments increased significantly from 2007 to 2008 in part because of the number of grant agreements that the region signed during the year and in part because the region considered the \$72 million cost of building a new airport .

For several of the regions (e.g., the California Corridor, and Finger Lakes), the amount of Initiative-connected investments appears to have dropped from 2007 to 2008. The decrease in California (and likely Finger Lakes as well) is because the region stopped reporting Initiative-connected investments, as mentioned above. A similar situation occurred in West Michigan, where again grant staff is not reporting all of the funds from other sources because of a disagreement about ETA's definition of leveraged funds. Other regions noted that their Initiative-connected investments had slowed because of changes in their grant activities. For

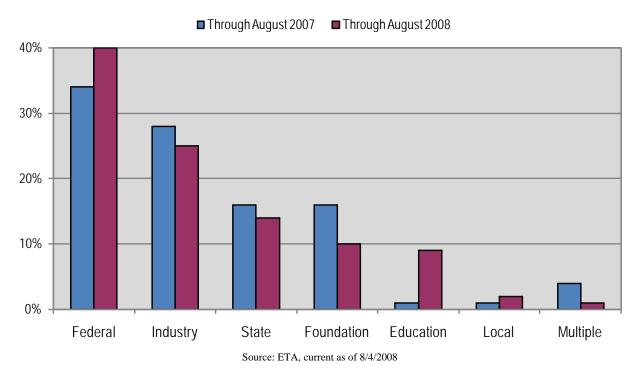




example, such contributions decreased in Wall Street West once the region realized that their efforts to complete a fiber optic connection to Wall Street would not be realized within the grant period. Similarly, Metro Denver's business partners lost interest in the initiative because the region had to refocus its talent development efforts on shorter term training for adults than the longer term pipeline issues industry is most concerned with, and this likely impacted Initiative-connected investments.

Figure 4.4 illustrates the breakdown of Initiative-connected investments across regions by type of funding source. The majority of Initiative-connected investments are from federal sources, followed by private industry, foundations, and state funds. This ranking is the same as was reported in the evaluation's first Interim Report, with one notable change: education funds – usually matching funds from school districts, community colleges, and universities for school-based Initiative-funded programs – now account for 9% of all Initiative-connected investments, as opposed to just 1% in 2007. This change reflects the increased emphasis on worker training adopted across all of the regions.

Figure 4.4
Initiative-Connected Investments For All Generation I Regions
By Funding Source





Summary

During the second year of the evaluation, the regions conducted a broad variety of activities aimed at transforming the regional economy. These included workforce development strategies such as job training, credential and certification programs, training for underserved populations, incumbent worker training, and training for "green jobs." Regions also provided services to strengthen local businesses and promote innovation through entrepreneurship such as entrepreneur training and technical assistance, business incubators, assistance for rural businesses, youth entrepreneurship training, cluster initiatives, small business assistance, and help in accessing investment capital. Finally, the regions used talent development strategies such as STEM programs for youth in high school, career awareness programs, and postsecondary programs.

While the regions were implementing these strategies, they strove to adjust their program activities and funding distributions to conform to the newly clarified H-1B funding restrictions. Similarly, ETA did not immediately make clear the measures that would be used to gauge progress in the regions, and the regions have thus also struggled to fit the progress they have made into the metrics. Metrics will be discussed in the next chapter, along with other measures of progress in the regions.



Chapter 5: Progress Reported by Generation I Regions

Given the breadth of the regions' goals and activities, the grantees discuss many kinds of progress in their quarterly reports to ETA. Some of the types of progress are described in other chapters of this report, for example, building partnerships and organizational collaboration, and implementing activities in support of the transformation of their local economies.

This chapter first describes the Initiative Accountability Framework and the quantitative measures that ETA is using to assess the outcomes of the regions; it then turns to qualitative measures for several specific types of changes within the regions. These include: 1) innovation; 2) progress toward regionalism; and 3) the sustainability of the initiative's efforts within the region after the end of the grant period.

Initiative and Regional Metrics

ETA developed the Initiative's Accountability Framework¹³ early in 2007 to provide guidance to regions on how to approach the process of measuring their success. The goal of the framework is to ensure that the grantees systematically capture their initiative's results and outcomes – both quantitative and qualitative – as well as any information that will help demonstrate their achievements and the value of their regional strategies to stakeholders. The three components of the Framework are:

- 1. The ETA Common Measures;
- 2. Initiative and region-specific metrics; and
- 3. The Initiative evaluation effort, of which this report is a part.

This section discusses the first two Framework components.

Common Measures

The Common Measures were designed to provide a singular definition for key outcomes measures for over 40 federally funded employment programs. The value of these measures is their ability to describe each region's achievement of the core purposes of federal workforce investments, i.e., how many people find jobs, whether they remain employed, and how much they earn. The Common Measures serve as outcome metrics for the regions' talent development goals. ETA acknowledged that the common measures are the conclusion of the "regional transformation success story" and not the beginning, nevertheless looking at these metrics is important because they allow for comparability across programs, which is why ETA uses them when monitoring all of its grants.

¹³ DeRocco, Emily. "WIRED Performance Reporting – Implementing Your Regional Accountability Framework (Generation I and II Grantees)," Memorandum to WIRED Regions, April 27, 2007.





Three measures apply to programs serving adults and three measures apply to programs serving youth. The adult measures include:

- Entered employment;
- Employment retention; and
- Average earnings.

The youth measures include:

- Placement in employment or education;
- Attainment of a degree or certificate; and
- Literacy and numeracy gains.

Unfortunately, very few of the regions even included the Common Measures in their quarterly metrics templates, and only one initiative (Piedmont Triad) reported its performance on these measures in its December 2008 quarterly report. Several factors may contribute to this lack of data.

First, calculating the Common Measures requires the initiative and/or its partners to collect Social Security Numbers (SSNs) from participants in order for the local or state workforce agency to access Unemployment Insurance (UI) wage records for the data needed to calculate the measures. This often is an issue with service providers who have concerns about the confidentiality of their participants' personal information.

Second, because employers may submit wage records up to three months after the end of a quarter, a significant time lag is usually involved in accessing the UI wage records. Several of the regions noted that this was the reason that they had not provided data on the Common Measures in their December 2008 quarterly reports.

Third, whether a state or local workforce agency is assisting the initiative in accessing the needed data, special arrangements will need to be made. Many state workforce agencies calculate the Common Measures only for the state as a whole. Similarly, local WIBs may calculate these metrics for their local workforce area, but most of the Generation I initiatives have a footprint that is larger than the geographic area for which a single WIB is responsible. In either case, calculating the Common Measures for the region is a separate step from what the workforce agency usually does.

Finally, the Common Measures were not designed to adequately capture information on the Initiative's networking strategies, or about training for entrepreneurs. Many entrepreneurs start out as self-employed, and thus their wage information would not be included in the UI wage records.

¹⁴ The North Star Alliance provided data on wages, but because many participants were incumbent workers, the region did not calculate placement and retention rates. Wall Street West referenced a separate Common Measures report, which the evaluation team was not been able to obtain.



₹UCSanDiego Extension always something new

As the regions approach the end of their grants, the data needed to calculate the Common Measures for their early years should become available. The evaluation team looks forward to discovering whether more of the initiatives are able to provide information about these metrics in their quarterly reports for December 2009.

Initiative Metrics

The Accountability Framework presented a set of performance measures for the grantees to use in their quarterly reporting. ETA provided an "Addendum" to its regular grantee quarterly reporting format specifically for the Initiative grants. This spreadsheet provides a template for the grantee to report on the Initiative metrics, which are organized into three categories – education and training, capacity-building, and economic indicators. Each category includes a number of metrics to be completed by all regions. The metrics template also includes space within each of the three categories for regions to identify their own measures of progress.

Site visit respondents made several observations about the metrics and the process by which they were rolled out; they suggest that both the metrics themselves and related communications have affected the consistency and quality of the data that the regions are able to provide. For example:

- First, ETA suggested that the grantees use the metrics presented in the Accountability Framework, but did not require that the regions use these measures.
- Second, the metrics were introduced a year after the grants started, and many regions thought that the metrics did not address the type of work they were doing at all.
- Third, ETA encouraged the regions to define and adopt region-specific metrics to tell their story to complement information gathered via the suggested metric framework.

Each region uses additional measures to document their progress – usually the metrics drawn from their grant proposals and implementation plans.

The remainder of this section discusses the three categories of metrics, and the data that grantees provided through December 2008.

Education/Training Measures

Data items in this category include: the number of individuals starting and completing workforce education and training programs using Initiative funds; the number attaining degrees, certificates, or industry certified credentials as a result of workforce education/training using WIRED funds; the number of individuals with Initiative-funded education or training who entered employment in target industries; and the region's total investment in incumbent worker training. Figure 5.1 shows the results that the regions reported for these measures in their December 31, 2008 quarterly metrics reports.

Across all of the regions, the total number of individuals to begin education and/or training courses using grant funds was 31,499. Of those who started education/training courses, 19,104 (61%) had completed training by the end of 2008. A total of 4,473 graduates of training funded by the Initiative had gone on to be employed within a targeted industry, or 25% of those who completed training. The figure also shows that 43,897 individuals attained a degree, certificate, or credential via training funded by the Initiative. The last column in Figure 5.1 presents the





Figure 5.1
Progress on Initiative Metrics by Region: Education and Training,
Cumulative Through December 2008^a

	# Began education/ training using Initiative funds		# Completing education /training using Initiative funds		# Attained degree, certificate, or credential using Initiative funds		# Trained & entered jobs in target industry		Total \$ invested incumbent
Region	Total	% of Target	Total	% of Target	Total	% of Target	Total	% of Target	worker training
WAEM	939	19%	132	5%	3,985	73%	N/A	N/A	\$4.10 million
California Corridor	1,687	125%	692	69%	63	119%	561	68%	0 ¹⁵
Metro Denver	832	35%	475	23%	429	29%	146	10%	N/A
Northwest Florida ¹⁶	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCI	13,641	156%	6,594	108%	1,044	151%	3,130	125%	N/A
Kansas City ¹⁷	1,207	123%	1128	115%	6,424	N/A	95	N/A	N/A
North Star Alliance	1,028	66%	256	16%	648	56%	170	15%	\$1.68 million
Mid-Michigan ¹⁸	3,662	177%	3,363	159%	2,841	222%	28	13%	\$120,000
West Michigan	110	32%	110	32%	24,094	48%	0	N/A	N/A
Montana ¹⁹	1,984	N/A	1,476	N/A	912	N/A	593	N/A	\$2.41 million
Finger Lakes	5,629	80%	4,106	59%	2,975	85%	N/A	N/A	\$9.2 million
Piedmont Triad ²⁰	80	N/A	16	3%	268 ²¹	60%	N/A	N/A	N/A
Wall Street West	700	47%	756	N/A	482	N/A	20	N/A	N/A
Total	31,499		19,104		43,897		4,743		\$17.51 million

^aSource: December 2008 quarterly reports received by ETA





¹⁵ The definition of total investment in incumbent training is disputed in the California Corridor, and the region's quarterly metrics report shows the amount as 0.

¹⁶ Northwest Florida does not report data ETA metrics table, and the figures detailed in the quarterly narrative report could not be translated into this format.

¹⁷ Kansas City metrics were calculated by adding up sections of the region's narrative report; the figures are likely to underestimate the actual totals. Kansas City's goals for certifications and entered employment were not available.

¹⁸ Mid-Michigan metrics were calculated by adding up the figures from the region's quarterly metrics report and may underestimate the actual totals.

¹⁹ Goals for Montana metrics were not available.

 $^{^{20}}$ Goals for Piedmont Triad metrics were not available.

²¹ Piedmont Triad has a Work Keys program, which explains the high figure compared to the number who began education/training using WIRED funds.

available data on the funds that the grantees invested in incumbent worker training. Overall, the regions reported spending \$17.5 million in training their partner's employees. For example, through the end of 2008, Finger Lakes spent \$9.2 million training employed workers, and WAEM spent \$4.1 million.

These numbers are likely to underestimate the influence of grant-funded training for several reasons. First, as Figure 5.1 illustrates, not all of the regions used (or reported) the ETA metrics, and some of the initiatives that did use them did not use all of the measures. Second, a number of regions provided relevant data about participants in a level of detail that was useful for internal tracking purposes but not for evaluation purposes. Others reported their metrics in only their quarterly report narratives. The evaluation team had to compile data for each measure from both of these types of reporting, which introduced the possibility that staff missed some data. Finally, inconsistencies exist in the data in that some regions did not appear to include participants who were involved in degree, credential, or certificate programs in their count of trainees who enrolled and completed training.

The number of individuals who entered training varied widely across the regions, from over 13,000 enrolled in NCI-funded training, to 80 in the Piedmont Triad. The extremes of this range represent the very different approaches that regions adopted in providing worker training, ranging from specific skill certification to college degree programs. Many of the regions had stated their goals for the number of individuals that their initiatives would train in their Implementation Plans, and Figure 5.1 also presents the proportion of their goals that the number enrolled represented. While WAEM had only enrolled 19% of their training goal, several regions – including the California Corridor, NCI, Kansas City, and Mid-Michigan – had already achieved more than 100% of their targets. Similar patterns held for the other measures included in the figure. Again, not all of the grantees had specified a target number for the employment and training measures because the initial emphasis of their implementation plans was on building collaborative relationships with partner organizations. As a result, quite a bit of data are missing on the degree to which the regions met their targets related to employment and training.

In addition to the suggested metrics, many of the regions added their own employment and training measures that reflected the specific activities in their local areas. Some of these included the number of: incumbent workers trained; participants co-enrolled in WIA; participants retained in employment for six months; low income/minority participants to complete the program; youth introduced to target industries; and internships begun and completed.

Capacity-Building Measures

These measures focus on the degree to which the initiatives increase the capacity of their partner organizations to improve the skills of the region's workforce. The measures that ETA suggested to capture this growth include:

- Number of educators prepared for instruction in identified industries, along with the projected number of additional students that will be trained annually as a result;
- New curriculum developed, and the projected number of additional students to be trained annually as a result;





- Work-based strategies developed or implemented (clinical experiences, internships, etc.), and the number of additional students projected to be trained annually as a result;
- Career guidance strategies developed or implemented; and
- Instructional equipment purchased with grant funds, and the projected number of additional students to be trained annually as a result.

As Figure 5.2 illustrates, only one region (NCI) provided data for all of these measures in its December 2008 quarterly report, and another (Metro Denver) reported on all the metrics but one. On the other hand, four regions reported no data for any of these metrics. The rest of the grantees provided data for some measures but not others.

The grantees were most consistent in reporting on the number of educators prepared for instruction in identified industries, the number of new curricula developed, and the number of students projected to be trained as a result of these two activities. The regions that provided data trained a total of 5,429 educators, and estimated that these instructors would in turn train 88,146 students per year. The initiatives developed 207 new curricula, which they projected would be used to train 6,278 students. Again, for most of the reasons cited above, these results are likely to underestimate the influence of grant-funded activities and should be considered cautiously.

Data availability is spotty for the rest of capacity-building metrics. One challenge may be that ETA did not define such services as "work-based strategies (clinical experiences, internships, etc.)," and "career guidance strategies," or clarify what might be included in instructional equipment. The information in Figure 5.2 about the purchase of instructional equipment seems to support this theory since in reporting on this measure, some regions provided the amount of funds they had spent on equipment, others indicated the number of pieces of equipment they had purchased, and yet another merely indicated that they had bought some without further detail.

The regions again tailored their quarterly reporting templates to include a substantial number of additional capacity-building activities, for example:

- California Corridor detailed 82 measures in 15 separate projects. The measures include a metric to track the number of supplier network transformation surveys completed, the incorporation of 150 innovation asset profiles into the California Corridor Connectory portal, and a minimum of ten new WIB partnerships supporting entrepreneurship.
- Montana included several unique metrics, including a measure to track the creation of a
 centralized information clearinghouse, networking contacts, oil seed production information,
 biodiesel production information, and Montana industry news. Another metric is a career
 pathway map that identifies all related job opportunities.
- Finger Lakes used a number of region-specific capacity-building metrics, including one to develop a specialized cadre of technology "business starters" and another to double business plan participation compared to the number of applicants for the region's 2005 contest.
- NCI 's quarterly metrics reporting template consists of four workbook pages in an Excel spreadsheet. One page summarizes the key employment and training measures discussed above, while the others include over 300 measures detailing the implementation of business innovation, talent development, civic leadership, and entrepreneurship strategies.





Figure 5.2
Progress on Initiative Metrics by Region: Capacity-Building,
Cumulative Through December 2008

Region	# Educators prepared for instruction in identified industries and	Projected # additional students who will be trained annually as a result	# New <u>curriculum</u> <u>developed</u> and	Projected # additional students who will be trained annually as a result	# Work-based strategies developed/ implemented and	Projected # additional students who will be trained annually as a result	# Career guidance strategies developed/ implemented	Instructional equipment purchased with WIRED funds and	Projected # additional students who will be trained annually as a result
WAEM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
California Corridor	286	N/A	15	700	4	9	3	N/A	N/A
Metro Denver	476	18,044	37	2,456	23	165	5	\$15,600	N/A
Northwest Florida ^a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCIb	175	9,399	58	1,639	3	111	2	\$97,800	9,141
Kansas City ^b	3420	29,138	8	366	N/A	N/A	N/A	yes	N/A
North Star Alliance	38	960	4	374	10	N/A	9	\$439,000	N/A
Mid-Michigan ^b	39	100	24	N/A	0	0	0	\$702,000	N/A
West Michigan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Montana	188	635	55	473	N/A	N/A	N/A	\$127,000	N/A
Finger Lakes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Piedmont Triad	529	11,075	4	270	N/A	N/A	1	n = 2	400
Wall Street West	278	18,795	2	N/A	N/A	18	N/A	N/A	N/A

^a Northwest Florida does not report data ETA metrics table, and the figures detailed in the quarterly narrative report could not be translated into this format.

^b NCI, Kansas City, and Mid-Michigan metrics were calculated by adding up figures from either the region's narrative or quarterly metrics report, and thus may underestimate the actual totals.





Because the capacity building measures were so unique to each region, compiling them across regions is virtually impossible.

Economic Indicators

ETA proposed that the regions report annually on a diverse assortment of measures that could reflect changes in the economic status of their local areas. In addition to the Common Measures, indicators in this group include:

- Number of new jobs created by occupation/industry;
- Average wage by industry;
- Unemployment rate;
- High school dropout rate;
- Retention rates in all public education institutions;
- Number of completers (received degree or certificate) in all public education institutions by industry;
- Academic achievement in K-12 based on No Child Left Behind test scores;
- Number of new business startups or expansions;
- New seed and venture capital investments;
- Government investments; and
- Patents.

Half of the regions provided no data for any of these measures and did not add measures more directly related to their efforts of their specific initiatives. For this reason the data for individual regions is not included in this report. On the other hand, the other half of the regions provided at least some information on the economic indicators, and five initiatives added individualized economic indicators. For example:

- Wall Street West includes the number of data center operators/site selectors/developers/financiers.
- Montana reports on the creation of a private equity investment group, the number of acres in oilcrop production, and business and job growth in the Tribal nations.

As mentioned above, summarizing measures of progress across regions is difficult if not impossible because of the degree to which the regions tailored their metrics to their initiative's implementation plan. The remainder of this chapter discusses important qualitative measures of progress. The next section explores the achievements of the Generation I regions related to innovation, followed by sections on regionalism and sustainability.





Innovation Transformation

Innovation is about change – change in practices, processes, and products used by people and communities to solve problems, deliver services, improve productivity, achieve efficiencies and, ultimately, transform practice. By 2009, the world has become a global innovation economy. Whereas the old globalism focused on choosing locations based on low-cost land and labor to produce high volume products, the new globalism focuses on finding places with innovation networks and commercialization capacity to support high-value innovation-based activities. Innovation is about creating and developing new economic assets in a marketplace. In short, innovation is the predominant focus of these transformative efforts.

In the context of the Initiative, innovation is first and foremost about changes in regional workforce and economic development strategies and practices. Stimulating innovative, collaborative initiatives to integrate high value-added strategies for business development and for workforce education and training can enhance economic growth. Such initiatives typically include creative approaches to engage new partners and funding sources that ensure sustainability.

From this perspective, innovation describes originality in the things people make, what people do, and how they do it. In the most expansive sense, innovation can characterize significant attitudinal and behavioral changes in a region – in other words, the way people think and the manner in which people act. In this report, the evaluation team used these many interpretations of innovation in analyzing the products, services, ideas, and actions of the regions.

The regions sought to enable transformative innovation in several different ways: support for innovative technological developments and business start-ups; new programmatic models; and social and organizational innovations. Technological innovation involves new or improved products and processes that generate revenue or reduce costs in traditional industries, or that represent technologies on which entrepreneurial start-ups can be built. With regard to programmatic innovation, all of the regions have been thinking outside of the box in designing and supporting their programs. Their approach has led to a variety of creative programs and strategies in regional cooperation, workforce development, STEM education, support for entrepreneurship, and other areas of concern to the regions. Importantly, the regions demonstrate innovation not only in the way the central partners in each region do their own work, but also in the way they encourage innovation in other actors at the edges of the network, for example, secondary school teachers, the state WIB, One-Stop case managers, businesses, and others.

Diverse Examples of Innovation from Regions

Below are some examples of the many ways in which innovation appears in the regions.

<u>Innovation in WAEM</u>. A key feature of WAEM's advanced manufacturing training and the Modern Multi-skill Manufacturing (M3) credential is the adoption of an innovative online training delivery system, an "anytime, anywhere training system." Amatrol, an internationally recognized provider of learning systems for technical education, offers a wide variety of manufacturing training modules based on national skill standards. Administered by the WAEM





Alliance, training and assessment for the M3 is organized around a series of Amatrol's virtual training laboratory modules. As an Internet-based system, the system allows workers to prepare for the M3 assessments at any location with broadband access – home, school, libraries, or the labs established at the WAEM colleges and allied high schools. Importantly, the online training modules may also be used for upgrade and individual skills training at an employer's worksite. The M3 credential is available to incumbent workers, dislocated workers, underemployed workers, and students seeking to certify their skills, whether or not they have taken Amatrol courses.

<u>Innovation in the California Corridor</u>. California Innovation Corridor's focus is not merely on increasing economic activity, it is on encouraging an innovation economy that creates an innovation infrastructure – an environment that fosters innovation, entrepreneurship, commercialization, and high value products and services that provide jobs with high productivity and that support a higher standard of living. The California Corridor has three goals:

- Innovation Support Create new companies and high-skill, high-wage jobs by designing a replicable and sustainable "innovation support architecture" to increase innovation and entrepreneurship. To this end, the region developed a Regional Innovation Economic Model, an inventory of "innovation assets," that is, the identification of best practices in technology transfer and commercialization, profiles of workforce skills needed for 21st century jobs, and a WIB toolkit describing the intermediary role workforce investment boards can play in supporting entrepreneurial companies.
- **Industrial Rejuvenation** Improve the international competitiveness of the region's supply chain by developing and executing a "Smart Supplier Strategy" that supports manufacturers, small businesses, and entrepreneurs in adapting to global manufacturing transformation.
- **Talent Development** Accelerate development of a highly skilled 21st century talent pool by creating pilot projects and activities to support a continuum of math, science, and engineering education (K-U), and lifelong learning relevant to the 21st century worker.

Innovation in Metro Denver. Several respondents in Metro Denver claimed that the initiative has caused a "buzz" about the regional economy, the targeted industries, and talent development in state and local policy circles, and noted that the goal of regional economic transformation has resulted in increased alignment of educational policy with workforce and economic development in Colorado. Recently, the state legislature increased general funds to support cluster-based economic development mirroring the Metro Denver efforts. The workforce and education systems have taken a broader view than in the past, are forming partnerships, and are changing in their thinking and conversations.

Innovation in Northwest Florida. At the time of the evaluation visit in late Fall 2008, Northwest Florida had just awarded six Workforce Innovation I Grants to the region's WIBs to provide innovative workforce training, including one to a rural WIB that planned to use its grant to facilitate student participation in a robotics competition in order to expose them to career possibilities in STEM fields. The RFP for the Workforce Innovations II grants had just been released. In reviewing these proposals, Northwest Florida has engaged an academic research institution to determine whether and how each bid connects with the analyses of the industry data. Finally, the Green Circle Bio-Energy wood pellet plant in Jackson County, recipient of an





Initiative-sponsored Employee Skills Training Grant, represents a successful and innovative use of the region's natural resources (pine forest plantations), existing transportation and logistics industry clusters (roads, rail, and ports, in particular, the Port of Panama City, Florida), and advanced technology for the production of energy wood pellets for use as a coal substitute in power plants. Production has already begun at what is expected to become the largest wood pellet plant in the world.

Innovation in NCI. Purdue University, a premier engineering and scientific research institution, leads the NCI region. This resource, coupled with Perdue's mission of community engagement as a land grant university, has translated into partnerships between academic researchers and industry practitioners to turn theory into practice. The preeminent example of this is NCI's Nanotechnology Transfer project. This project works with a pilot group of 14 advanced materials firms in which tool and die work is an integral part of operations. These firms are provided with a new nano-technology coating for the surfaces of their cutting tools, reducing wear and tear and waste, and increasing machinery productivity.

Innovation in the North Star Alliance. In Coastal Maine, the Advanced Engineering and Wood Composites Center (AEWC) at the University of Maine, Orono, is a partner of the North Star Alliance in the R&D Pillar. The Center is developing the next generation of cost effective, high-performance, hybrid composite materials. The Center has developed products ranging from bridge girders and power plant exhaust system components to skateboards. Participating industries include a vast range of enterprises that either make up or support the marine trades, or those that utilize advanced composite materials such as boat building, marine/waterfront infrastructure, building products, sporting goods, ballistic armor, and more. The fact that an initiative on the scale of the North Star Alliance has a commitment to consensus decision-making is also innovative.

Innovation in Mid-Michigan. An important partner of Mid-Michigan's Center for Entrepreneurship and Commercialization at SVSU is the Mid-Michigan Innovation Center (MMIC), a business incubator and networking resource. SVSU held an "Inventions to Market Day" (I2M) in Spring 2008 in collaboration with partners that included the Mid-Michigan Inventors' Group, a newly established nonprofit organization. At this conference, teams of SVSU MBA students competed to develop commercialization strategies for local inventors. In addition, Prima Civitas Foundation (PCF) awarded ten organizations with Entrepreneurs and Inventors Day grants.

Innovation in West Michigan. One of the most innovative strategies in West Michigan is not an individual project but rather the region's approach to funding innovations. WMSA uses an innovations portfolio management system to manage the development, prototype, and launch of all core initiatives, to ensure that products match the needs of area companies. The Innovation Lab approach creates "learning by doing" for all participating stakeholders in this region's initiative. The "Innovation Management System" includes a series of processes to receive, review, vet, and monitor progress for innovations and includes a stage-gate process (Go/No-Go decision points). Projects include three phases – concept definition, implementation, and sustainability. The stage-gate process provides a mechanism and criteria to continue to fund





projects or stop projects (not award further funding) without stakeholder support or that are determined not viable for other reasons (e.g., cannot scale or are not sustainable).

In addition, West Michigan funded the development of the first curriculum of its kind, focused on teaching students to be innovative. The curriculum includes three learning modules for different types of skills critical for innovation: 1) Synthesis" (the ability to see patterns and connections), a skill critical to developing innovative thinking; 2) "Iteration" (the ability to generate ideas); and 3) "Self-reflection" (the ability to reflect and self-assess past events to shape future actions).

Innovation in Montana. One of Montana's greatest challenges has been to overcome the vast distances that complicate all forms of program activity. Even when the content of training is fairly traditional, program operators have had to come up with innovative ways to make training accessible. As pure distance learning is not effective for most technology courses, Montana colleges are employing a number of hybrid options that

"The Montana Agro-Energy Program (MAP) lets us go beyond the tried and true things to ask what is really working and what is not. This is a rural frontier area. We need to be creative, and in fact we have been for a long time. MAP gives us an opportunity to honor that creative tradition. The whole concept is innovative. First, the initiative is truly regional. We have seen regional elements in specific projects, but never at this scale. Second, it's flexible, not one-size-fits-all in terms of service delivery and training options. Third, it is many-layered, with training, business development, and university research... So there's much more variety in what can happen." - Montana Job Service regional manager

combine hands-on and distance learning. One model involves students coming in periodically to see instructors face to face and practice on equipment. A second option is for the instructor to go to the student's home or place of business, as is done for the technical assistance portion of some rural business management courses. A third option is to take essential equipment on the road; an example is MSU-Billings College of Technology's mobile computer classroom and mobile equipment setup for hazardous materials training. Other examples from Montana are:

- Miles Community College (MCC) developed a two-semester certificate course in
 entrepreneurship that can be taken in person on campus, or through a combination of online
 and interactive TV courses. On-campus options are multiplied though cooperative
 arrangements between MCC and its Cheyenne and Crow tribal college partners. Classes
 from any of the partner colleges will be accepted and the certificate can be awarded from any
 of the colleges.
- Montana respondents cite one of their achievements as "learning to think backwards."
 Regional transformation efforts have fostered a practical awareness of industry targeting and demand linkages throughout the workforce system. Concepts that have traditionally been the province of specialists at the state level are being understood and put into practice at the branch office level. Local Job Service staff report that there is more "planning about what to do next" founded on a vision of the region's current and near-future industrial base. As one case manager put it, "Instead of just reacting, we are learning to think backwards. You start with the industrial base, trace the demand links between industries, and translate that demand into occupations. As the base shifts, new occupations come over the horizon. It's very powerful."





Innovation in the Piedmont Triad. One of the key successes that emerged during the evaluation's second visit to the Piedmont Triad was the involvement of the private sector and the initiative's ability to ascertain what the private sector wants and needs to create economic transformation. Private companies are heavily represented on the region's cluster roundtables and many representatives are high-ranking CEOs with limited free time. Grantee staff members believe that the willingness of busy people to continue attending these meetings indicates just how valuable they perceive these efforts to be. One of the most striking successes in bringing together private companies is the logistics and distribution roundtable. This roundtable includes companies who ordinarily are in fierce competition and would not work together, but they are now willing to collaborate so that they can have the competitive advantage of being involved in this effort early on.

Supporting and Using Business Incubators

Finally, business incubators are geared specifically for start-up companies and firms in the nascent stages of their development. Many of the regions have business incubators affiliated with or partially subsidized by this Initiative. For example:

- Kansas City leveraged a small investment of \$30,000 into a \$3 million dollar federal grant to operate a Regional Technology Transfer Network biotech business incubator with wet lab facilities located on the Kansas University Medical Center Campus.
- As Chapter 3 describes, Finger Lakes has developed a highly complementary and integrative
 network of incubators and research parks across the entire region which enables each to serve
 particular business development challenges and encourages referrals and resource sharing.
- In Mid-Michigan, the opportunity arose to take over a research and production facility that Pfizer, Inc. had closed down in the city of Holland. The MMIT received approval from ETA to shift \$500,000 of the funds allocated to Michigan State University for training to "repurpose" the Pfizer facility into an R&D and educational facility centered on the bioeconomy.

From its inception, the Initiative was conceived to be more than a series of job training programs. ETA leadership recognized that the existing workforce culture includes many attitudes and behaviors that need to be changed. At the core of the Initiative has been a commitment to transformation in the workforce system so that it will be better suited to the challenges of the 21st century economy. Fundamental to this type of transformation is how policy-makers, program managers, and citizens think about the alignment of talent and economic development at the regional level. Also fundamental is a focus on economic and workforce strategies that address the full range of existing and emerging industries and skill sets essential to regional prosperity. Ultimately, the regions are seeking tangible change in the way the U.S. develops the human capital so critical to global economic competitiveness.





Progress Toward Regionalism in the Generation I Regions

One of the major challenges facing the regions from the beginning of their grants was building a regional identity: an awareness of the region as a cohesive economic unit and a willingness to prioritize regional issues and goals. When the Initiative began, only a few of the regions actually had pre-existing structures for planning and making decisions *as a region*. For most grantees, implementation of the principals of regional economic collaboration and transformation required creating new alliances among agencies, organizations, and companies that had previously operated in isolation – if not in competition – with each other. They considered the city, county, or state as the relevant geographical context in which to make decisions that would influence economic and social well being. At the time of the 2007 evaluation visits, several regions were working hard – in some cases struggling – to create a regional identity that would be widely accepted among stakeholders. The extent of regionalism in Generation I regions grew between the 2007 and 2008 site visits, as discussed in this section. The majority of partners and stakeholders in these regions now recognize the interdependencies and opportunities that make worthwhile the considerable effort required to work together on regional priorities.

The concept of regionalism as used by social scientists is, first and foremost, an economic construct. It describes the economic interdependencies and synergies that characterize clusters of industrial or business activity in a particular geographical area. A particular supply chain may be the unit that defines a region – for example a core industry, such as automobile manufacturing, along with the companies that make and repair parts, as well as the caterers and accountants that serve them. A region may be an extended labor market, defined by commuting patterns in a metropolitan area. It may be a group of counties defined by the state as an economic development region, in which leaders have realized economies of scale by learning to work together across city and county lines.

Many argue that the advent of global markets, outsourcing, and the existence of the Internet make the discussion of geographically defined regions irrelevant. Economic and sociological data suggest that this is not the case. Experience has shown that most innovations still come about through face-to-face interactions among highly skilled individuals with diverse knowledge and interests. The importance of "place" is a reflection of the importance of people, their skills, and their ability to collaborate.

Increasingly, these highly interdependent and synergistic clusters of producers, suppliers, and labor are not limited to a narrowly defined geography such as a city or county – they are often spread across multiple jurisdictional and geographic locales. Central Michigan is a dramatic example: assembly plants in Flint and Lansing purchase components from a web of close to 200 suppliers distributed across multiple counties. Both the manufacturers and their suppliers draw on a labor pool made up of people who commute to work from farms and small towns. This *ecology of economic activity* can be identified empirically and, in many of the regions, was the factor that defined the region's geographic boundaries.

Some regions are not defined so much by geography as by a set of parallel, but not necessarily interdependent, economic activities and needs. The California Corridor provides a strong example of this phenomenon; its rationale as a region has to do with the commonalities within





the aerospace industry, and the knowledge and competencies needed from both its workers and its suppliers. Spread across more than 400 miles, the California Corridor is a collection of subregional clusters that share common characteristics. Thus, they have learned together and developed parallel, though not tightly interconnected, strategies for industry growth and workforce development. California Corridor is often referred to as a "mega-region" because of its size and complexity, and because of the loosely related but similar character of its economic and workforce activities. Recognizing the differences (and often the rivalries) among different areas within the region, this initiative's leaders did not focus significant effort on developing a unified regional identity for the Corridor. Instead they promoted cross-fertilization across different sub-regions within the Corridor. Numerous site visit respondents noted – and some were surprised to discover – how much they had learned though their involvement in collaborative activities, and the extent to which their own organizations had benefitted from that collaboration.

Nearly all regions have made significant progress between 2007 and 2008 in their "journey" toward regionalism. Examples include:

- Site visitors report that in Kansas City, regionalism while not yet universal has increased over the past year. Higher education institutions have become more collaborative in their non-Initiative ventures due in part to the relationships they developed through the initiative. Workforce partners in the metropolitan area have learned to "speak the same language" and have worked together to create "a common customer experience for both job seekers and employers." While some of their traditional rivalries remain, decreasingly these are a barrier to collaboration.
- In West Michigan, collaborative relationships that began under the initiative have benefited environment efforts in the region that were not funded by the grant. The Green Jobs Regional Skills Alliance will prepare West Michigan workers for jobs in the burgeoning alternative energy industry. The Clean Cities Coalition is another regional effort to expand local markets for alternative transportation fuels, refueling sites, and clean vehicle technologies. The Coalition also supports the development of alternative fuel corridor along the I-96 highway in West Michigan. The corridor will include both alternative fuel infrastructure and truck stops with idle reduction technologies.
- The area covered by NCI had never been considered as an integrated regional unit prior to these collaborative efforts. Recent developments have shown their willingness to think regionally, however. The two metropolitan areas in the region, traditionally competitive, have supported each other's efforts to retain the talent base in the region during a period of layoffs.
- When asked in 2007 about the prospects for regional transformation, respondents in the Piedmont Triad appeared not to believe such a thing was possible, nor even to know what transformation would look like. "We're working on transition," one said; "we'll have to wait and see about transformation." Asked the same question in 2008, another respondent was able to visualize successful transformation as "putting the region back in competition with Charlotte and the Research Triangle if the region transforms economically, kids will realize that they can stay here and get a good education and a good job."





- One of the most dramatic examples of growing regionalism is in the Finger Lakes region. In 2007, site visitors observed real tensions as members of the Governing Board debated whether the region should be branded as "Greater Rochester" or "Finger Lakes." Representatives of rural counties reported resentment that Rochester-based organizations were dominating the discussion. By 2008, two region-wide collaborative groups were operating significant projects; the region's WIBs were creating a Regional Skills Alliance, while the region's community colleges were creating a Regional Center for Workforce Excellence.
- Mid-Michigan is the region in which regionalism represents the most profound change directly attributable to the initiative. Looking closely at three points in Mid-Michigan history is useful to appreciate fully the magnitude of this region's journey:
 - o Prior to this initiative, the counties within the grant-identified boundaries had never been considered a region. In fact, the governor required them to come together as a region at the grant proposal stage.
 - O At the time of the 2007 site visits, regional identity was cited as the greatest challenge for Mid-Michigan. "Each of these communities has its own economy, requiring workers with varying education and skill levels. For example, Lansing is characterized by a highly educated, high-wage economy, while the economies of Flint and Saginaw are built upon small industrial supplier companies that use workers for manufacturing. Other parts of the region are rural, with economies driven by agriculture." Furthermore, at that time the Mid-Michigan partners had no shared vision about transformation philosophy and goals; they were principally aware of the funded projects that directly affected them. Respondents made statements such as "How do you get people to work together when they have different images of what a prosperous future looks like?" "What are the common concerns, future options and the central synergies?" "You can't take 100 years of history and wave a wand. How are you going to move this culture towards common goals and esprit de corps, when you have no regional council of government and these difficult jurisdictional boundaries?"
 - The major indicator of grant-funded change at the time of the 2008 site visits was of a growing sense of regionalism. As one respondent said, "It puts an extreme multiplier on all of our individual strengths." As a result of these transformation efforts, the state Department of Labor and Economic Growth has divided the state into 13 regions, promoting regionalism. The region has developed a shared vision and goals; the initiative has not yet been able to change the economy, but it did change the environment. "A culture of collaboration is now assumed and taken for granted." Respondents believe that, because of the increased regional collaboration this has fostered, their region will fare better in the current recession than will other regions of the state. They also expect their regional economy to recover more quickly than others, given their increasingly diversified economic base.

As the above examples suggest, the regions vary in the extent to which they themselves regard increased regionalism as being among their key successes. Yet nearly all regions have evolved between 2007 and 2008, with key partners learning to work together more effectively in a regional context.





Proximity seems to matter in new ways in the globally traded sectors. One of the challenges for several regions has been to identify the ways a region can interact effectively with global partners and customers. As one interviewee noted, "There was a time when you never had to make a long-distance call to get a customer." Boat builders in Maine, however, are now focused on the Chinese market, and producers of automobile components in Michigan are exploring global markets.

Expert analysts of regional economic activity have noted the importance of networks in fostering innovation and economic growth.²² Boundary-spanning networks that engage in meaningful collaborative activities tend to outperform those communities in which industrial, business, and workforce development sectors are isolated from one another.²³ In an era of high-paced global competition, decisions need to be made quickly; risks are high because of uncertainties about technology, markets, and competitors; and multiple resources need to be mobilized simultaneously.²⁴ Regional partnerships have the benefit of building awareness of their collective capabilities and resources. Together, more effectively than in isolation, they can learn about and respond to new opportunities. Having established the required underlying trust, they can move quickly, even with imperfect information.²⁵

For all these reasons, the progress the regions have made toward learning to think and act regionally – as well as across professional boundaries – will be likely to facilitate achievement of the goals they initially established. That progress is also likely to strengthen them during the current economic downturn and make the most of their regions' competitive strengths. Finally, increasing regional collaboration has fostered new and stronger relationships among partners, relationships that will continue to enhance the regions' ability to compete in a post-Initiative economy.

The next section explores in more detail the elements of sustainability in the regions. It discusses the factors that, in many regions, have improved the prospects for sustainability of the vision and grant-funded projects since the evaluation's 2007 site visits.

²⁵ Cross, R., A.B. Hagedon, and S. Parise. "Critical Connections: Driving Rapid Innovation with a Network Perspective," Network Roundtable White Paper, University of Virginia, 2005; Powell, Walter and Stine Grodal. "Networks of Innovators," in *The Oxford Handbook of Innovation*, J. Fagerberg, D.C. Mowery, R.R. Nelson, editors, New York: The Oxford University Press, 2005; and Springer, Berlin, Robert Huggins, and Hiro Izhushi. Competing for Knowledge, London: Routledge, 2007.





²² Gloor, Peter. Swarm Creativity: Competitive Advantage through Collaborative Innovation Networks, New York: Oxford University Press, 2006.

²³ Garcia, Maria. Social Capital, Networks and Economic Development: An Analysis of Regional Productive Systems, New York: Edward Elgar Publishing, 2006.

Audretsch, David. The Entrepreneurial Society, New York: Oxford University Press, 2007.

Sustainability

The regional initiatives may be sustained in a variety of ways, in a continuum ranging from the sustainability of the overarching vision to sustainability of specific activities. The evaluation used four points along this continuum to organize the various activities and evidence of sustainability in the regions, including:

- **Philosophical Sustainability.** The initiative represents a new way of thinking about economic competitiveness that considers human capital as a key element and the regional economy as its focus. The evaluation is looking for evidence that this philosophy is becoming a part of the ethos of regional actors tasked with and concerned about the economic vitality of their locales.
- Relational Sustainability. Collaboration is the heart of transformation efforts. The initiative has encouraged partners to act regionally across geographical and jurisdictional boundaries as well as cross-functionally across organizational and professional and systemic boundaries. To identify relational sustainability, the evaluation is examining the durability of each region's networks of stakeholders from different sectors working in concert and unified in purpose.
- **Institutional Sustainability.** Transformation of the workforce system is one of the chief goals of the Initiative. As the workforce system transforms, so can the various education, economic development, and other collaborators also undergo their own transformation by institutionalizing change within their own organizations. The evaluation team is exploring the extent to which the partner agencies adopt different policies and activities that promote collaboration. Additionally, institutional sustainability can refer to the extent to which the institutional home of grant activities will be able to carry on the region's work and support new regional partnerships after the life cycle of the grant is over.
- **Programmatic Sustainability.** The Initiative has spawned many new and creative training, education, support, and outreach programs and activities across the country. The evaluation is assessing whether these will be likely continue beyond the grant.

This section presents examples of each of these types of sustainability found in the 13 regions.

Philosophical Sustainability

During the 2008 evaluation visits, respondents in many regions noted that a philosophical shift was already taking place in the region's popular conscience. In Metro Denver, for example, the initiative has generated interest in the regional economy, the targeted industries, and talent development. Interview respondents reported that transformative principles have "changed the conversation" through its messages on regionalism, the talent pipeline, and aligning educational policy with workforce and economic development. In Kansas City, one interviewee noted that sustainability has been redefined in the industrial sector in a "a recycle-reuse-reduce model" in which workers in a declining industry (reduce) are retrained with new skills and cycled back into growing or emerging industries ("recycled") or are able to transfer ("reuse") their existing skills into new industries or new positions.





One of the California Corridor's industry partners described the palpable, albeit difficult to quantify, nature of philosophical change in that region: "There is a shift happening [in workforce/business relationships], but it can't be quantified and you can't put metrics to it." The first year he gave a presentation at the California Workforce Association's annual meeting, "they looked at me like I had two heads; nine months later, there was a good discussion. It's a huge shift. When they talked about the economic innovation model developed as a project, the WIBs said, 'Oh, okay, we understand that.' There's a better appreciation of being on parallel footpaths, or even on same footpaths, and out of silos."

Relational Sustainability

The evaluation's first Interim Report indicated that perhaps the most important measurement of transformation is not whether the specific strategies and activities started under the initiative can be sustained, but whether the underlying collaboration between disparate stakeholders to support economic innovation on a regional level is maintained. In all of the regions, partners have established strong boundary-spanning relationships, and site visit respondents in many of the regions reported that these relationships will endure. For example, the Maine Commissioner of Labor noted that the fundamental integration of services between economic development and workforce will continue beyond the end of the grant, as will the collaboration between Maine Department of Labor and the state Department of Education. All of these agencies have developed close working relationships with and through the North Star Alliance, and now have a shared trust and language upon which to build future collaboration.

Relationships have grown at the local level as well as the state level. Respondents in Montana stated that one of the biggest accomplishments of the Montana Agro-Energy Plan is that local Job Service staff members have established relationships with both the tribal colleges and Montana State University, Northern. As one respondent said, "We are now a lifetime partnership."

Regions have made varying progress towards institutionalizing relationships formed through participation in the Initiative. Northwest Florida's Entrepreneurship Council is collaborating with the National Business Information Clearinghouse to develop a web portal that addresses the core issues confronting entrepreneurs. The collaboration is one of two pilot demonstration projects funded by the U.S. Department of Labor. Wall Street West's Sustainability Committee, whose members have agreed to meet monthly, represents community leaders' commitment to developing the structures and momentum that will sustain the region's achievements.

In February 2008, Piedmont Triad invested in sustaining relationships by forming the Piedmont Triad Leadership Institute to build capacity in the region and bring others to the table. This group includes college presidents, hospital presidents, business leaders, university staff, and elected officials. Conveners have worked to ensure both representation across all 12 counties and a mix of "usual suspects" and emerging leaders. The group has met to explore the economy's needs and strengths, visualize the impact they could make, narrow down exactly what they would do, and develop an action plan, which they completed in September 2008.

The California Corridor's education and industry partners who served together on the STEMCAP committee and advisory board also collaborated to fund summer institutes in which





teachers and students can spend their summers working in NASA laboratories and at the Jet Propulsion Laboratory (JPL). Workforce partners in this region reported initial hesitance about collaboration. After two years of working together, however, these respondents reported positively on new partnerships formed, not only across systems, but *within* the workforce system as well. "We realized that businesses don't care which side of the county line services are on," noted one interviewee, "... we found out it's us (the WIBs) that are in the way."

On the other hand, competition among stakeholders for money and credit remain a barrier to sustainability in California. Partners heard a university in the region was pursuing a large grant to write a STEM education plan and urged the university to align its proposal with the already-written STEMCAP. "But, there are the usual problems with territory," one education partner said. "It would be best if, instead of developing a new plan, [the university] would have just taken STEMCAP, but then they would not have gotten the \$750,000 to develop a new plan."

Institutional Sustainability

Partner institutions have begun changing in various ways as a result of their participation in the Initiative. From the workforce system side, the Chair of the Montana State WIB has proposed rolling new transformation processes into the regular state WIB functions due to concerns about the sustainability after the grant ends. In addition, Montana's Governor has proposed creating a new bureau within the Department of Labor and Industry specifically to coordinate with the state's Office of Continuing and Higher Education, to institutionalize the link between the two agencies. In Michigan, the state has reorganized its cabinet so that the new Department of Energy, Labor and Economic Growth handles both workforce and economic development, ensuring that the mingling of these two priorities will be institutionalized in state policy.

Institutional sustainability is also a priority for regions attempting to ensure that the organizations leading these efforts will be able to carry on their work and partnerships after the life cycle of the grant is over. Some regions located their initiative within a pre-existing regional collaborative. For these regions – for example, West Michigan with the West Michigan Strategic Alliance (WMSA) – sustainability will occur simply because the same organization will still be in place to carry out the priorities. Staff in West Michigan emphasized that their goal is to sustain the work that has been done, which will be facilitated by the continued existence of WMSA and the funded initiatives rather than by the Core Team. WMSA was doing this type of work before the grant, and can be counted on to continue these efforts after the grant expires. Similarly, Northwest Florida's activities are congruent with the strategic plan of Florida's Great Northwest, and the organization will maintain them once the grant ends. In Mid-Michigan, the partners have always been thinking ahead. Respondents recalled that at the initiative's first meeting, a key stakeholder asked, "This is a three-year project? What should we do in year four?"

Institutional sustainability is a particularly important issue for the two-state regions. Kansas City's grant leadership is drafting a framework for a stakeholder "oversight group" of CEOs (chosen for their power to commit organizational staff and resources) to oversee the continuance of the work begun under the initiative, and the Executive Committee plans to recommend a proposed framework within the next year.





In WAEM, The Montgomery Institute is currently investigating the possibilities for transforming the present WAEM Governing Commission into a USDA Rural Investment Board with a mission to focus on regional development and talent development. Another example of institutional sustainability in this region is the WAEM Alliance, a permanent oversight and credentialing body for the M3 and other distinctly regional credentials that consists of the eight community colleges partners. Other functions of the Alliance are to support regional training programs and economic development projects, and to implement innovative training programs that are aligned with regional priorities.

The North Star Alliance Program Manager is currently drafting a proposed sustainability plan, which includes the recommendation that NSAI serve as the umbrella organization for the three separate industry associations, and be chaired by an elected member of each.

Programmatic Sustainability

The Generation I regions have adopted a range of strategies to ensure that the programs and activities they established remain after the ETA grant funding ends. These include embedding new programs and curricula in established colleges and universities, requiring sub-grantees to develop sustainability plans, identifying other funding sources to continue initiative activities, and lobbying for policy changes that will institutionalize key initiative strategies. These various approaches are discussed below.

Montana developed curricula for several courses related to bioenergy and supporting industries. Many of these short community college courses – such as welding, hazardous materials, lockouttagout, and similar training – are oriented to existing industries and are expected to be in steady demand after the grant ends. One respondent noted that these classes will have had three years to build a base of student interest by the time the initiative ends. Sustaining training initiatives for the biofuels cluster will require more public support, however, as those industries are still in their infancy. A likely source of future funding for biofuels classes based on grant-funded curricula is the state's Green Campus initiative, which, although it is not currently linked to the initiative, involves online classes, degrees in energy conservation, and conservation-focused facilities improvement.

Regions also have made structural changes to ensure programs are sustained beyond the grant period. WAEM's strategies include requiring sustainability plans from all partners; "mainstreaming" new community college courses and youth programs so as to ensure their continued funding through the educational system; and tailoring activities in order to be eligible for state and other funding. WAEM's MyBiz and Start It! cards programs were expanded to all of Mississippi, a move that will ensure a more stable funding base.

NCI partner organizations have incorporated key initiative activities into their ongoing programs, which will contribute to the sustainability of the initiative's efforts beyond the grant period. The Purdue Center for Regional Development (PCRD) will continue to support development, Ivy Tech will continue its STEM career training program, and TAP will continue to operate its Reach Centers and offer the services of business services consultants.





In Northwest Florida, grant funds have been used to methodically research, study, and analyze best practices for sustainability, including a study of targeted industry employers to be shared with the State Legislature in hopes of supporting the development of future regional efforts. In Mid-Michigan, the MMIT Steering Committee/Governing Board has taken on responsibility for exploring relationships with foundations, government, businesses, and others to secure long-term support for coordinated economic development within the region.

Integrated business service approaches developed under the grants also will help to sustain local programs and training. Parts of the WAEM region have been very successful in attracting new large manufacturing employers. WAEM colleges in these areas are reaching out to the industrial base for sustainable partners, not only as customers for training, but also as donors for expanded facilities. WAEM's emphasis on developing enterprise-ready communities has also created stronger long-term ties to local government in some parts of the region.

Regions have also attempted to ensure program sustainability by introducing features such as fees for services, rental income and membership dues for grant-funded projects. NCI required many of its funded programs to build-in mechanisms of sustainability in their program designs. For example, New Tech High in the Rochester Community School District is a demonstration site, charging fees to host tours and give workshops on how to institute a wall-to-wall high school technology program. The fees help pay for continued programming. Similarly, in West Michigan, funded projects are required to demonstrate plans for sustaining their work after the grant money disappears. Many of the region's activities, such as the Manufacturing Skills Cooperative and West Michigan TEAM, derive revenue from employer or participant fees that will enable the projects to be self-sustaining after grant funding is gone. The director of West Michigan TEAM reported that companies like the program because *they* fund it, so it won't "expire when the political winds change." Another self-sustaining product in this region is the grant-funded Innovation Curriculum, which includes three learning modules on key entrepreneurial skills. Twelve community colleges are now paying to use the curriculum.

The North Star Alliance established two training centers in Maine: 1) the Maine Advanced Technology Center focuses on composites and is operated by a community college; and 2) the Marine Systems Training Center focuses on various systems on boats and is operated by an industry trade group. Both training centers will continue to operate after the grant ends, funded by employers or workers paying tuition.

Some regions are attempting to sustain their work through policy efforts at the state and local level. In Wall Street West, several respondents highlighted the statewide efforts to support STEM industry career pathways in Pennsylvania high schools as a potential forum for continuing many of the region's objectives of demand-driven workforce development and regionalism. In West Michigan, the NCRC WorkKeys innovation is also being sustained through policy efforts in the education and workforce systems. In December 2007, the NCRC WorkKeys Innovation received a commitment from the Michigan Council for Labor & Economic Growth (CLEG) to develop an implementation plan for a statewide career readiness credential based on the ACT WorkKeys National Career Readiness Certificate (NCRC). In August 2008, Michigan's governor signed the School Aid Bill, SB-1107, which added "Locating Information" to the Michigan Merit Exam. Now all three of the WorkKeys tests will be given annually to Michigan





High School students, giving them the opportunity to earn a NCRC. Additionally, the Michigan CLEG committee endorsed making the NCRC the standard for all MichiganWorks agencies.

The evaluation's 2008 visits revealed that regions have attempted to ensure the work of the initiative through concerted efforts at philosophical sustainability, relational sustainability, institutional sustainability and programmatic sustainability. The final evaluation visits will likely uncover strengthened and new strategies in these areas as the projects conclude and as regional partners endeavor to enshrine the progress they have made towards regional economic transformation.

Summary

The accomplishments of the regions include systems to support innovation that are likely to benefit their regional economies in the years to come. Most of the regions have also taken steps to assure that the partnerships and activities they have created will continue to operate and benefit their regions after funding for their initiatives ends.



Chapter 6: Quantitative Measures of Progress: Changes in Extant Data Measures for the Generation I Regions

Introduction

The Generation I regions all focus on economic transformation through new integrated approaches to collaboration, innovation, workforce investment, and economic development. Each region has a strategy to achieve this goal that is based on the region's distinctive geography, assets, and economic history. Thus, the measures of progress that the evaluation is monitoring over time include a highly diverse range of variables. To supplement the qualitative measures that the evaluation is collecting through site visits, analysis of existing quantitative data allows tracking of progress over time on specific goals both within regions and across regions, using a variety of existing reliable metrics as indicators of progress.

The first Interim Report introduced a range of baseline indicators representing different aspects of long-term economic transformation, variables that are reliable and comparable across regions as well as years. These sorts of measures can provide external, independent, and unbiased information about the regions' progress toward economic and workforce system transformation. Success should result in many shifts in each region; therefore the evaluation needs to track many variables, examine many correlations, and look for leading indicators of change across a wide range of potential outcome areas. To this end, the evaluation team has been collecting data on a number of measures beyond the usual workforce metrics. Since the evaluation is intended to track progress toward goals as well as achievement of goals, the team has focused on factors that are leading indicators of change, and has identified sources of data that track innovation, transformation, entrepreneurship, and education and talent development measures.

The cost-effective way to achieve this in-depth analysis is to use data sets collected by others, usually for other purposes. The evaluation team has identified and selected national data sets, gathered at least annually using reproducible methods, and with geographic identifiers available so that data for the regions may be aggregated using zip code or county/state identifiers. When researchers use data in ways that were not envisioned by the gatherers, they must take care to identify any hidden assumptions that are not spelled out in the data dictionaries, and to assess the quality and completeness of all fields, particularly those fields that were not central to the original use. The evaluation team has been fortunate to enjoy the cooperation of nearly all of the third-party data providers in obtaining additional documentation of their data sets to ensure the validity of the data for evaluation purposes.

In order for the analysis of extant data analysis to be reliable, the data collected by the owner organizations must be uniform over the years (one of the criteria used in qualifying data sources), and the evaluation team methods must also be exactly reproducible, year after year, so that even small changes in measures can realistically be attributed to actual change in the region, and not to a change in data collection or analysis methodology. The evaluation's approach reflects these principles.





Many exogenous changes in the national (and international) environment are occurring and will continue to occur throughout the grant period. Ideally, to clearly identify the impact of the Initiative within an environment in which other changes are occurring, the evaluation team would need to compare the region with the grant activities in place to the same region without these efforts, over the same time period. As that is clearly not possible, the study compares each region to its host state, and observes the *changes in the difference between the region and state* over time. Did the region change more along certain dimensions than the state as a whole? While this approach is not perfect, it is feasible for all of the regions, and thus is the one the evaluation team used.

In the first year of this study, the baseline values for the selected indicators created a snapshot of the regions before transformation efforts began. The evaluation team again analyzed the full complement of indicators in the second year to track annual changes from the baseline values and thus assess the regions' progress across the various dimensions of economic transformation. The details of this analysis can be found in Appendix D. The reader should note, however, that the study team began these analyses by examining data from years just previous to grant award to determine the existence of any trends that might influence or confound the evaluation's measurement the grantees' success. Thus, the second year data represents the very early implementation of the initiatives, and expecting visible changes due to regional transformational activities is not reasonable, particularly given that outcomes for training activities may lag enrollment by a substantial period (e.g., graduation from a STEM academic program may lag a student's enrollment by two years for a community college degree, and by four years for bachelors' level program).

This brief chapter summarizes a few highlights from the evaluation's second analysis of extant data. Again, because of the short period for comparisons (2006-7 or 2006-8), drawing conclusions about the initiatives' influence on these measures is premature. The evaluation's Final Report will compare extant data over four years, providing a better picture of the regions' transformation.

Data Sources

The analysis presented in Appendix D compares regions to their host states for the baseline and following year for extant data metrics covering:

- Workforce Employment and Wages Data sources: National Bureau of Labor Statistics and U.S. Internal Revenue Service. Data items include
 - o Average annual wages;
 - o Number of employees by industry;
 - o Worker migration;
 - o Migration of adjusted gross income of workers.





- **Measures of Innovation and Commercialization** Data sources: Dun and Bradstreet, National Science Foundation, National Institutes of Health. Data items include
 - o Number of new business starts;
 - o Number and dollar amounts of federal Small Business Innovation Research (SBIR) and Small Technology Transfer (STTR) grants;
 - o Number and dollar amounts of NIH and NSF awards;
 - o Number patent applications;
 - o Number patents granted;
 - o Number of patents with foreign coauthors (measure of globalization);
 - o Number angel investor networks.
- Education and Talent Development Measures Data source: US Department of Education Integrated Postsecondary Education Data System (IPEDS). Data items include
 - o Total enrollment in two-year and four-plus-year institutions of higher education;
 - o Number of entering students;
 - o Number of degree completions;
 - o Number of degree completions in STEM subjects;
 - o Number of instructional staff;
 - o Number of new faculty hires.

Summary of Incremental Changes in Extant Data Measures

Regional transformation is likely to be reflected in changes in extant data measures over the course of many years, and single year-to-year changes would be small in most cases. Even so, the evaluation team's analysis showed some statistically significant, incremental changes in the period between August 2007 and the end of 2008. These are presented in Figure 6.01, which summarizes a comparison of changes that occurred over the period in each region to changes that occurred in the region's host states. The figure also includes the direction of the change in terms of achieving the region's goals, a description of the change, and the type of goal that the measure is addressing. For example, the figure shows that new business starts in the Finger Lakes region (related to the goal of increasing innovation) decreased significantly more than did new business starts in the state. On the other hand, the NCI region experienced a decrease in SBIR/STTR funding (another measure linked to the goal of increasing innovation) that was significantly smaller than the decrease experienced in Indiana as a whole.

These short-term changes should be cautiously interpreted for the reasons discussed above. Observing these measures over a longer period of time will provide more reliable evidence of the influence of each region's activities on its economic health, and the evaluation's Final Report will present the results of such an analysis.

110





Figure 6.1 Regional Measures Compared to State: Changes Between August 2007 & December 2008*

Region	Measure	Change**	Description of Change	Region's Related Goal
California Corridor	2-yr completions	•	Region/state down less than 1%	Create high skilled workforce
California Corridor	New business starts	1	Region/state increased 1%	Increase innovation
Finger Lakes	New business starts	•	100 fewer business starts in 2nd year	Increase innovation
Finger Lakes	Patent applications	•	Region/state down 3%	Increase innovation
Kansas City	2-yr completions	•	Region/state down 2%	Create high skilled workforce
Kansas City	2-yr entering students	1	Region/state up 1%	Create high skilled workforce
Kansas City	2-yr STEM completions	•	Region/state down but still above state	Create high skilled workforce
Kansas City	4-year STEM completions	•	Region/state up 3%	Create high skilled workforce
Kansas City	4-yr entering students	•	Decrease mainly due to smaller entering class in Univ. Missouri-KC	Create high skilled workforce
Kansas City	4-yr Instructional FTEs	•	Region/state up 3%	Create high skilled workforce
Metro Denver	2-yr entering students	1	Region/state up < 1%	Create high skilled workforce
Metro Denver	4-year completions	•	Region/state down 3%	Create high skilled workforce
Metro Denver	4-year enrollment	•	Region/state down 2%	Create high skilled workforce
Metro Denver	2-yr Instructional FTEs	•	Region/state down 4%	Create high skilled workforce
Mid-Michigan	2-yr completions	•	Region/state up 1%	Increase graduation rates
Mid-Michigan	2-yr Instructional FTEs	•	Region/state down 3%	Create high skilled workforce
Mid-Michigan	New business starts	•	Region/state down 2%	Increase innovation
NCI	Amount SBIR/STTR funding	++	Decrease in Phase II funding in state	Increase innovation
NCI	New business starts	•	Region/state down 2% from 7% to 5%	Increase innovation
North Star Alliance	2-yr entering students	1	Region/state up 1%	Create high skilled workforce
Northwest Florida	2-yr completions	1	Region/state up 1%	Create high skilled workforce
Northwest Florida	New business starts	•	Region/state < than 1%	Increase innovation
Piedmont Triad	2-yr entering students	•	Region/state down 4% but now in line w/enrollment	Create high skilled workforce
Piedmont Triad	2-yr Instructional FTEs	•	Region/state down 1%	Create high skilled workforce
Piedmont Triad	Patent applications	•	Region/state down 1%	Increase innovation
Wall Street West	2-yr entering students	•	Region/state up 3%	Create high skilled workforce
Wall Street West	2-yr Instructional FTEs	1	Region/state up 3%	Create high skilled workforce

^{*} All relationships shown are statistically significant at the 95% confidence level

^{**} Moderate change denoted by single arrow; more marked change denoted by two arrows)





Chapter 7: Workforce System Transformation

Transformation of the workforce system – fundamental change in how the system functions in support of regional economic growth – is crucial if the existing DOL/ETA system is going to operate successfully in an increasingly global economy. Today, new workforce challenges are constantly emerging and the rules for success are changing quickly. The workforce system must be "re-imagined" if it is to work smoothly and effectively with economic development organizations, the educational system, and business and industry to meet the demands of the 21st century economy.

ETA defined a vision of workforce system transformation for the Initiative (see Figure 7.1) that has the various components of the workforce system fully integrated with education and economic development, and fully aligned with the region's vision for economic growth. This chapter identifies some of the key indicators of progress in the integration and alignment of the workforce system, and provides examples of how transformation of the workforce system has begun to take place as the implementation of transformation efforts in the regions has unfolded.

Figure 7.1 Elements of Workforce System Transformation

- 1. The workforce system operates as a talent development system; it is no longer defined as a job training system. Its goal is an educated and prepared workforce on a U.S. or global standard.
- Workforce system formula funds are transformed, providing significantly increased opportunity for postsecondary education for lifelong learning opportunities aligned with the region's talent development strategy.
- 3. The workforce system no longer operates as an array of "silo-ed" programs and services.
- 4. The Workforce Investment Boards (WIBs) are structured and operate on a regional basis and are composed of regional strategic partners who drive investments, aligning spending with a regional economic vision for talent development.
- 5. Economic and workforce regions are aligned, and these regions adopt common and innovative policies across the workforce, education and economic development systems and structures that support talent development and the regional economy.
- 6. The workforce system is agile enough to serve the innovation economy, recognizing the reality that 2/3 of all new jobs are created by small businesses.
- 7. The workforce system actively collaborates with economic development, business and education partners to gather and analyze a wide array of current and real-time workforce and economic data in order to create new knowledge about regional economies. The system supports strategic planning, routinely tracks economic conditions, measures outcomes, and benchmarks economic competitiveness in the global marketplace.

Source: ETA, July 17, 2007





The Initiative and Workforce System Transformation

The regions were not initially charged with achieving the transformation of the workforce system. The November 2005 SGA¹ for the Initiative focused on supporting economic growth through regional collaboration, system integration, and innovation. Although the SGA referenced the need for the grantees to align their economic development efforts with workforce development and to create linkages with regional stakeholders, the SGA did not mention transforming the workforce system, nor even include an explicit requirement to include workforce partners in stakeholder partnerships.²

From ETA's perspective, however, strong linkages between the regions and the workforce system were clearly expected, and the Department saw a re-focusing of the workforce system within the framework of the Initiative – if not actual transformation of the system – as an important goal for the Initiative. The funding authority for the regions, the American Competitiveness and Workforce Improvement Act (ACWIA) that funds the H-1B visa program for foreign workers needed in the U.S., has as a primary goal the expansion of American workers' presence in high-skill and high-wage jobs. ETA leadership, therefore, may well have expected that any reader of the SGA would understand the importance of seeing the workforce system as integral to the regional effort, in order to meet the Initiative's goals.

As noted previously, the leadership and management of the Generation I regions largely comes from organizations outside of the workforce system; Finger Lakes and Montana are the only initiatives led by a workforce system entity. The other regions are led by organizations and partnerships from academia, economic development, community development, and industry. Several of these were managing a grant from a federal agency for the first time. The regions were surprised and, in many cases, quite taken aback, to learn – part way through the grant period and after their implementation plans were approved and operations were well underway – that they were expected to transform the workforce system in addition to accomplishing their other goals.

Several aspects of the workforce transformation to which the regions were expected to contribute – specifically, a regional approach to workforce development and collaboration among Workforce Investment Boards (WIBs) and business and industry – were already in progress around the country prior to implementation of the Initiative. Under the Workforce Investment Act of 1998 (WIA) – the funding authority for the workforce system – state and local WIBs, One-Stop Career Centers, and state workforce agencies were required to implement a number of collaborative efforts that are similar to those of the Initiative. For example, the membership of the state and local WIBs must include regional stakeholders, with a focus on employers (the law requires that a majority of WIB members be representatives of businesses). In addition, WIA

² "Regional stakeholders" were identified as "change agents representing an array of key interests including government, academia, business, community development and entrepreneurship." (Initiative SGA p. 10)





¹ DOL/ETA, Workforce Innovation in Regional Economic Development (WIRED) Initiative Solicitation for Grant Applications, http://www.doleta.gov/sga/sga/SGA-DFA-PY-05-04.pdf

encourages sharing of labor market information and coordination of service delivery across WIBs.

Furthermore, many state workforce agencies had already begun their own attempts at system integration prior to the Initiative. For example, the State of Michigan had already combined economic development and workforce programs into one department,³ and aligned the state workforce investment regions with its economic development regions. In Indiana, a realignment of the state's workforce development regions just prior to the grant award resulted in the creation of 11 Economic Growth Regions (EGR) overseen by the state's two WIBs; the boundaries of the NCI region were defined by the Governor's Office to conform to EGR boundaries. In North Carolina, both the North Carolina Commission on Workforce Development, the state's workforce development agency, and the North Carolina Economic Development Board were located within the state's Department of Commerce.

Other efforts to promote regional collaboration among WIBs were taking place prior to the Initiative. Over the last 15 years, California's Labor and Workforce Development Agency had increasingly encouraged local WIBs to take a regional approach to service provision and to use strategies that combine workforce and economic development. Such efforts, according to California Corridor respondents, laid the groundwork for implementation of transformation activities within the state, and prepared members of the workforce system at all levels for change.

The Indiana Department of Workforce Development had, in conjunction with the reconfiguration of the state's workforce system, launched the Indiana Strategic Skills Initiative (SSI). This state initiative funded regional level research to identify skill shortages, understand the local economy, and assess areas of job growth. NCI respondents characterized the SSI as a "macro version of each region." SSI prepared Indiana's public workforce system for the types of change brought about by the Initiative; according to one respondent, the Initiative "only accelerated the process." In several other regions, WIBs had already started to collaborate regionally prior to the Initiative. For example, in Finger Lakes, the One-Stops had met at the regional level, and in Northwest Florida, five of the six WIBs in the region were already meeting regularly as a group before the grant began.

In addition to these early moves toward promoting regionalism within the workforce system, soon after the Initiative was underway DOL/ETA began an effort to support vertical integration – the alignment and collaboration among all workforce system entities in a state – and to transform the workforce system into a talent development system. ETA's "Driving Transformation" initiative focuses on four areas that influence the ways these entities approach planning, program implementation, and service delivery:

- Workforce system structure and governance;
- Diversification of workforce funding;

³ The Department of Labor and Economic Growth (DLEG). On December 29, 2008, Michigan created a new agency, the Department of Energy, Labor & Economic Growth (DELEG), combining workforce and economic development efforts in order to prepare for Michigan's new energy economy.



₹UCSanDiego Extension always something new[™]

- Understanding the economy and the talent pool; and
- New service delivery strategies for One-Stop Career Centers.

As part of the Driving Transformation initiative, ETA has held transformational forums and workshops across the country over the past two years, creating considerable awareness of the concepts associated with workforce system transformation, and sharing knowledge regarding strategies and approaches. Thus, any efforts by the regions to achieve the transformation of the workforce system have not occurred in a vacuum.

The following section looks at the concepts embedded in "The Elements of Workforce System Transformation," and provides examples of progress toward such transformation that may be occurring in the regions.

Progress toward Workforce System Transformation

Between 2007 and 2008, the workforce systems within these regions made significant changes in their operations. They have made progress toward workforce system transformation, but their preliminary steps toward the desired goal may not (yet) rise to the level of "transformation." In other cases, transformation is observable, but reaches only some parts of a region or some components of the system. The steps toward transformation reported here are organized by the "Elements of Workforce System Transformation" shown in Figure 7.1.

Emphasizing Talent Development and Lifelong Learning

A key element of transformation is that the workforce system is aligned with the education system and has an increased emphasis on talent development. The workforce system of the 21st century must, in addition to developing a trained workforce for the jobs of today, also seek to develop an *educated* workforce that, in alignment with regional economic development efforts, is prepared for the jobs of tomorrow. The Initiative stresses that the workforce system must go beyond being simply a collection of job training programs. It must not only train workers in job skills, but also provide them with educational opportunities that will help them succeed in employment and career advancement in high-growth fields.

One example of the workforce system taking on this responsibility is in the Northwest Florida region, where the WIBs – key players in all of the region's activities – play a particularly important role in talent development. The WIBs work closely with the secondary school Career Academies which must, as a condition of their grant funding from the Northwest Florida region, work closely with the WIBs and the One-Stop Career Centers to ensure that the skills training they provide is relevant to the employment needs of businesses in the region. In another example, Northwest Florida awarded \$150,000 in Workforce Innovation I grants to the region's WIBs to train individuals in the skills and competencies needed by the targeted industry sectors. The initiative in Northwest Florida requires a 100% match from award recipients, meaning that the WIBs themselves made a comparable investment in this talent development effort.





Progress has also been made in the Wall Street West region, as the workforce system evolves from its traditional role as a job training system into a genuine talent development system. The Northeast Pennsylvania Business Education Workforce Partnership Transformation Initiative (NPBEWPTI) brings together the five WIBs in the region with 69 school superintendents, four business education partnerships, and the state Department of Education. Their goals are to develop business education partnerships, implement structured career exploration models, tailor K-12 curriculum to meet industry needs, and provide a regionalized career pathway awareness program throughout the nine-county region. The Lehigh Valley Workforce Investment Board is the lead organization for this grant-funded effort, and participation in the grant is perceived as having opened the WIBs up to working region wide with industry and education partners to achieve common goals and "actually change the face of education."

In Kansas City, WIBs have made a concerted effort to encourage training in career pathways in the targeted industry areas. In particular, the Workforce Partnership, in Kansas City, Kansas, has had success in reaching out to hospital human resource staff to identify incumbent workers who are moving up career ladders (CNA to LPN to RN) as candidates for training. They also were successful in working through training providers who had relationships with industry. According to one respondent, "Although there are still barriers to innovation within the system, the numbers are starting to kick in."

In the Finger Lakes region, the grant supports a highly regarded industry education partnership. The Finger Lakes Advanced Manufacturing Enterprise (or FAME) is a grass roots organization led by a manufacturing executive. FAME works with educators to shape pipeline development and assure long-term improvement in the quality of the preparation youth have received by the time they are ready to apply for jobs.

The workforce system in the California Corridor region partnered with education and the aerospace industry to support a highly successful pre-engineering training program at El Camino College. The program provides technology-based education to high school students under concurrent enrollment in the college's technical programs. Over 1,200 students have attended the pre-engineering Project Lead the Way courses on campus and at partner high schools.

The Montana region has built partnerships that have multiplied the training options for participants. The workforce system has begun to work more closely with community colleges and four-year colleges, making a greater variety of both long-term and shorter-term training available. Similarly, the initiative has helped front-line case managers look beyond particular approaches to funding, and has expanded the use of supportive services to make training work for the participant.

Eliminating Silos

Like many other service systems that provide an array of programs and services funded by various sources that have different eligibility requirements, and reporting and accountability responsibilities, the workforce system has tended to operate as a collection of siloed programs (such as WIA, Wagner-Peyser, UI, and Apprenticeship). Transformation involves not just coordination of the siloed workforce programs, but true collaboration across program





boundaries, so that all programs can operate at maximum efficiency. Bringing together funding from the different silos is a particularly important – and especially difficult – challenge in accomplishing collaboration.

In 2008, the State of Michigan made a strategic decision to emphasize education and training rather than reemployment, making "a radical shift from a traditional structure organized by federal funding source and program to a structure organized by customer and strategy." Within its Bureau of Workforce Transformation, Michigan now combines traditional workforce programs such as the Michigan Talent Bank and Veterans Services with career education programs such as Postsecondary Services and Adult Education, and employer programs such as the Regional Skills Alliances (RSAs). Both the Mid-Michigan and West Michigan regions are highly involved in the RSAs, which are industry-driven networks/partnerships in high-demand fields that focus on jobs and job training that will promote economic growth. Through the Information Technology RSA, the Mid-Michigan region signed a \$100,000 contract with the Capital Area Works! WIB to provide on-the-job training in IT at a Lansing-based corporate server farm. In West Michigan, the West Michigan Strategic Alliance was recently awarded a \$20,000 grant to serve as the convener for the region's Green Jobs RSA, through which WIBs and other partners in the region will collaborate, and which will focus on jobs making alternative energy components and jobs supporting the production of alternative energy.

Operating on a Regional Basis

Before the workforce system can operate on a regional basis, a change in the ways the different individuals and organizations in the system think of themselves must occur. Instead of considering themselves as separate – and possibly competing – entities, they must recognize that while their local concerns are important, they are at the same time part of a bigger picture. They must see the benefits in both efficiency and effectiveness that they can achieve by combining resources and acting collectively. In addition, where a region's partners include multiple WIBs, they can free up resources for training and other direct services to customers by coordinating activities, avoiding duplication of effort, and sharing responsibility for common administrative activities. As one respondent in the California Corridor region said, "Before this, [our board] focused on [itself], now we look at things at a regional level; it's not tunnel vision like it was before." Another noted: "[The Initiative] led to asking why everybody is doing the same thing, why there is so much duplication of effort?"

The lead organization for the effort in Finger Lakes is RochesterWorks, one of the three local WIBs in the region. When the initiative began, the role of the other two WIBs was not clear; however, the three WIBs have a history of being cooperative with each other, and had already developed regional connections. By 2007, they were talking about acting regionally in a number

⁵ Also based in the Bureau is the Governor's No Worker Left Behind Initiative, which redirects state and federal worker training dollars to tuition payments at any Michigan community college or other approved training program, for use by displaced workers who need training in high demand skills while receiving unemployment benefits.





⁴ "State Announces New Bureau of Workforce Transformation: Unprecedented re-design will drive change to a system of lifelong learning; Radically restructures workforce efforts." Michigan Department of Labor and Economic Growth, January 17, 2008.

of ways, including: establishing common eligibility standards; streamlining processes for selecting training providers; combining performance accountability efforts across the region; and making sure that funding requests to the state were done on a regional basis rather than by a local WIB. They now are operating one of the region's major funded projects, to develop workforce system initiatives that are sustainable, region wide, and transformative.

In Spring 2007, recognizing the importance of creating regionalism as a core value within the workforce system, the North Carolina Commission on Workforce Development offered Regional Collaboration Grants to provide incentives and support for regional planning and to encourage local workforce development boards (WDBs) to join with each other and with economic and workforce partners to do regional strategic planning. Although thinking beyond geo-political boundaries was already common practice for most of the WDBs, the desired outcome of the grant program is the development of processes and infrastructures that would formalize regional collaboration. The six WDBs of the Piedmont Triad Region (with help from the initiative) are tasked with determining how to build a regional structure, how to make decisions on a regional basis, and "how to be 'one voice' when you need to." Among other efforts, the Triad WDBs have built a regional web page to reflect their regional collaboration. They periodically operate regional "virtual job fairs" in which dozens of companies have on-line recruiting "booths" and hundreds of job seekers can learn about the employers that are hiring and submit resumes to them.

All five Wall Street West WIBs are active in transformation efforts funded by the initiative, which has made a significant investment in the region's workforce system through the grantfunded WIB Collaborative. The Collaborative's goal is to bolster the workforce pipeline to financial services and information technology occupations and increase educational attainment levels by providing opportunities for individuals to attain higher degrees. To date, the Collaborative has established a common individual training account allocation, agreed on common rules governing details such as length of training, and developed common forms such as the training application. According to one respondent in the region, the important "residual benefits" of these investments include the improved relationships they have developed by working together. The challenge is ensuring these relationships are sustained even without funding when the grant ends.

The five Wall Street West WIBs have also come together on a proposal for \$500,000 and match for \$1 million to provide a regional training program for workforce development. The WIBs came together easily; "Everyone got on board with the idea." Previous interactions between the WIBs and the economic development groups had typically occurred at a sub-regional level rather than region-wide; however, regional collaboration for this program has generally gone well. Most respondents in this region understood that progress would take time and that the objectives would be met over the long-term.

In some areas, regional structures exist in which the WIBs can and do operate, and some local WIBs have formed regional workforce alliances to coordinate their efforts across jurisdictional boundaries. This allows them to coordinate their efforts, and work more effectively together to address regional labor market needs. For example, in Metro Denver, the local WIB directors of the seven counties in the Denver metropolitan area convened voluntarily just prior to the start of the grant, to look at aligning services and addressing broader needs. Since then, the group added





representation from Larimer and Weld counties, mirroring the Metro Denver nine-county region. In West Michigan, prompted by the governor's Regional Skills Alliance program, WIBs in the region are now collaborating on both the Health Care Regional Skills Alliance (RSA) and the Green Jobs RSA, partnering with employers and educational institutions to train the region's workers for jobs in these industries.

Serving the Innovation Economy

To support the innovation economy and in collaboration with other partners, the workforce system must be actively engaged in nurturing the creation and development of new businesses, especially small businesses, in the region. That means they must "aggressively" promote and support entrepreneurship in the region. Learning to work effectively with entrepreneurs and small businesses requires the workforce system to move quite far from its traditional role of – and funding streams for – helping individuals find and maintain employment and providing businesses with the trained workforce they need. In most of the regions, the workforce system has been a participant in, although not often an initiator of, programs focused on entrepreneurship.

The grant-funded Center for Entrepreneurship and Commercialization at Saginaw Valley State University has 20 partners in the Mid-Michigan region involved in small business support, business incubation, and entrepreneurship. One important partner is the WIB for the Thumb Area of the region that has developed a special focus on entrepreneurship. Among its other projects to support economic development initiatives in this very rural part of the region, the ThumbWorks! Michigan Works Agency hosted an Inventors Day to promote and facilitate inventions and innovations in the region and to develop resources (e.g., potential investors, non-financial supporters) for continuing the development of innovative, entrepreneurial opportunities.

In virtually all the regions, services are being provided to the innovation economy. Chapter 4 reported that many of these were entrepreneurship and business services, as well as green jobs. Where WIBs are active partners – and where their staff and board members serve on collaborative steering committees – they are actively involved in supporting and shaping these efforts.

Collaborating with Economic Development, Business, and Education Partners

According to the "Elements of Workforce System Transformation," in a transformed workforce system, workforce development is aligned with, and integrated into, a vision for the region's economic development and growth. Members of the system see themselves as – and behave as – integral partners in a regional economic vision. Collaboration is key to the start of the transformative process. Many workforce system partners in the regions have made strategic collaborative partnerships a high priority, in recognition of their common interests with economic development, business, and education partners.

One important collaboration involves the cross-membership of the initiative's key players and of the WIBs themselves. Most of the regions include WIB chairs, directors, or staff in leadership and governance positions, often as members of the Steering Committee (e.g., Piedmont Triad,





Mid-Michigan). Similarly, in almost all of the regions, the WIBs in the region include initiative partners as members (e.g., Finger Lakes).⁶

In a number of the regions – such as NCI, the Piedmont Triad, West Michigan, and Mid-Michigan – the state's workforce and economic development agencies are formally aligned because they are both based in the same state agency, or because the geographical boundaries of the WIBs are aligned with those of the state's economic development regions. Such organizational and jurisdictional alignment of workforce and economic development areas communicates a clear message to staff and the public, underlining the fact that both systems have shared goals, and facilitating collaboration between the two in addressing these goals.

In those states where such restructuring or realignment predated the Initiative, the workforce system's alignment with a regional vision for economic growth was clearly advanced through the efforts of the regional initiatives. For example, the successes of the regions in Mid-Michigan and West Michigan (and the Generation II region in Southeastern Michigan), caused the concepts of collaboration and regionalism to take firm hold in the Department of Labor and Economic Growth (DLEG) and become a strong focus for the state agency overall. DLEG also increasingly emphasizes talent development; within the agency, the state has created a Bureau of Workforce Transformation, which helps individuals not only obtain employment but also acquire the skills needed for "the jobs of today and the future."

In some regions, separate economic and workforce agencies have – as a result of these transformation efforts – formed partnerships and adopted common policies across the workforce, education and economic development systems that support talent development and the regional economy. Metro Denver, for example, has forged a partnership with the Governor's Office of Policy and Initiatives (OPI) to help strengthen STEM skills for all students in Colorado. OPI will communicate STEM skills development programs to high growth industries, the public workforce system, K-12 educational institutions, and higher education. Additionally, OPI will collaborate with partners to connect the Governor's P-20 Policy Council's education policy goals and the goals of the Colorado Department of Labor and Employment to economic development organizations, and will work to communicate the goals and objectives of STEM policies throughout the nine-county region. The grant provided funding of \$100,000 to leverage a \$500,000 STEM grant that the Governor's Office received from the National Governors' Association.

Almost all California Corridor respondents named new partnerships – and the unexpected value of those partnerships in meeting the goals of their own organizations – as among the top benefits of participating in the Initiative. One example of successful partnerships that was noted often was the pairing of WIBs and economic development entities on specific projects. These new partnerships are fostering better understanding of the economic development community among WIB staff, and of the workforce community within economic development agencies. A key

⁶ Several WAEM partners are members of Alabama's Workforce Development Councils, which are sub-regional entities within the 65-county WIB that covers the non-urban areas of the state. Although they are different conceptually, these Councils have a number of responsibilities similar to those of a local WIB, such as oversight and fund disbursement.





aspect of the collaboration with the WIBs has been the region's work with the California Workforce Association (CWA) to incorporate the "Innovation Agenda" into CWA activities. The effort addresses the lack of a common language and set of tools for local workforce agencies, and the need to recognize the different levels of "sophistication" among the WIBs in the Corridor. Additionally, CSA included workforce system partners in almost every project undertaken under the grant, and every quarterly meeting of the CWA had something on the agenda related to the grant. CWA has used the WIB Toolkit developed under the grant as way to get everyone talking about the role of WIBs in regional collaboration.

Piedmont Triad successfully launched the TriadWorks Project, a collaborative initiative of six WDBs in the region. In conjunction with the project, the WDBs have come together to promote regional economic development, building upon each individual WDB's strengths, and committed to building a workforce and support system for the region that can meet the needs of any employer in the world. One of the major successes in Piedmont Triad is the initiative-led Piedmont Alliance for Triad Health (PATH), which works directly with health care employers to address their workforce needs. It serves as a model for the state's effort to support Regional Skill Partnership development in other industry sectors. The Partnership is over 30 members strong, supported by the six WDBs, eight community colleges, and currently 12 employers, and is strongly positioned to secure funds that will assure sustainability beyond the grant.

Kansas City respondents report that "one of the most innovative things" they are seeing in the region is that the workforce system has begun listening to businesses, which "had not occurred much in the past." Participation of the workforce system in these efforts has redefined how the system is perceived by industry. One respondent in Metro Denver made a similar observation, that industry in that region is beginning to see the workforce system in a different way: "Industry, education and workforce partnerships are incredible...the players have shown a real commitment."

Similarly in NCI, partnerships between the workforce system and industry have developed and deepened. In the opinion of one respondent, the workforce system has moved from being reactive, whether to good news (plant openings) or bad (plant closings), and is becoming more proactive in working to understand the workforce needs of business and industry in the region, and to address them through training and education.

Challenges to Workforce System Transformation

As noted above, fundamental changes in how the workforce system operates – and thinks of itself – are needed if it is to continue to operate successfully in the 21st century global economy. Evidence can be seen that some progress has been made toward such transformation in the regions, in many cases thanks to these efforts. Many challenges remain, however, including those described below.





Challenges Attributable to the Economic Downturn

The economic downturn that became acute during the last half of 2008 has begun to dominate the thinking of workforce system leaders, along with other Initiative partners and stakeholders. They have begun asking each other questions such as the following: How do you ensure positive employment outcomes during times of rising unemployment? How does the workforce system achieve the training needed to reorient frontline staff to new ways of thinking during a time of severe economic downturn such as we are in today? At a time when unemployment is sharply rising, businesses are folding, and layoffs are spiking, how do staff at the One-Stop career centers and other front-line people in the workforce system keep their focus on developing the talent pipeline, working with industry to create new jobs, and thinking about economic growth over the longer term? Neither leaders in regional transformation nor the nation's top economists can provide easy answers to this set of seemingly overwhelming challenges.

In Northwest Florida, one respondent believed he had a partial answer. This region is characterized by very close collaboration between the workforce system and the economic development professionals who work within the lead organization. According to this respondent, the lead organization told the workforce system professionals that they should take care of immediate needs, and that activities supported by the initiative would take care of the long-term. Another possible answer is for WIBs to look for opportunities to support others in the region who are building the support systems that will facilitate economic recovery. They must also keep in mind that talent development in support of growing industry clusters is crucial to long-range economic growth.

Challenges to Regional Cooperation among WIBs

WIBs in a few regions are struggling with how they should balance the unique challenges and opportunities they confront at the local level with the use of common strategies, policies, and procedures for approaching challenges and opportunities across the region. They question how local-level entities in the workforce system can engage in regional thinking and collective action, while at the same time meeting their responsibilities under WIA to address WIB-level needs. For instance, in Metro Denver and in Missouri and Kansas, WIBs are reluctant to follow the Indiana model, in which they moved from local WIBs to a larger regional body. While they may be able to *cooperate* with other WIBs in the region, they fear losing their autonomy and worry that their focus on local issues will be diminished. Additionally, individual WIBs may have difficulty making sense of conflicting mandates in regions where the state's WIA jurisdictions do not match up with its geographic and economic development regions.

In some cases the extent of partnership achieved through transformation efforts, and even the ability to partner at all, was highly dependent upon the existing structure of the state workforce system. In several regions, the structure of the state's workforce system was not a good match for efforts to work collaboratively (for example, WIB boundaries and initiative-defined regional boundaries did not sufficiently match), or the state's priorities for the workforce system limited any efforts with regard to economic development or regional collaboration.





Challenges to Collaboration Across Professional Boundaries

To accomplish the goals of transformation, true collaboration – and not just a token effort – is needed among workforce professionals, educators, economic developers, and business. In some of the regions, workforce and economic development people work closely together, following a shared vision and recognizing their common goals. In others, however, efforts to work together have not reached that level. In one region, site visitors heard from workforce professionals that, although they had been invited to participate in some initiative activities, the invitation came too late and they were not offered a meaningful role: "We came as partners but were turned into stakeholders."

Some workforce professionals were deterred from collaborating fully with economic development organizations because they felt "stretched" to address competing priorities simultaneously. They expressed concern about working to achieve the economic development goals while at the same time working hard to meet the federal requirements to provide training to help individuals obtain high-skill, high-wage occupations. They worried that efforts diverted to economic development concerns would leave them unable to address the OMB Common Measures. In other regions, the structure of the workforce system within the state was not well suited to collaboration, or the state's priorities for the workforce system did not include economic development.

Another concern about competing priorities was highlighted by the views expressed by one respondent from Kansas City. The challenge for the public workforce system, according to this respondent, is the need "to transform from an order taker to an order maker." In other words, the system needs to select the markets they are going to serve based on research and on employer needs and opportunities, rather than shaping its services based on the workers and job seekers who "happen to walk through its doors." This point of view elicited concerns from those workforce professionals who prioritize services to workers and job seekers, and who worry about the needs of the people who don't fit into the available job opportunities.

Many of the organizations and individuals centrally involved in implementing (and even managing) regional transformation efforts have never before been involved in a grant from a federal agency, much less a grant from ETA. Workforce professionals in some regions, who have been working with ETA for many years, were surprised by the amount of education these organizations required in order to implement activities funded under the grant. For example, the California Workforce and Labor Agency worked in partnership (often on a daily basis) with CSA to fill in the gaps in CSA's knowledge about how the state's workforce programs worked. "It's a full-time job. They don't know what DOL will let you do and not let you do," said one state worker, adding that most of the dozens of partners were not familiar with the workforce system. By the same token, representatives of CSA explained that working with economic development organizations in a contract environment was sometimes difficult. "EDCs just weren't used to working like that," one CSA employee said.





Summary

Notwithstanding the significant challenges noted here, the workforce organizations that serve as implementers or partners have made substantial progress toward transformation of their systems at the local and regional level. In fact, many of the goals articulated in the "Elements of Workforce System Transformation" policy document are quite consistent with the goals of the Generation I regions.

Finally, as one respondent noted, "transformation is continuous – the job is never done." Now that important transformational structures are in place, partnerships are developing, and progress appears to be occurring. The evaluation team will continue to monitor these dimensions of transformation and the challenges involved in implementing them over the final months of the grant's operations. The trends toward transformation reported here may continue; or perhaps contextual and policy changes will take the workforce system in new and as yet unforeseen directions.



Chapter 8: Conclusions and Observations

The preceding chapters described in detail the progress the regions have made in their collaborative efforts to reinvigorate and transform their regional economies through an integrated approach to economic development and workforce development. These efforts have been significantly affected by the changing context, particularly, changes in overall economic conditions, in the opportunities or constraints existing within specific regions, and in leadership and grant management guidance from ETA. In sum, the Initiative has not been implemented in a vacuum.

As the evaluation's first interim report conveyed, the journey from grant award to the time of the first site visits differed dramatically from one region to another. The regions had extremely diverse starting points with respect to their social and economic histories, their goals, their regional identity, their leaders and partners, their management organizations, their access to non-Initiative funding. The first interim report noted variation also in the "distance" the regions had traveled since startup in their functioning as a region and in collaboration across jurisdictional boundaries and across institutional systems.

In contrast, the 2008 evaluation site visits revealed nearly as many similarities as differences in the progress made from region to region. One factor contributing to commonalities across regions may be that regions had attended numerous conferences aimed at propelling regional economic transformation in which they learned from each other and outside experts. Another factor may be the increasing emphasis from ETA on workforce development outcomes and system transformation, which – due to the common funding streams and reporting requirements for the regions – often took somewhat similar forms.

ETA's ambitious goals for the transformation of regional economies are important to understand. Genuine economic transformation involves a lengthy process of repositioning numerous siloed organizations, building trust among previously competitive agencies (and often, leaders), and delivering programs in the near term with transformative effects that are likely to be visible only after many years. For example, shifting a region from a traditional manufacturing economy – such as the auto industry – to a new economic order that is equally robust requires enormous investments, new technologies (and their commercialization), and the time to build new enterprises, as well as a variety of initiatives to ensure management know-how and workforce competency in a new industrial domain. In the short term, documenting business startups, early investments, workforce training, and early job placements in specific companies may be possible; however, the long-term and sustainable effects of transformation on a regional economy are not easily documented in two- to three-year time horizons.

As one method of documenting progress toward transformation, Chapter 5 of this report summarizes the employment and training successes that the performance metrics capture. A number of the regions demonstrated successes in training individuals and assisting them to find employment in a position that took advantage of the training they had completed. Regions also





were successful in launching a variety of innovative programs with a broad range of partnerships with colleges and universities, WIBs, economic development organizations, business and industry, and many, many, others.

This evaluation also explores a variety of what may be termed "uncommon measures," or assessments of social processes and regional dynamics that are still in the process of being broadly acknowledged and accepted as reliable indicators of progress. These qualitative measures include such things as the transformations taking place in the workforce system within the regions; the extent of collaboration across multiple agencies occurring within the region; and the extent of regionalism, which is both a way of thinking – "buying into" regional priorities – and a way of working collaboratively to plan and carry out new programs. Another "uncommon measure" is the evaluation team's assessment of the long-term sustainability of the gains made in each region, both in terms of programmatic sustainability and in the creation of sustainable regional systems for promoting economic growth.

The evaluation team continues to describe the transformation experience as a journey, evaluating the progress each region has made on its unique path toward economic transformation, relative to the place at which it began, and the contextual forces with which it has had to deal. Some summary observations about the twists and turns these journeys have taken are discussed below.

Regionalism

The concept of regionalism is central to the overall effort. With an overarching goal of transforming *regional* economies, the focus of the initiative has been on creating regional clusters of synergistic businesses – primarily in high value-added industries and services – and aligning both public and private resources so as to achieve a unified regional workforce and economic development strategy. As a consequence, an important part of this evaluation has been to track the extent to which the spirit and practice of regionalism is taking hold among the regions.

Regionalism is a cultural and identity issue as well as an operational strategy. At the time of the initial site visits, many of the regions were trying to develop or enhance a sense of shared identity; by the second site visits, the issues of "branding" and regional identity had largely been resolved and were no longer prominent in the conversation. The issue of achieving synergy among organizations and agencies with complementary competencies and resources, however, was of more concern. Although, theoretically, regions with a clearly defined identity are the more likely to engage in a wide range of collaborative activities, the evaluation team observed that many regions were finding ways to collaborate across traditional geographic and institutional boundaries, even though a clear, shared identity had not yet been established. This collaboration, often among previously unconnected organizations, represents a promising platform for future development. Within the regions that have accomplished strong collaboration, findings from the second round of evaluation visits suggest that networks have widened and become more diverse. People appear to know many more people than they knew





beforehand, including professional counterparts in other counties, potential collaborators in other organizations, and, importantly, potential advocates and investors.

Many individuals and organizations that engaged in one of the Initiative's collaborative activities reported the experience as a positive one, adding that it gave them both the knowledge and the trust to repeat the experience in the future. Given the enormous uncertainties that exist in today's economic environment, the rapidity with which new technologies rise and fall, and the rapid changes in market opportunities and conditions, this regional ability to work together could provide a very positive basis for adapting to change in these regions in the future.

Transformation of the Workforce System

The transformation of the workforce system has become a high priority for these regions. Chapter 7 of this report summarizes the evaluation team's findings about the extent to which workforce systems within the regions strove to achieve the types of transformation outlined in ETA's "The Elements of Workforce System Transformation" (see Figure 7.1).

The evaluation team found that transformation of the workforce system was occurring in highly visible ways in some regions and in more subtle ways in others. Not all of the changes can be attributed to the Initiative, however, because state-level efforts to transform the workforce system were taking place at the same time as the Initiative in a number of regions. Some of these projects used strategies such as mandating collaboration across WIBs, while others pursued aligning the workforce system with economic development and other economic growth assets. Thus, a number of workforce institutions were already showing understanding of – and support of – economic development goals even before the grant began. In other regions, regional transformation activities were able to catalyze new models of workforce investment, particularly by turning the attention of the workforce system toward economic development goals, as well as by encouraging partnerships at the regional, rather than local, level.

Thinking and acting regionally is an important component of transformation in the workforce system. At least in *some* portions of each region, the workforce systems in each of the regions are beginning to think regionally and engage in collaborative activities across jurisdictional boundaries. Numerous examples in this report show that collaboration is occurring and that workforce professionals are now less isolated than they previously were from both their counterparts in other local areas and from economic developers, educators, and business and industry from across the region.

One of the more promising developments across the regions was the workforce system's increased focus on talent development. An important example of this is the major involvement of the workforce system in the use of work readiness assessments such as WorkKeys (especially notable in the state of Michigan) and the development of credentials for career readiness and skills attainment. In many regions, site visitors found examples of increasing articulation between the WIBs and K-12 education and training, community colleges, and universities. In Metro Denver, for example, multiple WIBs work with a variety of training organizations to focus





on training initiatives in "high value added" sectors. Although such collaboration has typically not been *led* by the workforce (nor the educational) system, the impetus for an integrated vision of talent development was anchored in the regions' collaborative mechanisms, usually the governance group formed through the Initiative, which had brought together organizations that had never worked together before.

The emphasis ETA placed on the workforce system to "serve the innovation economy" appears to have created an incentive for state agencies, state and local WIBs, and other entities in the workforce system to focus their attention on, and align their priorities with, entrepreneurship, new business formation, and – in some few cases – even new technology development. As part of the Initiative, the workforce systems in several regions – for example, Finger Lakes and Maine – participated in programs to help both adults and youth to develop entrepreneurial and business startup skills. Some regions have provided seminars and workshops focused on financing and managing entrepreneurial technology companies. In most of the regions, the workforce system was becoming involved in emerging industries such as alternative energy, clean tech, and green jobs, and, as part of the initiative, began developing training programs for new and incumbent workers for jobs in these and other industries that utilized new technologies in more efficient and globally competitive ways.

Leadership

Collaboration in the regions took a variety of forms, beginning with the development of the initial grant proposals, early implementation plans, and in the establishment of governance structures. These governance structures were highly variable at startup, especially in the workforce system's role. Many of the regions used the first years of their grants to define partnership roles and program priorities, an effort that appears to have been valuable in framing the focus and later activities of the regions. By the time of the second site visits, all of the regions were quite clear about what they could accomplish, governance structures for implementation and – in some cases – sustainability, were well-established, and numerous regional collaborations were underway.

Leadership of the initiatives emerged as a significant issue affecting implementation. As Chapter 2 of this report points out, leadership at the federal and state levels clearly set the tone as to what was possible, as well as what was desirable, throughout the life of the Initiative. At the regional level, the evaluation team identified three different types of leadership that were critical to successful implementation of transformative principles in the regions: "championing," "catalyzing," and "integrating." The presence of all three leadership types are essential in order to launch, implement, and sustain new forms of collaboration and keep partners focused on common goals instead of diverging interests. All three leadership types do not necessarily need to be embodied in a single individual or organization, however, and very few of the regions have leaders that have mastered all three. All of the regions have found the leadership they need, sometimes in the person of various key partners, and have engaged a wide range of additional partners to assist in creating fundamental system changes aimed at regional transformation.





Sustainability

The issue of sustainability, which involves not only attitudinal and organizational dimensions but also major investment decisions at all levels, has been central to the Initiative. All of the regions stated their clear intention to use the grant as the foundation for regional economic transformation, not as a one-time funding source for program implementation. In addition, the early guidelines provided by the ETA, and the ongoing monitoring of performance over time by ETA regional leads, emphasized the importance of building new sustainable models of regional dialogue, planning, and implementation of initiatives to produce economic transformation through integrated talent development and business development efforts.

By the second site visit, more clarity existed about the directions in which the various regions were approaching planning for sustainability. Chapter 5 reports on sustainability in terms of four dimensions. The first dimension is described as **philosophical sustainability**, meaning a new way of thinking about the relationships and strategies that can potentially enhance competitiveness and economic growth at the regional level. While this type of sustainability is the most diffuse and hardest to measure, it may actually be the most durable because the ideas have become second nature to the partners and will become part of the culture of the region. The second dimension is **relational sustainability**, which is truly at the heart of the transformation concept, because it focuses on the growth of boundary spanning relationships across traditionally siloed jurisdictional, geographic, and institutional entities. The third dimension is **institutional** sustainability, which is about new organizational models involving new mechanisms for integrating the workforce system with economic development, education, and other growthfocused entities. In several regions – such as Kansas City, Metro Denver, Northwest Florida, and West Michigan – regional organizations that became the home organization for the initiative existed prior to the grant and evolved because of it. These organizations are positioned to continue beyond the grant period many of the workforce, economic development, and talent development activities implemented by their respective initiatives. In other regions – such as Mid-Michigan and Finger Lakes – regional civic organizations developed simultaneous with the Initiative, and are expected to be the home for continuing initiative-related activities. The final dimension is **programmatic sustainability**, which has to do with new and creative workforce development, talent development, and economic development activities that are predicted to remain operational long after funding ends. All of the regions have articulated a commitment to sustaining many of these integrative talent development and entrepreneurial support programs. In sum, sustainability is playing itself out in different ways in different locales, but clearly the majority of the regions have discovered the benefits of regionalism, collaboration, and leveraging complementary competencies and resources in important ways.

Next Steps

As they come to the end of their federal funding in January 2010, the next steps for the regions are to continue expanding their partnerships, use the relationships and collaborative mechanisms that they have formed through the grant as a basis for collaboration in support of other activities, and continue their journey toward a new economy. As one respondent noted, "Transformation is continuous – the job is never done."





The evaluation's next steps include surveying the regions' partners to capture as complete a picture of the Generation I social networks as is possible. The research team will conduct this survey twice: once in late Summer 2009, and again in Fall 2010, approximately six months after the grants have ended.

In Fall 2009, the evaluation team will conduct a final round of visits to each of the regions. Interviews during these visits will again examine changes in the workforce system and focus on transferable lessons learned and the sustainability of the initiatives' philosophies, relationships, programs, and institutional influences.

The research team will continue collecting existing data from various data sources to assess any economic changes that the initiatives may have inspired in their communities. Because the true impacts of the grants on their regions may not be apparent for another ten years, the evaluation's final report will summarize this data for the longest possible observation period within the evaluation. As Chapter 6 discussed, the research team will consider leading as well as other types of indicators to examine whether progress or changes can be attributed to the grants. Finally, the evaluation's Final Report will summarize the findings from these data collection efforts; the report's tentative date of availability is in Spring 2011.



Appendix A

Site Visit Highlights from Generation I Regions¹

- West Alabama East Mississippi (WAEM) Initiative
- California Innovation Corridor Initiative
- Metro Denver Initiative
- Northwest Florida Initiative
- North Central Indiana (NCI) Initiative
- Kansas City Initiative
- North Star Alliance Initiative
- Mid-Michigan Innovation Team (MMIT)
- West Michigan Initiative
- Montana Agro-Energy Program (MAP)
- Finger Lakes Initiative
- Piedmont Triad Initiative
- Wall Street West Initiative

¹ The descriptions that follow reflect the status of the Generation I regions as of December 2008.





West Alabama – East Mississippi (WAEM) Initiative

Introduction

The Initiative for West Alabama–East Mississippi (WAEM) aims to transform an economically depressed, mostly rural area into a region recognized for its support of local entrepreneurship and economic development, wide-ranging partnerships, and a credentialed workforce. WAEM's activities have continued to be guided by the four goals for economic transformation identified in its proposal and implementation plans:

- 1. **Community Strategic Planning:** Embed the capacity to identify key assets and strengths, target opportunities, and recruit champions to build an Enterprise-Ready region;
- 2. **Business Development:** Cultivate community and regional entrepreneurship;
- 3. Credentialing: Credential, certify, and transform to a regionally-branded workforce; and
- 4. **Youth Entrepreneurship and Credentialed Training:** Engage high schools and youth in regional branding and Enterprise-Ready activities.

Figure A-1 shows the current organization of the WAEM grant. The Alabama Department of Economic and Community Affairs (ADECA) Office of Workforce Development is the grantee and fiscal agent. In the grant's second year, several notable staff changes took place at The Montgomery Institute (TMI), the non-profit operating the grant. First, the Grant Director, who had been detailed to TMI for the grant by the Mississippi Development Authority where he was Deputy Director for Strategic Initiatives, resumed the position of president of TMI. The former president became a senior consultant to TMI, while an individual with experience in the initiative's community college and rural entrepreneurship activities became vice president, responsible for many of the project's day-to-day operations. The most important structural change in the past year was the elimination of the four Goal Committees originally formed to implement the grant, as they were seen to have served their purpose and had not been intended to be permanent.

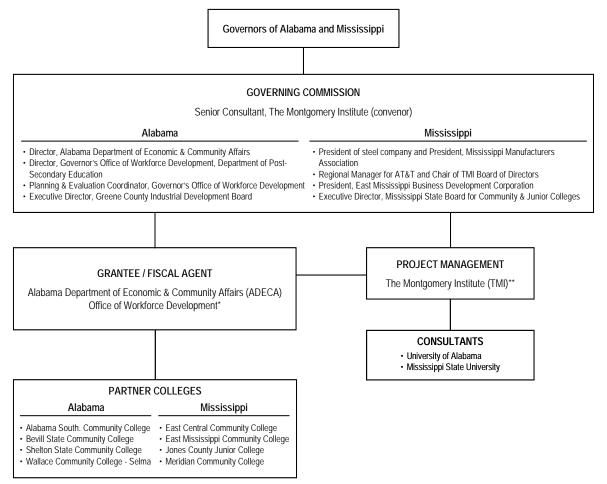
Significant Findings from Year Two

- Use of the Career Readiness Certificate (CRC) and the Modern Multi-skill Manufacturing (M3) credential is well established in the region, and credentialed training is well underway in all WAEM community college partners. A permanent credentialing body, the WAEM Alliance, was established to award the credentials and cooperate on training initiatives.
- The MyBiz entrepreneurship website began operating, and Start It! cards listing local business resources have been developed for more than 140 communities in the region.
- WAEM modified its "place-building" and rural leadership development activities to allow
 the community college partners to move through the implementation steps more quickly,
 instead of going through many months of grassroots organizing and consensus-building.
 WAEM has begun to adapt existing programs like Your Town Alabama and Mississippi's
 First Impressions to provide local leaders with basic skills in asset-based planning.





Figure A-1 West Alabama-East Mississippi WIRED Partner Map



- * ADECA contracts with TMI and with each of the eight community colleges for WIRED staff and activities.
- ** TMI contracts with the University of Alabama and Mississippi State University for research. Previously, TMI contracted with the Rural Policy Research Institute (RUPRI) for specialized technical assistance on entrepreneurship and place building
- WAEM community college partners have begun to offer dual enrollment and dual credit courses for high school juniors and seniors in subjects related to advanced manufacturing and are working with area high schools and youth programs to develop entrepreneurship programs.
- WAEM's partnerships with the community colleges in both Mississippi and Alabama continue to be solid. Neither state's educational system had strong links to the workforce system prior to the grant, however, a situation that has changed little over the course of the grant, especially in the area of entrepreneurship.





Key Issues

Community Colleges as the Locus of Initiative Activities

Community colleges are key to the WAEM model. In addition to playing central roles in rural communities, these colleges in both Alabama and Mississippi are major actors in each state's workforce development and training activities, and WAEM identifies the eight partner colleges' workforce development directors as the real leaders in the region. The October 2007 creation of the WAEM Alliance, made up of the eight community college districts that define the WAEM region (four in Alabama and four in Mississippi), formalized the colleges' roles in the grant and established an ongoing mechanism for collaboration.

Community Strategic Planning

Building upon its insights that successful economic development in rural areas is based largely on entrepreneurship and that community leadership skills are as important as physical infrastructure to that success, WAEM embarked upon an ambitious program of community strategic planning and entrepreneur development. When the grant began, WAEM began implementing the Rural Policy Research Institute's (RUPRI) community leadership development model. Early RUPRI model activities included holding community and business roundtables, and coaching local civic and business leaders in developing strategic plans to make their communities Enterprise-Ready. The process proved to be too lengthy and complicated for all but three of the eight pilot communities, however, and WAEM substantially simplified the RUPRI model to speed the process, with an emphasis on concrete efforts such as the Start It! cards to connect entrepreneurs to local resources. The RUPRI model also lacked training in the planning and leadership skills needed to carry out effective asset-based community development at the local level, and required well-prepared local coaches inside and outside the community college network. To address these issues, WAEM has adapted and begun to implement other community development programs, such as Your Town Alabama (which became "WAEM Town") and the First Impressions program at Mississippi State University.

Entrepreneur Development

WAEM's approach to entrepreneurship has been to focus more on building local and regional resource networks for business than on individual entrepreneurship training. The main emphasis has been on the development of the MyBiz website, and the training of local Connectors and Navigators to help entrepreneurs access and make best use of the website. The website features links to resources and information at the community level, a Resource Navigator with region-wide links, and calendars of training and events offered by community colleges and other providers. A key element of this effort has been the creation of Start It! cards that list local resources for business start-ups. At the time of the 2008 site visit, the MyBiz website had logged nearly 100,000 unique hits and Start It! cards had been developed for more than 140 communities in the region.

Credentialed Training

Most of WAEM's funds were allocated to developing a credentialing/certification mechanism to help build a regional workforce identity. In addition to expanding Alabama's WorkKeys career readiness assessment to Mississippi in order to establish the Career Readiness Certificate (CRC) and associated training, WAEM developed the Modern Multi-skill Manufacturing (M3) credential, a regional performance-based credential documenting entry-level and intermediate





skills for advanced manufacturing. Administered by the WAEM Alliance, training and assessment for the M3 is organized around a series of virtual training laboratory modules developed by Amatrol, an internationally-recognized provider of learning systems for technical education.

Youth Entrepreneurship and Credentialed Training

WAEM's partner colleges now offer high school juniors and seniors dual credit (high school classes that provide college credit) and dual enrollment (college classes taken while still in high school) courses related to advanced manufacturing, computer-assisted drafting, machine tool trades, telecommunications, and electronics. WAEM and the community colleges are also working with area high schools and youth programs to integrate entrepreneur programs into the high school curricula. East Mississippi Community College, for example, recently partnered with a local high school to provide a class on how to start your own business, and Meridian Community College's initiative-funded staff put on an event using a "high-school" version of WAEM's entrepreneurship program. An important youth entrepreneurship program is offered though the University of Alabama's REAL (Rural Entrepreneurship through Action Learning) program, an experiential program for students and teachers in rural high schools. A youth section of the MyBiz website is also under construction.

Partnerships

WAEM has adopted a broad definition of partnership that encompasses the large number of individuals and organizations that are actively participating in project activities. In addition to its formal (contracted) partners, WAEM partners include university/college coalitions, regional commissions, economic development organizations, municipal governments, businesses and industry associations, state and local WIBs, the Mississippi Band of Choctaw Indians, and foundations. Many new partners were added in the past year, including members of the WAEM region's Mayors' Network, the University of Alabama's Center for Community-Based Learning (assisting with the MyBiz website) and REAL Program, and the Area Health Education Center.

Challenges

Impact of Economic Changes on the Region

WAEM was intended to help reverse long-term job loss in the region, particularly the steep decline in traditional manufacturing jobs that has occurred over the past ten years. Those losses accelerated in recent months, as large manufacturing layoffs occurred in many parts of the region. Increased workloads have strained the capacity of the One-Stop Career Centers and may make introducing new forms of collaboration with WAEM more difficult in the short term. Despite the overall trend, some parts of the region continue to grow with the relocation or expansion of advanced manufacturing employers in aerospace, steel, automotive and other industries. According to WAEM staff, such disparities validate WAEM's central tenet that the job pipeline must be regional, multi-skilled, and oriented to a broad base of identified growth industries.

Interaction with the Workforce System

Effective collaboration and coordination between WAEM and the ETA-funded workforce system remains a challenge. Although WAEM regards the community colleges to be the primary vehicle for delivering workforce training and community development services in the





region, the ETA workforce system is also an important partner, especially ADECA's Office of Workforce Development. Because of "siloed" agency relationships and funding streams within each state, however, workforce development efforts at the community colleges and those of the ETA system in either Mississippi or Alabama are not connected, and neither state educational system had strong links to the workforce system prior to the grant. The situation is exacerbated by the region's bi-state nature and the large differences between the two states in how their educational systems and workforce systems are organized. Despite the lack of a clear mandate for collaboration between WAEM's community college staff and the local WIBs and One-Stops (WIN Job Centers in Mississippi and Career Centers in Alabama), grant-initiated collaboration efforts are underway. In addition, several of the WAEM colleges have played crucial roles in Rapid Response efforts for large-scale factory layoffs in the region's small towns and rural areas.

Turnover in Leadership

Although TMI and ADECA leadership has remained stable, many changes at the top levels of the community colleges have occurred, involving key partners in the initiative and the WAEM Alliance. Two of the four Alabama colleges have had three presidents since the grant began, and upcoming retirements at the other two and at several of the Mississippi colleges will mean still more change in the near future. Bringing new partners up to speed is time-consuming at best, and may be especially difficult when the personnel changes are the result of politics or upheavals in the partner organizations. Nonetheless, WAEM staff report that "some of the newer presidents have really become engaged in workforce and community development."

Pace of Implementation

Partly as the result of using the RUPRI models, progress during the grant's first two years was slower than desired by many stakeholders. The pace picked up in the past year, as the community and entrepreneurship development process was simplified and sped up, and the M3 credential, MyBiz, advanced manufacturing training, and youth programs were implemented. Full implementation of M3 has been slow in several of the colleges, however, partly due to problems and delays in the procurement process for Amatrol equipment. In addition, the ETA-required shift in focus for WAEM's youth programs – from an original design that encompassed K-12 education and included STEM programs for middle school students, to programs for high school students age 16 or older – delayed their implementation. Some WAEM staff saw this shift in focus as a lost opportunity to start the talent pipeline where it needs to start, suggesting that by age 16, many promising youngsters lack essential math and science skills or have dropped out of school.

Successes

Credentialed Training/WAEM Alliance

The empowerment of the eight partner colleges as an oversight and credentialing body has been one of the most positive outcomes of the grant to date. The WAEM Alliance, formed in October 2007 from the eight-partner community and junior colleges, is an accrediting body for the M3 and similar credentials. The Alliance is positioned to support regional training programs and economic development projects and to implement innovative training programs that are aligned with regional priorities. The CRC and M3 credentials not only provide a regional workforce certification recognized by all of the community college districts on both sides of the state line,





but also facilitate economic and workforce development via a common language and credentialing mechanism.

Several of the region's employers have adopted or are considering the CRC or M3 as required credentials for new hires. At the time of the site visit, over 2,000 students at partner community colleges had earned CRC credentials, and more than 400 were in training leading to M3 qualifications.

Sustainability and Governance

In planning for operations beyond the grant period, WAEM faces the special challenge of creating a permanent governance structure able to function across state lines. TMI is currently investigating the possibilities for transforming the present WAEM Governing Commission into a USDA Rural Investment Board with a mission to focus on regional development and talent development.

Other strategies for sustainability are to make activities eligible for state funding by broadening their scope beyond the region and "mainstreaming" the funding of new college courses. MyBiz and Start It! cards are slated to expand to all of Mississippi with state funds; MyBiz will continue in Alabama as part of ADECA's Project Gate grant. Most of the new courses developed with grant funds are expected to be rolled into the state system, and colleges in the region's fast-growing areas are reaching out to major employers as sustaining partners. The partner colleges have all submitted individual sustainability plans.

Collaboration

From the beginning, WAEM utilized several effective mechanisms to stimulate collaboration, such as using an interlaced committee structure to ensure communication and participation across all of the college partners, conducting meetings and events in locations across the two states, and holding regional roundtables and conferences that included representatives from economic development organizations, businesses, community colleges, workforce development entities, and local school districts. These early efforts have paid off at the operational level. Workforce development staff at the community colleges have cultivated strong working relationships across state lines, and have improved their ties with local economic development and community organizations. What is less clear is whether collaboration between the community colleges and other partners in the WAEM network can be sustained at regional and cross-state levels after the grant ends, without the creation of a regional governance structure.

Regional Facts

List of Counties

- Mississippi, 19 counties: Clay, Oktibbeha, Winston, Leake, Scott, Smith, Covington, Lowndes, Noxubee, Neshoba, Newton, Jasper, Jones, Perry, Greene, Wayne, Clarke, Lauderdale, Kemper.
- Alabama, 18 counties: Lamar, Fayette, Walker, Pickens, Tuscaloosa, Greene, Sumter, Hale, Perry, Dallas, Marengo, Choctaw, Clarke, Wilcox, Marion, Monroe, Lowndes, Conecuh.

Boundaries of Region – The region is built around the boundaries of four community college districts in Alabama and four in Mississippi.





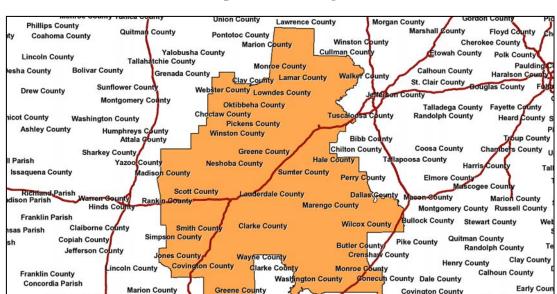


Figure A-2 Map of WAEM Region

Urban vs. Rural – The region is largely rural, with two small urban areas, Tuscaloosa, Alabama and Meridian, Mississippi.

Mobile Cou

Santa Rosa County

Perry County

Stone County

Demographics

Wilkinson Co

Pearl River County

Avoyelles Parish

The WAEM region represents about 18% of Mississippi's population and 12% of Alabama's. The region's population density (39.5 people/sq mile) is far less than the average for both Mississippi (59.7) and Alabama (86.1).

Figure A-3 WAEM Region Demographic Details^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma	32.2%	38.3%	21.7%
Post Secondary Degree	19.6%	39.9%	11.8%
Per Capita Income	\$14,877	\$18,447	\$10,514
Median Age	34.5	39.0	24.8
Unemployment Rate	7.8%	15.2%	5.1%

^a U.S. Census Bureau, Census 2000





Covington County

Walton County

Geneva County

Miller County

Site Visit Details

Date of Visit: December 1-4, 2008

Site Visitors: Kay Magill and David Drury, BPA

Site Visit Respondents:

- Phillis Belcher, Greene County Industrial Development Board
- Mason Bonner, Associate Director, The Montgomery Institute
- Tim Climer, President, West Point-Clay County Growth Alliance
- Bill Crawford, President and WAEM Grant Director, The Montgomery Institute
- Michael Curran, Mississippi Department of Employment Services
- Tommy Dulaney, President, Structural Steel, Inc. and President, Mississippi Manufacturers Association
- **Ken Dupre**, Vice-President, The Montgomery Institute
- Hank Garner, IT administrator, The Montgomery Institute
- **Bud Gilbert**, Branch Director, Meridian, Mississippi Department of Employment Security
- Monty Gilbreath, Human Resource Development Manager, PACCAR Inc.
- **Bruce Hanson**, Community Entrepreneurial Development Facilitator/ Workforce Services, East Mississippi Community College
- Bill Hornsby, Alabama Department of Economic and Community Affairs fiscal staff
- Charles Ireland, Workforce Development Director, Bevill State Community College, Sumiton, Fayette, Hamilton, and Jasper, Alabama
- John Johnson, President, Alabama Southern Community College
- Victoria Liddell, WAEM Community Development Facilitator, Meridian Community College
- Chris Reed, Associate Director, The Montgomery Institute
- Bill Scaggs, Senior Consultant to The Montgomery Institute
- **Raj Shaunak**, Vice-President of Workforce and Community Services, East Mississippi Community College, Mayhew, Mississippi
- C. D. Smith, regional manager for AT&T and Chair of the TMI Board of Directors
- Lisa Sollie, WAEM Facilitator, Leadership, Meridian Community College
- Verna Stringfellow, administrative staff, Mississippi Department of Employment Security, Meridian
- Dan Talley, Assistant Dean, Community and Business Development, Meridian Community College
- Steve Walkley, Division Director, Workforce Development Division, Alabama Department of Economic and Community Affairs

A-8





California Innovation Corridor

Introduction

In response to evidence that California is losing its global competitiveness, the California Innovation Corridor aims to optimize conditions for innovation and 21st Century workforce competitiveness in the region through the integration of education, workforce, and economic development systems/innovation strategies. The California Corridor has three strategic goals:

- 1. **Innovation Support** Create new companies and high-skill, high-wage jobs by designing a sustainable "innovation support architecture" to increase innovation and entrepreneurship.
- 2. **Industrial Rejuvenation** Improve the international competitiveness of the region's supply chain by developing and executing a "Smart Supplier Strategy" that supports manufacturers, small businesses, and entrepreneurs in adapting to global manufacturing transformation.
- 3. **Talent Development** Accelerate development of a highly skilled 21st Century talent pool by creating pilot projects and activities to support a continuum of STEM education (K-U), and lifelong learning relevant to the 21st Century worker.

The California Labor and Workforce Development Agency (LWDA) is the grantee, and its Employment Development Department serves as the initiative's fiscal agent. The California Space Authority (CSA), dedicated to facilitating California's competitiveness within the space and aerospace industries, manages the grant (see Figure A-4).

Significant Findings from Year Two

- Almost every respondent named new partnerships and the unexpected value of those new
 partnerships in meeting the goals of their own organizations as the top benefits of
 participating in the initiative.
- Many projects involved various forms of data collection that usually took longer than
 anticipated, but respondents noted that the collection process itself proved to be a valuable
 tool for nurturing partnerships and collaboration. The majority of respondents saw data
 collection as one of the most valuable outcomes of the initiative.
- The grantee and its partners delivered projects relevant to all of its strategic goals:
 - Innovation Support Regional Innovation-Driven Economic Model, an inventory of
 "innovation assets," that is, innovation drivers that develop new technology and/or
 processes for commercialization; profiles of workforce skills needed for 21st Century
 jobs; and a WIB toolkit describing the intermediary role that local boards can play in
 supporting entrepreneurial companies.
 - 2. <u>Industrial Rejuvenation</u> A survey identifying high priority supplier training needs; dissemination of findings to suppliers, economic development agencies, and WIBs; identifying resources to address the identified needs; and an industry-driven manufacturing technician training program.
 - 3. <u>Talent Development</u> STEM education collaborative action plan (STEMCAP); a high school earth science curriculum; implementation of a mechatronics AA degree program; retraining dislocated software specialists for space-related careers; orientation of





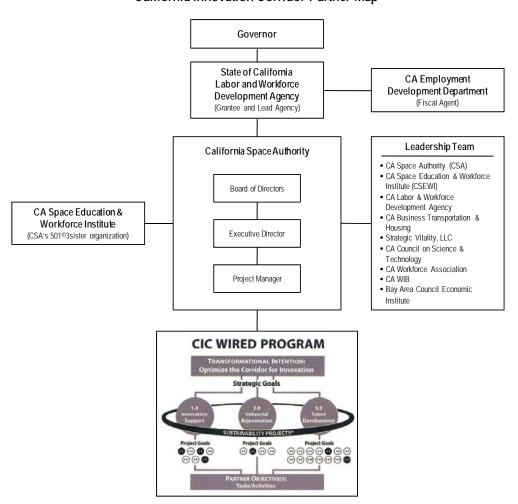


Figure A-4
California Innovation Corridor Partner Map

* Sustainability Projects are those projects that support both a strategic transformational goal and also the greater CIC WIRED grant effort as a whole. Sustainability projects include: 1.1 (Economic Development Model), 1.3 (Innovation Asset Inventory), 1.7 (WIB Toolkit), 2.2 (Supply Chain Competitiveness/Smart Supplier Initiative), 3.5 (STEM Collaborative Action Plan), 3.14 (Learning Collaboratory)

university and graduate advisors; development of a virtual aerospace education center; and building a learning collaboratory of training and best practices.

- Most projects were compressed from three to two years because of administrative challenges to starting projects in Year 1. As a result, some projects ended without being fully implemented. Nonetheless, partners on many of these projects continue to work collaboratively to find funding for continued implementation and dissemination.
- Some of the completed projects are living products that will require ongoing updating and maintenance. As the grant nears its end, identifying who will take the responsibility for maintaining the products is a pressing concern.





Key Issues

Regional Identity and Size

The California Innovation Corridor covers an area as large as many states, and rather than being a single regional economy, it is really a region of regions encompassing demographic profiles traditionally in competition with one another (for example, northern versus southern California; high-tech versus agriculture; inland versus coastal; urban versus rural). Rather than focusing significant effort on developing a regional identity for the Corridor, the initiative's leadership promoted cross-fertilization across different regions within the Corridor. The size of the region, its ambitious goals, and 25 different projects all involving multiple partners, have proven to be both a strength of the Corridor's initiative and a challenge to its implementation.

Regional Administration, Management and Communications

Respondents across the board praised CSA for their remarkable administrative success and strong management skill in moving toward completion of all the region's projects. Many felt that partner and leadership meetings focused too heavily on tasks and deliverables, however, and not enough on system transformation. CIC staff faced many administrative challenges at the beginning of the grant, including the contracting process, project leadership, and internal and external communications. For example:

- The process of contracting with CSA and then with sub-recipients was very challenging. Two significant contracting barriers emerged with several partners intellectual property rights and the federal daily limit on consultant fees. Many projects experienced almost a one-year delay in start up, but moved forward on the original deadlines for completion. In many cases, project staff felt they needed another year to see the full fruits of their efforts.
- CSA assigned a Project Lead from among its participating partners. In some cases, the lead was someone with whom CSA already had a strong prior working relationship; in other cases, the lead was chosen for knowledge or experience; and in others, leads were chosen strategically to ensure maximum engagement of key partners. Not every Project Lead turned out to have the necessary skills to facilitate collaborative work processes and develop effective partnerships, which resulted in some projects getting a slower start and requiring a stronger CSA/CSEWI leadership role than others.
- CSA staff put extensive time and resources into communications including email, conference calls, webinars, meetings, and a collaborative online workspace. Even so, building a common vision of where each project fit in the overall effort, and maximizing sharing of resources and knowledge across such a large group, was challenging. InnovateCalifornia.net became a partial solution to address this, although the website is used more as a repository for information rather than as an interactive tool to support collaborative communication.
- Eleven projects with target populations younger than that allowed under H-1B funds were impacted by the stop work order issued by ETA in November 2007. Some projects were delayed by as much as six months and some will not meet project objectives.

Involvement of the Workforce System

One of the region's biggest challenges has been to maximize the continuity and regularity of WIB engagement. At the proposal stage, the California Corridor engaged certain WIBs in specific projects, but in light of DOL's emphasis on transforming the workforce system, the





Corridor shifted some of its focus to a much larger scale effort to influence the workforce system statewide. A key aspect of that effort has been working with the California Workforce Association (CWA) to incorporate the Initiative's agenda into CWA activities that address the levels of sophistication across the WIBs in the Corridor, as well as the lack of a common language and set of tools for local workforce activities. Additionally, CSA included workforce system partners in almost every project undertaken under the grant. After two years of working together, workforce partners reported positively on new partnerships formed, not only across systems, but *within* the workforce system as well. "We realized that businesses don't care which side of the county line services are on ...we found out it's us (the WIBs) that are in the way."

Jobs and Training: Success and Challenges

Partners designed and implemented a variety of job training programs. Some projects created jobs immediately; some did not create immediate jobs, but taught necessary lessons for future job creation; and other projects will need new funding to move beyond design to implementation.

- Partners completed the first round of Aerospace Manufacturing Technician training in August 2008. All 20 participants completed the training and 45 are on the waiting list for the next course. A second cohort of 16 additional students completed the training with a total of 29 students placed into jobs utilizing the new skills. Deans from the El Camino College Industry & Technology division and the Compton Education Center, Vocational Education and Technology division are interested in adopting the training as a fully accredited certification program.
- The Aerospace Corporation and Cal Poly partnered to create and implement a two-day introduction to the basics of systems engineering. The symposium has been offered twice and drew more than 100 participants. Videos of the second symposium sessions posted to the InnovateCalifornia.net website are consistently the most popular item downloaded from the site. The partners also published on the website a catalog of systems engineering training resources for working engineers.
- Twenty-seven dislocated/unemployed software specialists completed aerospace skills training through a partnership between a local WIB and university extension program, and 16 are now employed in the aerospace industry.
- A mechatronics curriculum now is in place at six community colleges. The program offers career education in technical and mechanical skills. The program has attracted students living in isolated areas who can take the courses in real time online.
- A needs assessment of the aerospace industry revealed deficiencies of suppliers who
 understand the changes in the aerospace supplier network and who possess the new skills and
 capabilities required to compete in a global market place. An analysis of the needs survey
 was published and two, two-day workshops were held to test the curriculum. The next step
 of instituting the 18-credit supply chain management certification course awaits new funding.

Successes

Development of the STEM Collaborative Action Plan (STEMCAP)

California Corridor's most ambitious STEM project, developing the STEMCAP, faced major challenges, including the competitiveness of education stakeholders, inexperience in





collaboration, a perception that education/academia and industry have different agendas, the misperception that the chief role of industry should be to provide funding rather than input, ETA directives regarding use of grant funds for K-12 activity, and political issues around the potential systemic changes needed. These challenges were addressed through a carefully facilitated, extensive collaborative planning process. The result is a STEMCAP that is seen as very valuable and is now receiving attention at the highest state and federal policy levels.

Partnerships and Collaboration

Some examples of successful partnerships include:

- The pairing of WIBs and economic development entities on specific projects which is fostering better understanding of the economic development community among WIBs, and of the workforce community within economic development agencies;
- The partnership between the Naval Postgraduate School and a grant-funded project that has
 generated the Naval Postgraduate School Cubesat Launcher prototype, a significant means of
 supporting university and other student payloads to provide experiential training for
 aerospace. Other U.S. government organizations have taken an interest in the Cubesat
 program and have provided some funding.
- A partnership between a small supplier and a supply chain management research team at the University of Southern California that is now funded by the Air Force Research Laboratory.

Asset Mapping

California Corridor calls its asset inventory effort the "Innovation Asset Mapping Inventory." Since the California Corridor focuses on an innovation economy, the focus of the inventory is on resources to support innovation. A collaborative effort involving partners across the Corridor, the project has now built 1,287 innovation asset profiles into the Connectory® portal, which is a statewide, web-based buyer-supplier network containing profiles of California industrial and technology companies across all industries at every level of the supply chain. The portal continues to be updated and expanded by users.

Capacity-Building: Increasing Role of Workforce System in Economic Development "Racing for the Future" is an online toolkit providing WIBs with essential tools for understanding the innovation environment and adapting successfully to it. Available on the website, http://www.wibtoolkit.net/, the toolkit provides background on changes in California's economy and how they affect the workforce system, explanations of the five core roles WIBs can play in the local economy, case studies of six WIBs, and a compendium of resources including documents, maps, and LMI data.

Identification of Accomplishments

With the help of a contractor, California Corridor has identified accomplishments and success stories across all of its projects for over a year. This process has encouraged project teams to be reflective about what they are doing, and to identify the specific outcomes, successes, and experiences they have achieved and from which others might learn. As of February 2009, California Innovation Corridor had 320 deliverables and 137 success stories on its website at http://www.innovatecalifornia.net/.





Sustainability Beyond Grant

All of California Corridor's projects are intended to be transformational in nature with the intention of not only bringing about new partnerships and organizational linkages, but also creating models, methods, systems, procedures, or products that will outlive the grant period. All projects were to be completed by November 30, 2008, after which CSA made a preliminary estimate of unused funding and submitted a draft Utilization of Funds proposal to the state. In addition, CSS developed a draft sustainability plan identifying ten additional projects, all of which were further implementation of Phase 1 projects, along with expansion and updates to the IC.net website and sustainability of key products and deliverables.

In addition, some initiative partners continue to look for ways to take the final step toward sustainability post-initiative. For example:

- One group of partners developed a core curriculum for certification of supply chain managers
 and tested the course in two-day workshops at Lockheed and Northrop Grumman. The grant
 ended before they were able to implement the full course in community colleges. In
 December 2008, however, two community colleges, a WIB, and the grantee submitted a
 grant application for a \$2 million DOL grant that would allow them to finalize the curriculum
 design and launch it both on campus and interactively online.
- Education and industry partners who served together on the STEMCAP committee and advisory board collaborated to fund summer institutes where teachers and students can spend their summers working in NASA and JPL laboratories.

Regional Facts

List of Counties – Alameda, Santa Cruz, Santa Clara, Monterey, San Luis Obispo, Kern, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego.



Figure A-5
Map of California Innovation Corridor Region





Figure A-6
Demographic Details for the California Innovation Corridor^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma Post Secondary Degree	19.6% 33.7%	25.4% 41.7%	15.9% 20.0%
Per Capita Income	\$22,017	\$32,349	\$14,856
Median Age	32.7	37.4	30.4
Unemployment Rate	6.9%	11.8%	3.9%

^a U.S. Census Bureau, Census 2000

Boundaries of Region – From Alameda County in the north to San Diego south, flowing east in southern California to encompass the Antelope Valley and the Inland Empire, the 13 counties in the Innovation Corridor are home to key U.S. innovation, entrepreneurial, manufacturing and security infrastructures.

Urban vs. Rural – While the region contains the largest urban areas in the state – Los Angeles, San Diego, and San Jose – it also covers some relatively rural areas.

Demographics and Variation Across the Region – The region represents about 70% of California's population. The regions population density (415.6 people/sq mile) is almost twice of the state's density overall. The region contains California's most populous county, Los Angeles (9,519,330). San Luis Obispo County has the smallest population in the region (246,681).

Site Visit Details

Dates of visit: October 20-21, November 3-7, November 17-18
Site Visitors: Linda Toms Barker, BPA; Tricia Cambron, BPA
Site Visit Respondents:

- Wally Aguilar, Economic Development Analyst, Employment Training Panel
- **Joan S. Bissell**, Director, Teacher Education and Public School Programs, California State University
- **Daniel Boyd**, Supplier Program Manager, Boeing
- Mitch Boretz, Technical Communication Specialist, University of California, Riverside
- Michael Carlson, Director, SEARCH (Troops to Teachers)
- Paige Chen, Instructional Design Consultant, Antelope Valley College
- Victoria Connor, Principal, Strategic Vitality, LLC





- Mark Christiansen, Business Intelligence Manager, Riverside County Economic Development Agency
- Eric Daniels, Director of State and Local Government Relations, California Space Authority
- **Kenneth Dozier**, Executive Director, USC Viterbi School of Engineering, Western Research Application Center
- Deborah A. Dukes, Labor Market Analyst, San Bernardino Workforce Investment Board
- Randall Echevarria, Project Manager, California Space Authority
- Martie Evans, Workforce Collaborative Specialist, Employment Development Department
- **Jaime Fall,** Deputy Secretary, Employment and Workforce Development, State Lead, California Labor and Workforce Development Agency.
- Chuck Flacks, Policy Analyst, San Diego Workforce Partnership
- **Dennis Galligani**, Executive Director, Alliance for Regional Collaboration for Heightened Education Success (ARCHES)
- Michael J. Gallo, President, Chief Executive Officer, Kelly Space & Technology
- David Gonzales, Director, Center for Applied Competitive Technology
- **Jennifer Grutzius**, Assistant Secretary of Economic Development, Bureau of Business, Transportation, and Housing
- Barbara Halsey, Executive Director, California Workforce Investment Board
- Virginia Hamilton, Director, California Workforce Association
- Edward K. Kawahara, Principal Consultant, California Economic Strategy Panel
- Margaret Lau, Coordinator of Economic Development, Allen Hancock College
- Sylvia Liddicoat, Lecturer, Electrical Engineering Department, Adjunct Faculty, Center for Excellence in Science & Mathematics Education, Cal Poly San Luis Obispo
- Carla Loveless, Project Lead, Support Services, Garvey Spacecraft Corporation
- Robert Mejia, Employment Services Manager, South Bay Workforce Investment Board
- **David Militzer**, Education Programs Consultant, Regional Occupational Programs and Workforce Development, California Department of Education
- Denise Miller, Workforce Collaborative Specialist Section Manager, California EDD
- Nick Pelster, Technical Director, California Space Authority
- Christine Pence, Director, Workforce Innovation Programs, UC Riverside
- Christine Purcell, Manager, Industry Workforce & Manufacturing Development, CSA
- Gary Shipper, Vice President, The Aerospace Corporation
- Richard Shope, Science Research Analyst, JPL's Office of Science Research and Analysis

A-16

- Joel Shraeter, Director of Technical Education, The Aerospace Corporation
- Judy Turner, Director, Programs and Partnerships, California Space Authority
- Terry Weiner, California Manufacturing Technology Consulting
- Ray Wells, Manager, Technology, California Space Authority





Metro Denver Initiative

Introduction

The mission of Metro Denver's initiative is "Building a talent base to drive prosperity." On the one hand, Denver has a thriving and diversified economy propelled by growing technology sectors and one of the most highly educated workforces in the country. On the other hand, the region has a low high school graduation rate and a talent development pipeline that is "leaking" at all stages, leaving local workers inadequately prepared to compete in the fast-growing, highwage industries in the area. The grant is responding to this challenge, known as the "Colorado Paradox," by building regional partnerships in the nine-county Metro Denver region among industry, education, economic development, and the public workforce system. The initiative aims to strengthen the region's talent pipeline at all levels in order to produce a skilled workforce for some of the region's fastest growing, high-wage, industries that are also experiencing labor shortages. In order to accomplish this, Metro Denver is addressing the following goals:

- 1. For the benefit of Colorado's future, develop a home-grown skilled workforce for its fast-growing, high-wage, industries that are also experiencing labor shortages aerospace, bioscience, energy, and information technology-software so that our regional companies can remain competitive in the global economy.
- 2. Be one of the best regions in the country in science, technology, engineering, and math (STEM) education, supported by a full skill set of competencies and masteries. Metro Denver will be the "go to" region when companies are deciding to relocate or expand because our workforce has the best STEM skills.
- 3. Provide an entrepreneurial climate for business creation and expansion for companies in targeted industries.
- 4. Become the region where the minimum acceptable educational standard for all becomes a post-secondary certificate or an associate degree.
- 5. Create a regional system that seamlessly integrates workforce, education, and economic development programs to effectively meet the needs of individuals and business.

Significant Findings from Year Two

- During its second year, Metro Denver created a new organizational structure and reconstituted its Leadership Council as the initiative shifted focus from research to implementation (see Figure A-7).
- Some industry partners are more interested in talent pipeline development and less interested in (and subsequently less engaged in) worker training and job placement activities.
- ETA's requirement that each of the Metro Denver fiscal partners audit the grant has resulted in the initiative being audited three times per year, instead of just once. The fact that the fiscal partners are united in their frustration with this situation is an indication of the level of trust that has developed between the three agencies.
- The Metro Denver Initiative has completed the first two of three rounds of training grants. The first two rounds of grants were expected to:





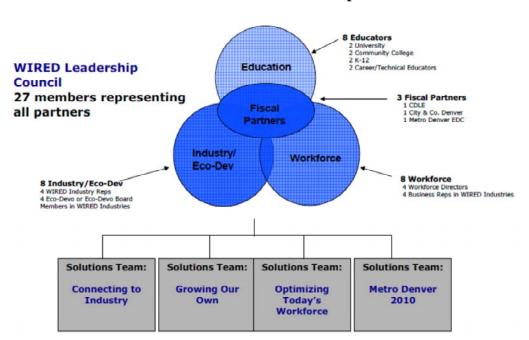


Figure A-7
Metro Denver Partner Map

- Prepare nearly 500 educators for instruction in target industries or STEM skills;
- Impact 10,000 students as a result of educator training;
- Provide outreach to low-income and minority participants (11 of the 20 programs);
- Develop or revise curricula for 38 courses; 27 new work-based programs (including clinical experiences and internships); 11 career guidance programs; 38 partnership and outreach projects among education, industry and workforce system partners; and six remediation/bridge programs;
- Train 1,500 people for careers in target industries;
- Allow 700 participants to receive an education- or industry-certified credential; and
- Place 1,000 people in jobs in target industries.

Key Issues

Organization and Administration

In the first year of the initiative, Metro Denver established eight panels composed of representatives from industry, education, and the workforce system. Each panel focused on different industries, to conduct research and analysis on talent shortages, employer needs, and to make recommendations about activities to address these issues. The 16 co-chairs of the panels formed the High Skills Leadership Council, which set the policy direction and vision for the initiative. The Council vetted the recommendations of the eight panels in September 2007.

During the initiative's second year, Metro Denver dissolved the panels and formed four Solutions Teams to act on the approved recommendations. The Solutions Teams were cross-disciplinary, cross-industry groups supported by Metro Denver and addressed:





- Connection to Industry: Identify information and access to internships, externships, apprenticeships and work-based experiences for students, teachers, incumbent workers, and other job seekers.
- **Metro Denver 2010:** Develop a sustainability plan to continue the initiative's work after grant ends.
- **Growing Our Own:** Focus on programs and initiatives for talent pipeline development, particularly STEM skill development.
- **Optimizing Today's Workforce:** Focus on programs that train and place incumbent workers in the target industries.

The Solution Teams completed their work in Summer 2008. The High Skills Leadership Council was then reconstituted into the current Leadership Council, partly in response to a concern that the workforce system was underrepresented; while some members remained from the previous Council, new members joined as well. The mission of the new Leadership Council is to provide oversight, focus on the sustainability of Metro Denver's mission, define the transformation of workforce delivery system, and work toward becoming a permanent structure for regional talent development. The Leadership Council was originally slated to meet quarterly, but its members have now decided to meet every two months.

Industry Engagement

Limitations in the use of grant funds and an increased ETA emphasis on common measures and employment outcomes have shifted the emphasis of Metro Denver's activities from building talent pipeline capacity to shorter-term training. Many of the employers involved with the grant – particularly in the aerospace and biotech sectors – reported that they were most concerned with developing a talent pipeline for the future, and thus favored education interventions that target students as early as the fourth grade. Moreover, many of the employers in the initiative's targeted industries require professionals with advanced degrees. Some voiced frustration that the initiative seems less focused on these concerns than they had originally hoped.

Sustainability

Metro Denver's plans for sustainability are vested in the Sustainability Planning Research Project. The initiative released a Request for Proposals for project consultant services in December 2008 with the goal of developing a Regional Talent Development Model for use after the grant ends. Most of the region's partners agree that some convening body is needed to continue the initiative's framework and, most importantly, to facilitate and foster the boundary-spanning dialogue and relationships that the initiative started. Some respondents felt that the resulting model may validate efforts to continue the current Leadership Council; others felt that the future of regional talent development lies with the Regional Workforce Board; still others felt that using an outside consultant to review the options would not only diffuse any potential competition or political influence on the decision-making, but might actually result in a completely different long-term leadership structure than the ideas currently being considered.

Impact of Changes in the Economy on the Region

The local economy is supported by growth in the aerospace sector, relatively high energy prices, and an increased investment in renewable energy. Some respondents believed that the growth in





the energy sector and in the local transportation sector (not a target industry) will lessen the full impact of the national economic downturn in Metro Denver.

Jobs and Training

The Workforce Innovation Grants (WIG) fund workforce development, training, entrepreneurship, and other industry-specific education and training partnership projects that promote employment or employee advancement in Metro Denver's four target industry clusters. In March 2008, the initiative awarded nine WIG grants totaling \$2.6 million. The region awarded another six Workforce Innovation Grants II (WIG II) totaling more than \$1.2 million in June 2008. The only substantive difference between the two grant programs is that WIG II grantees were required to partner with the workforce system in order to receive funds.

Involvement of the Workforce System

Some respondents suggested that one of the Metro Denver definitions of "regionalism" – that of uniform systems and services across the eight WIBs – may not be best approach to regional talent development. They opined that different WIBs in the region should develop their own approaches based on local industry needs. Some interviewees also cautioned against overselling what the workforce system can do, such as placing high level talent (those with advanced degrees) in high tech careers. Finally, initiative stakeholders disagree about the mission of the Regional Workforce Board. Some respondents said they see the Board as a working group of the directors (or designates) of the local WIBs working toward better coordination of systems and services across the region. This is how the Regional Workforce Board operates now. Other stakeholders envisioned the Board as a region-wide committee of regional civic, education, government, and industry leaders focused on industry cluster-based talent development. Some had envisioned the Board as a regional WIB, but the local WIBs do not share that vision and it is not likely to be implemented.

Challenges

Administration

Metro Denver's fiscal partners – the Colorado Department of Labor and Employment (CDLE), the Denver Office of Economic Development (OED), and the Metro Denver Economic Development Corporation (Metro Denver EDC) – shared frustration about the level of monitoring and the number of audits required since ETA's fiscal reviewers asked grantee organizations to take more fiscal responsibility for the grant. This requirement resulted in both CDLE and OED auditing Metro Denver EDC, in addition to ETA's fiscal reviews and independent audits. Senior leadership of the fiscal partners express dissatisfaction with the level of bureaucracy associated with the grant, but also note they are governed by that bureaucracy and thus are unable to rein in the monitors or ignore onerous requirements. One interviewee stated that each layer of bureaucracy has its own narrow and strict interpretation of the federal regulations and have imposed those narrow interpretations on the initiative's operations.

Successes

Metro Denver leadership points to its three grant programs – Jumpstart (which funded ten grants totaling \$3.7 million in January 2007), WIG, and WIG II – as its greatest successes to date. In addition to these three grant programs, the initiative has been successful in increasing region-





wide focus on the talent development pipeline, and workforce and economic development. For example, Metro Denver provided the impetus for Colorado's Governor's Office to apply for a STEM grant from the National Governor's Association and to create a P-20 Council to support regional STEM skill development, develop more detailed asset maps, and move the policy agenda forward in regional areas across the state.

The initiative has also caused a "buzz" in state and local policy circles about the regional economy, the targeted industries, and talent development. Respondents pointed to a closer alignment of educational policy with workforce and economic development in the state, and more collaboration between the traditional silos of education and workforce. For example, the Colorado Bio-Science Association (CBSA) now has workforce members on its board, and the association's educational committee has become the talent development committee. In addition, the state legislature had bi-partisan support for a recent increase in general funds to support clustered based economic development mirroring Metro Denver's efforts.

Regional Facts

List of Counties: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer and Weld

Boundaries of Region: 9 counties including the Denver Metropolitan Statistical Area defined by the US Census.

Urban vs. Rural: The region, centered on Denver, is a combination of urban, suburban and rural areas.

Demographics: The region contains 66% of the state's population, with Denver as the largest population center in the region. Larimer and Weld Counties are the most rural and remote with population densities well below the regional median of 364 people per square mile.

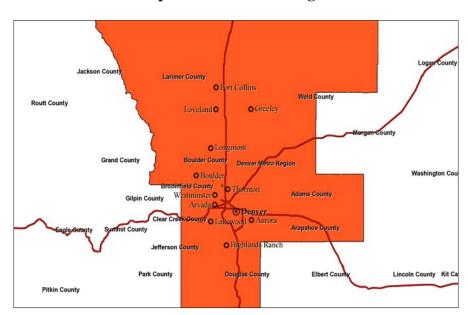


Figure A-8
Map of Metro Denver Region





Figure A-9 Metro Denver Demographic Details^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma Post Secondary Degree	21.5%	31.1% 59.3%	14.8% 23.6%
Per Capita Income	\$25,522	\$34,718	\$18,708
Median Age	33.8	36.8	31.0
Unemployment Rate	4.1%	5.7%	3.2%

^a U.S. Census Bureau, Census 2000

Site Visit Details

Date of visit: December 9-12, 2008

Site Visitors: Tommy Smith and Linda Toms Barker, BPA;

Site Visit Respondents:

- Joseph M Barela, Manager, Arapahoe-Douglas Works
- Barbara Bauer, President and CEO, Globesight Partners
- Chuck Beck, Red Rocks Community College
- Karen Benker, Metro Denver Contracts Administrator
- Beverly Buck, CU Denver, Center for Education Policy Analysis
- Rochelle Cassell, Executive Assistant, Metro Denver
- Tom Clarke, Executive Vice President, MDEDC
- **David Ford**, Grant Manager, Denver Office of Economic Development
- Ledy Garcia-Eckstein, Executive Director, Metro Denver
- **Dawn Gardner**, Arapahoe/Douglas Works! (ADW)
- April Giles, Colorado Bioscience Association
- Paula Gomez-Farrell, Director of Workforce Development City and County of Denver
- Michele Haney, Red Rocks Community College
- Mary Jeffreys, Industry Coordinator, Metro Denver
- Vicky Jennings, Director of Business Relations, Fitzsimmons Redevelopment Authority
- Vicky Lea, Industry Coordinator, Metro Denver
- **Jerome McCarthy**, Industry Coordinator, Metro Denver
- Nicole McGee, Center for Applied Math and Science for Innovation and Competitiveness
- Linda Murphy, Executive Director, Metro Denver Workforce Board
- Kathryn Otten, State WIRED Director, Colorado Department of Labor and Employment





- **Andre Pettigrew**, Executive Director, City and County of Denver Office of Economic Development.
- Beverly Rivoire, Regional Training Center, Colorado State University
- Deanna Scott, Regional Training Center, Colorado State University
- Chris Shepard, Colorado Bioscience Association
- Joan Smith, Red Rocks Community College
- **Becky Troyer**, Front Range Community College
- Lynn Vosler, Front Range Community College
- Kevin Weiner, Industry Coordinator, Metro Denver
- Carol Young, Contracts Administrator, Metro Denver



Northwest Florida Initiative

Introduction

The goal of the Northwest Florida Initiative is to transform the region's economy and improve America's global economic competitiveness through talent development in five target industries: aerospace and defense; life sciences; information technology, software development and electronics engineering; and alternative energy. The initiative also aims to integrate efforts in workforce development, economic development, education, and training across the region and to facilitate regional partnerships that create and expand employment opportunities for workers in the region.

The grantee and fiscal agent is the Agency for Workforce Innovation (AWI), the state agency responsible for implementation of Florida's workforce investment programs. Project management for the grant is housed in Florida's Great Northwest, Inc. (FGNW), a regional economic development organization based in Destin, Florida (see Figure A-10). FGNW leads a coalition of businesses, entrepreneurs, economic development organizations, secondary and post-secondary educators, workforce development boards, foundations, and small business development organizations that is focused not only on developing a skilled workforce in the target industries, but also on creating high-skill, high-wage job opportunities in the region.

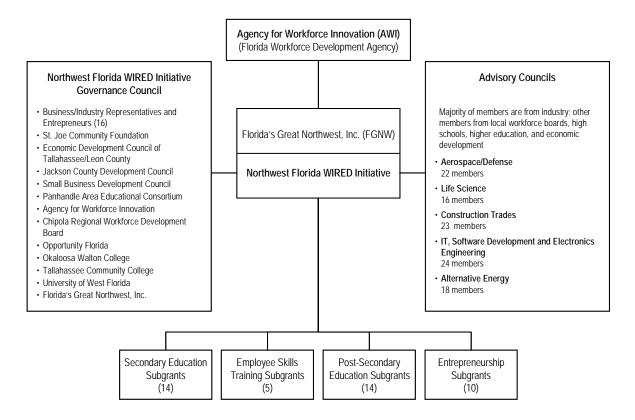
Significant Findings from Year Two

- FGNW is highly regarded within and outside of the region, and is well positioned to serve in a non-competitive way as the focal point for the region's efforts to achieve economic transformation. FGNW's ability and willingness to take on risk on behalf of the collaborative's efforts has enabled partner organizations to pursue projects that they might otherwise consider too financially or politically uncertain.
- In large part because of the initiative, FGNW has engendered trust and cooperation from a variety of partners, including the workforce system, industry and education, and is increasingly seen as a useful and powerful partner in leveraging resources for the region.
- Although the downturn in the economy had the potential to create tension between the shortterm objective of the workforce system to find people immediate work, and the long-term objective of the initiative to create and fill high wage, high skills jobs, FGNW and local WIB leaders have come to understand their objectives are not mutually exclusive, even during hard financial times.
- The initiative continues to establish new partnerships, particularly in the development of post-secondary programs aimed at creating a multi-university, multi-college, high skills, and high wages, training effort. Existing partnerships have been strengthened through such means as the Workforce Innovation Grants recently awarded to the six WIBs in the region.
- In 2008, Northwest Florida completed a comprehensive study of renewable energy resources in the region and strengthened its focus on renewable energy as a target industry through the work of a vibrant and engaged Alternative and Renewable Energy Council.





Figure A-10 Northwest Florida WIRED Partner Map



• The initiative completed an analysis of workforce demand for 118 target industry occupations, which involved face-to-face interviews with more than 200 employers. Site visit respondents credited this analysis as having a unifying effect on partners and leading not only to better collaboration across silos but also to innovative approaches. As one post-secondary partner put it: "The right data can highlight a path to new ideas."

Key Issues

Leveraging Regional Identity

Since the grant began, FGNW has expanded its visibility both within and beyond the region. Participation in its annual Focus event, which courts business site locators from around the U.S., quadrupled in size between 2007 and 2008. FGNW is looking ahead to ways to expand the region's definition in order to capitalize on the completion of the new Panama City, Florida, airport in 2010 and on the planned widening of the Panama Canal.

Interaction with the Workforce System

Prior to the grant, local WIBs in the region were already collaborating with each other and with FGNW, primarily through membership on the FGNW Board of Directors and through monthly meetings to share ideas and strategies. The workforce boards were also working collaboratively





across systems, coordinating their efforts with services such as Veterans' Services and TANF. Key to this cooperation were the findings of a study that identified jobs and training needs and the ways in which grant funds could supplement training where WIA funds were not available. While workforce respondents noted that the main value of the study was that it provided documentation for "something we already knew," they did indicate that the initiative had facilitated their connections with business and education and improved awareness of the workforce system's role in economic development.

As part of its Workforce Innovation Grant program, Northwest Florida recently awarded grants of between \$20,000 and \$35,000 to each of the six local WIBs in the region for STEM education and skills training upgrades. As unemployment has risen, however – in late fall 2008, the region's One-Stop Centers saw a 35% increase in demand – workforce personnel have noted the need to spend training money on preparing people for the jobs that are available now, rather than for the high skill, higher paying jobs that require a longer term investment. Both FGNW and the WIBs report that they have been able to come to a collaborative arrangement so that everyone can be served, with FGNW taking responsibility for "worrying about the long term."

Worker Training

Northwest Florida has approached worker training through four grant-making programs:

- Employee Skills Training Grants: Northwest Florida provides grant funds to businesses in its target industries to train employees for new positions that meet specific wage and benefit requirements. As of August 31, 2008, \$1.1 million in Employee Skills Training grants had been approved and contracted. Grantees have created 492 of the 941 jobs to be created per their contracts. Some grantees will be returning the funds, however, because they can't create the jobs that are required, can't find enough skilled applicants, or have lost revenue as the economy declined.
- Secondary Education Career Academy Creation: Northwest Florida has awarded grants to fund the development of career skills programs at the secondary education level. These include
 - The Wakulla County High School Medical Academy draws a large number of enthusiastic students and has fostered new partnerships between education and the region's medical community. Nearly a third of the school's 1,200 students are enrolled in Academy courses, and 400 potential students attended a recent Academy open house.
 - Grant funds supported the launch of an Aerospace and Flight Academy in the Jefferson County School District.
 - The Gadsden County School District is working with the Banner Center of Excellence for Career Academies/Secondary Education to create an information technology institute at West Gadsden High School.
- **Post-Secondary Education Program Development:** Starting in 2008, the initiative turned its education focus to post-secondary programs necessary to meet the current and future workforce needs in the region's target industries. Using the data collected from the grantfunded analysis of occupations and training capacity in the region, FGNW is working with the region's post-secondary institutions, target industry employers, and workforce and economic development boards, to develop a strategy for addressing IT and engineering

A-26





workforce talent shortfalls. FGNW and the college presidents also using the data in negotiations with the State Legislature for additional resources, such as a new research facility on one university campus. Northwest Florida staff expects to release a Request for Proposals to implement the recommended training solutions in mid-2009.

Two post-secondary grants were awarded in 2008 in response to data that revealed a severe shortage of heavy equipment operators in the region. One grant extended initiative funding for a successful training collaboration between Tallahassee Community College and the local WIB; a second grant will fund the implementation of a similar heavy equipment operator-training program at Washington Holmes Technical Center. The two programs have attracted enthusiastic industry support (the Tallahassee program has been invited to bring its classes to the city's public works yard) and will have the capacity to train 200 heavy equipment operators per year.

• Entrepreneurship Grants: Because the costs for the program as originally planned were not allowable under the grant, major delays occurred in awarding Entrepreneurship grants to business to train workers and create jobs in high-skill, high-wage positions. In 2008, the region revamped the program and awarded ten Entrepreneurship grants tied to the hiring, training and retention of employees for 12 months. Together, the businesses invested matching funds of almost \$7 million, and by August 2008 had created 48 of the 141 total jobs to be created. The economic downturn has negatively affected some of these business partners. Of the ten entrepreneurship grantees, one has moved to Malaysia, one has gone out of business because of the credit squeeze, and one returned the funds when it was unable to meet the training requirements.

In addition to its four main grant-making programs, in December 2008, Northwest Florida awarded \$150,000 in Workforce Innovation I grants to be shared by the six workforce investment boards in the region. The WIBs will use the money to train workers, both unemployed and employed, and students aged 16 years or older, in gaining skills and competencies needed to obtain or upgrade their employment positions in the initiative's targeted industry sectors. These projects will address specific occupational needs and the educational requirements for those occupations, and direct trainees toward the appropriate talent development programs. The region has also allocated \$1.75 million for its Workforce Innovations II grants. To be eligible for the grants, the training facilities must be in Northwest Florida and trainees must either be employed with a target industry employer in the region or be training for target industry and occupation employment opportunities within the region. Twelve proposals were received by the December 2008 submission deadline.

Industry Councils

The input and guidance provided by Industry Advisory Councils for each of the target industries is an integral component of the Northwest Florida initiative. Each Industry Advisory Council is made up predominantly of businesses actively engaged in that target industry. In 2007, the region funded an alternative energy feasibility study that outlined the direction for the industry in Northwest Florida and identified related jobs, wages, skills, and training. The study has informed the work of Northwest Florida's Renewable and Alternative Energy Council, whose partners include representatives from state universities, community colleges, local businesses, and public and private industry (military and energy manufacturing). The Council meets

A-27





quarterly to discuss and implement an increasingly innovative strategic agenda. Their focus is on renewable energy innovations, including best practices for creating green industry parks and an analysis of the region's suitability for wind and solar energy industries. The Council recently applied to the U.S. Department of Energy for funding to explore potential methods for harvesting the woody biomass feedstock in the region.

Successes

Partnerships and Collaboration

The initiative continues to be a catalyst in creating and expanding partnerships in the region and in facilitating collaboration among the partners. Examples include:

- The grant funded upfront curriculum costs and equipment for Project Lead the Way engineering programs in Escambia and Bay Counties. When fully implemented, the programs will have enrolled more than 250 students in each county.
- In Jackson County, a local educator asked the local WIB for help with talent development. The result was an externship during which teachers spent three days in the field with a local business, and developed lesson plans using real-life examples from their experience. For example, one teacher used a blueprint from a local manufacturing firm to teach geometry.
- The region and rural WIBs partnered to bring a Robotics program to rural schools.

Initiative partners commented on the value of FGNW's low profile, party-neutral approach to collaboration. Referring to FGNW's approach as "stealth economic development," one partner commented, "The good thing about Florida's Great Northwest is that they are not here to compete with you, and they don't try to take all the credit."

Worker Training

FGNW created several successful worker training programs. For example:

- A customized software systems provider reported that the training provided and jobs created through the grant funds made his business more competitive.
- A start-up company that specializes in software development for medication dispensing and regional health information networks created twice as many jobs as required by its initiative contract. The company hopes to capitalize on increasing federal emphasis on electronic health care networks.
- In late 2008, a partnership between the region and Gulf Power made local headlines when the power company matched an initiative employee training grant of approximately \$350,000 with more than \$900,000 of its own funds.

Innovation

The Workforce Innovation II grants, released in October 2008, aim to address specific industry needs by funding innovative workforce development, training and other industry-specific education and training partnerships. For a project to receiving funding, it must encourage or lead to high-skill, high-wage employment or employee advancement in one of four high-growth industry clusters – aviation, aerospace, defense, and national security; energy and the environment; health sciences and human performance enhancement; or transportation and





logistics – or in the support industries, information technology or research/engineering services. These grants are seen as a unique opportunity for Northwest Florida entities to "develop original and creative solutions" to meeting employment training needs in the region's knowledge based workforce: "The point of innovation cannot be overemphasized."

The Green Circle Bio Energy wood pellet plant in Jackson County, which received an Employee Skills Training Grant, has proven to be a successful and innovative collaboration between natural resources (the region's pine forest plantations) and existing transportation and logistics industry clusters (roads, rail and ports).

Sustainability

Northwest Florida's activities are congruent with the strategic plan of Florida's Great Northwest, and will be maintained by that organization once the grant ends. In addition to supporting worker training programs, initiative funds have been used to methodically research, study, and analyze best practices for sustainability. Some examples:

- Before launching its post-secondary program grants, the initiative hired the Haas Center for Business Research and Economic Development at the University of West Florida to conduct a high tech occupation and gap analysis, and then used the data to engage post-secondary institutions in discussions prior to writing the RFP, which will go out in mid-2009. (DOL granted Northwest Florida a no-cost extension to 2010 so that they can roll out the postsecondary programs over a two-year period.)
- Grant funds provided the regional workforce data needed to support the state mandate for school districts to produce five-year strategic plans for career education at the secondary level under the CHOICE Academy model.
- The initiative funded more than 228 interviews with targeted industry employers to determine short and long-term private employer personnel needs and skills requirements. The results of the study are being shared with the State Legislature, and will be used to support the development of future regional efforts.

Sustainability after the grant ends is primary on the agenda of the newly formed Entrepreneurship Council. The Council is collaborating with the National Business Information Clearinghouse to develop a web portal that addresses the core issues confronting entrepreneurs. A representative from NBIC sits on the Council. The collaboration is one of two pilot demonstration projects funded by the ETA.

Initiative-Related Funds

Northwest Florida is structured as a grant-making organization that requires a 100% match from grant recipients, thus leveraging grant funds with the matching funds. At the end of the fourth quarter for 2008, FGNW reported a \$14 million match for the approximately \$4.5 million in grants awarded to date.

In addition to matching funds from its grantees, initiative/FGNW staff continues to seek additional funding from outside sources. For example, in February 2009, Gulf Power matched a training grant with \$900,000 of its own funds. FGNW also continues to partner with Enterprise

A-29





Florida, Inc., the state's economic development arm, to promote the SBIR/STTR Phase 0 and SBIR/STTR Phase 1.5 programs to small and mid-sized businesses in Northwest Florida.

Challenges

Regional Economy

- The average unemployment rate across the 16 northwest counties rose from 3.3% in 2006 to more than 6% (the highest since 1993) in Fall 2008. Regional WIBs reported a 35% increase in requests for services as compared to last year.
- As the housing crisis continues, the initiative is decreasing its emphasis on the construction trades as a target industry.
- Respondents report that the region is still in the early stages of harnessing the resources of the region toward a more diverse economy, which is still very reliant on tourism.
- Tightening credit markets influenced the success of the initiative's entrepreneurship and employee skills sub-grantees and in some cases funds were de-obligated.

Distribution of Funds

As the monies awarded to Northwest Florida's sub-grantees cannot be expended until the completion of the funded training programs, staff has some concern about the grant project's ability to spend out its obligated funds in a timely manner. With ETA's recent approval of a nocost extension to 2010, this concern has abated.

Regional Facts

Figure A-11
Map of the Northwest Florida Region







Figure A-12 Northwest Florida Demographic Details^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma	28.4%	40.4%	18.9%
Post Secondary Degree	30.6%	49.9%	10.4%
Per Capita Income	\$18,276	\$20,577	\$12,152
Median Age	35.5	41.0	29.4
Unemployment Rate	5.9%	8.3%	3.6%

^a U.S. Census Bureau, Census 2000

List of Counties: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf, Liberty, Gadsden, Leon, Wakulla, Jefferson, Franklin.

Boundaries of Region: Florida's Great Northwest comprises 16 counties covering 13,000 square miles.

Urban vs. Rural: The region is urban, with Pensacola and Tallahassee representing the largest population centers, and rural.

Demographics: Northwest Florida's region represents 8% of Florida's total population. Within the region, Escambia County has the largest population (294,410), and Liberty County the smallest (7,021).

Site Visit Details

Date of visit: October 27-30, 2008

Site Visitors: Kay Magill and Tricia Cambron, BPA

Site Visit Respondents:

- Dr. Judith Bense, President, University of West Florida, WIRED Governance Council
- Kim Bodine, Executive Director, Gulf Coast Workforce Board
- Suzie Culkin, Grant Program Manager, Florida's Great Northwest
- Rob Cowan, General Dynamics Land Systems
- Sue Evans, National Business Information Clearinghouse, Entrepreneurship Council
- Willie Farrow, High Growth Business Incubator, Entrepreneurship Council
- Rick Frasier, Tallahassee Community College
- Jerold Hall, Landrum Staffing, Entrepreneurship Council
- Bill Jacobus, Avocare
- **Fred Leopold**, Chair of the Northwest Florida Governance Council and of the FGNW Board of Directors; President and CEO of Vanguard Bank

A-31





- Kelly Lorenz, Manager, Marketing & Communications Florida's Great Northwest
- Rick Marcum, Executive Director, Opportunity Florida (Mymilitary.com)
- Roger Miller, Project Director, Florida's Great Northwest
- **Kimberly Moore**, Executive Director, Workforce Plus
- Sonya Negley, Manager, Community & Business Development, Florida's Great Northwest
- Susan Nelms, Executive Director, Workforce Escarosa
- Beth O'Donnell, Wakulla County School District
- Julie Paton, Administrative Assistant, Florida's Great Northwest
- Jackie Phillips, Agency for Workforce Innovation
- Debra Rackley, Gadsden County School District
- Sheryl Rehberg, Executive Director, North Florida Workforce Development Board
- **Keith Rowe**, Cornerstone Software Systems
- Pam Tedesco, Director, Northwest Florida Initiative
- Al Wenstrand, Executive Director, Florida's Great Northwest
- Richard Williams, Executive Director, Chipola Regional Workforce Development Board



North Central Indiana (NCI) Initiative

Introduction

A decline in large manufacturing firms and suppliers and the low educational attainment of an aging workforce were the impetus for the North Central Indiana (NCI) grant proposal. With a focus on advanced manufacturing, advanced materials, agribusiness, and food processing industries, NCI seeks to nurture start-ups, increase post-secondary education among mature incumbent workers in declining industries, establish networks for entrepreneur support, and develop collaboration among communities throughout the region. An underlying goal is to develop both nationally and internationally renowned innovative initiatives that can be replicated both across both the region and the state of Indiana.

Purdue University's Center for Regional Development (PCRD) manages both the grant's finances and implementation. The Policy Advisory Team is made up of executives from the regional partners and operates like a Board of Directors. The Core Team consists of the managers from the regional partners and is the tactical group charged with overseeing NCI management (see Figure A-13). NCI also convenes a panel of the region's local economic development organizations (LEDOs) to inform, solicit input, and build collaboration. NCI's other key partners include Tecumseh Area Partnership (the local workforce board for the region), Indiana University–Kokomo, Ivy Tech (the statewide community college system), and Small Business Development Centers in Lafayette and Kokomo. Statewide partners include the Indiana Office of the Governor and the Indiana Department of Workforce Development.

Together, NCI and its partners are: 1) building **Talent Networks** to support a region dedicated to lifelong learning; 2) strengthening **Entrepreneurship and Innovation Networks** in the region; 3) developing **Business Clusters** in health care, energy efficiency, advanced materials, agribusiness supply chains, nanotechnology, and green workforce certification; 4) strengthening habits of **Civic Collaboration**, including building networks, developing communities of practice, and hosting regional forums; and 5) investing in innovative partnerships through a \$5 million **Opportunity Fund**.

Significant Findings from Year Two

- NCI has seen increased cooperation between partners and stakeholders in the region.
- NCI's partner organizations have incorporated key activities into their ongoing programs, which will contribute to the sustainability of the initiative's efforts beyond the grant period.
- NCI has expanded its industry focus to include alternative energy

These topics are described in more detail in the sections that follow.

Key Issues

Organization and Administration

NCI has maintained the same organizational structure since its inception. While the membership of the Policy Advisory Team, Core Team, and initiative staff have remained relatively consistent, the degree to which these groups are involved in implementation of the initiative in a hands-on





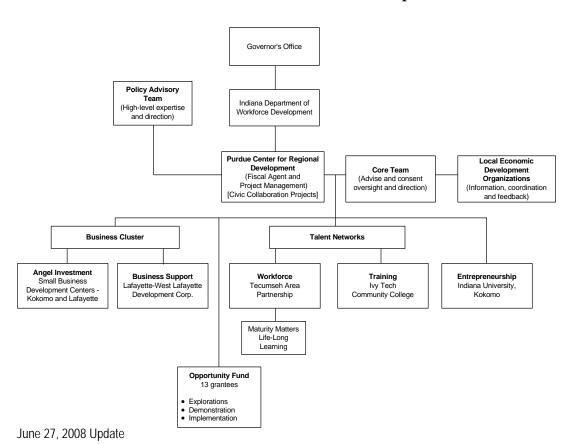


Figure A-13 North Central Indiana Partner Map

way has shifted over time. During the grant's start-up phase, the Policy Advisory Team actively shaped the vision and agenda for the region, and the Core Team operationalized that agenda. Each committee met monthly to implement programs, inform regional stakeholders, and review and award Opportunity Fund sub-grants. By the time of the second evaluation visit, the Policy Advisory and Core Teams were meeting less frequently, and on an ad hoc basis. The staff manages the day-to-day administration of the initiative, including data collection and reporting.

Only two personnel are dedicated to NCI full time. Initiative staff members at Purdue, Ivy Tech, and Indiana University, Kokomo, who oversee the four key NCI activities – entrepreneurship, talent development, business innovation and civic networks – are only partially funded by NCI. As such, NCI has maintained a low overhead and does not have a large infrastructure or staff to maintain.

Collaboration

Through their participation in NCI's advisory committee, county-based LEDOs – which previously viewed each other as competitors – have networked, exchanged ideas, and collaborated. Building on this experience, the LEDOs are now sharing advice and assistance and pursuing joint endeavors. Several local projects – such as a wind farm in Howard County, a





business park in Miami County, and a job fair in Tippecanoe County – have benefited from this regional communication and cooperation. While some respondents felt that the region continues to operate in a divided way (e.g., urban versus rural, east versus west, Purdue versus other initiative partners), those differences are no longer a barrier to communication and collaboration.

Initiative Interaction/Influence on the Workforce System

At the time of the grant award, the NCI region consisted of two local workforce areas, one centered on the West Lafayette/Lafayette metro area, and one centered on Kokomo. In July 2006, Indiana's Department of Workforce Development combined these two local workforce areas into a new State Workforce Region 4. Several interviewees noted that the initiative "only accelerated the process" of integrating the two workforce areas into one.

Sustainability

To receive initiative funding, NCI required that applicants include mechanisms of sustainability (such as fees for services) in their sub-grant program designs. For example, NCI paid for computers and other equipment for New Tech High in the Rochester Community School District. This school serves as a demonstration site for a wall-to-wall high school technology program and provides tours and workshops for a fee, ² thereby supporting continued programming.

In addition, many of the NCI workforce training, technology transfer, entrepreneurship, and regional leadership development initiatives at Purdue, Ivy Tech, and Indiana University, Kokomo, have been institutionalized, with their current and future costs incorporated in the organizations' annual budgets. Thus, funding from NCI served as "seed money" to overcome the barrier of high start-up costs. When the grant funding ends, these activities and the staff that support them will remain with their "home" organizations.

Jobs and Training

The Tecumseh Area Partnership (TAP), the Work One Center operator and fiscal agent of the Regional Workforce Board, recently opened the second of two Regional Employment and Assessment Centers for Hiring (REACH) supported by NCI funds. The concept behind the REACH Centers is that the public workforce system will serve as a "back office human resources" to premium employers in the region. The REACH Centers offer WorkKeys job task assessments, company showcases, brokered background and reference checks, drug screening, employer seminars, and a Business and Professional Exchange networking group for white-collar workers. When Toyota contracted with the local Subaru plant to build its popular Camry line, TAP was able to screen 23,000 applications and then assess 5,000 candidates through the REACH Centers.

Challenges

The Economy

In Fall 2008, the region suffered a major loss of automotive engineering jobs due to layoffs at Delphi Corporation's Kokomo manufacturing facilities, with more layoffs anticipated. Some respondents in the region are concerned that layoffs will hinder business retention and attraction efforts. As firms seek to conserve resources to withstand an economic downturn, they may be

² Other school districts in the NCI region can use these services without cost.





less willing to invest in incumbent worker training. These and further job losses throughout the region increase demands on the workforce system, and such demands can limit the resources the workforce partners can contribute to collaborative efforts.

Successes

Regionalism

The evaluation's First Interim Report identified barriers to developing a successful regional economy in the NCI region:

- Lafayette/West Lafayette is the larger, more prosperous urban center of the two centers within the region. Site visit respondents in the second region, Kokomo, are apprehensive that the initiative will most benefit the Lafayette area.
- With the exception of the two cities, the region is largely rural. Some partners are concerned that NCI will neglect rural areas in favor of the two urban areas. Others have suggested that the rural areas have different issues and impediments to economic development than cities.
- Some in the region hold a perception that NCI is just "another government grant to Purdue to do Purdue projects," which, in the opinion of some, has slowed the process of implementing regional initiatives.

Despite these barriers, regionalism has increased. Responses to Delphi layoffs are an example of how the two urban centers of the region are working together: soon after the layoffs, Greater Lafayette Commerce, the urban economic development organization in the west of the region, held a job fair. Before the initiative, the Kokomo/Howard County Development Corporation (the parallel organization in the east part of the region) may have viewed the event as a threat by a competitor. Instead, they considered the job fair important in retaining an important talent base in the region and gave their blessing. When the Kokomo/Howard County Development Corporation submitted a proposal to use NCI funds to seed a incubator concept called "skunk works" to capture some of the laid off engineers, it received immediate and undivided support across the region.

NCI has developed a briefing presentation that highlights the investments made in each of the 14 counties in the region to demonstrate regional initiative impacts. One major investment in a rural area of the region was the White County Instructional Center. NCI provided funding for initial equipment for the Center, operated by NCI partner Ivy Tech, which will provide workforce training and post-secondary education in a relatively remote and underserved area of the region.

Many respondents have reported that there has been a shift in the way Purdue and its role is viewed in the region. While some still privately refer to Purdue as the "800-pound gorilla," they will also readily admit that Purdue is a valued regional partner.

Alternative Energy

NCI has seen an increased emphasis on clean energy technologies exemplified by two initiatives, the Clean Energy Partnership and the Indiana Energy Systems Network. The Clean Energy Partnership includes players from several rural counties in the region. While NCI has not provided any direct investment, this partnership came about due to NCI efforts to forge a relationship across the region. NCI has facilitated the Clean Energy Partnership by connecting





partners to the National Renewable Energy Laboratory and providing other networking opportunities. The partnership organized several community forums to support clean energy activities of local government, farmers, industrial workers, manufacturers, households, and small business consumers. The Clean Energy Partnership is also developing an Asset Mapping Toolkit to integrate clean energy and economic development through the connection of clean energy supplies to clean energy users.

The Indiana Energy Systems Network (IESN) facilitates business creation, market expansion, and talent development in energy conversion, power storage, distributed power generation, and alternative energy by leveraging the existing intellectual capital (people and technology) of the automotive industry in Indiana. IESN actually extends beyond the NCI region and throughout the state of Indiana. NCI provided seed funds to allow for research and outreach to attract sustainable money from corporations and investors. The governor's office suggested investing NCI funds for this initiative given the high concentration of talent and assets in the NCI region.

Regional Facts

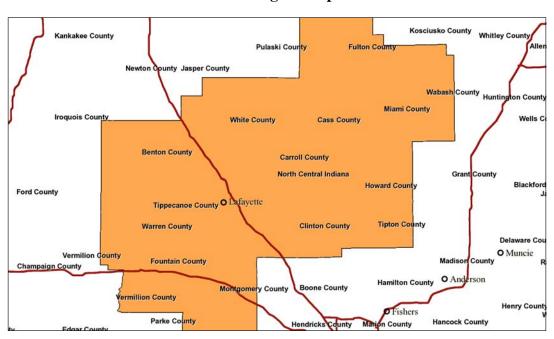


Figure A-14 NCI Region Map

List of Counties: Cass, Fulton, Howard, Miami, Tipton, Wabash, Tippecanoe, Benton, Carroll, Clinton, Fountain, Montgomery, Warren, White.

Boundaries of Region: The 14 counties in the region represent a newly created state economic development zone.

A-37

Urban vs. Rural: Primarily 14 rural counties, situated between West Lafayette/Lafayette (population over 86,000) and Kokomo (population over 46,000).





Demographics: Although the region only represents 8% of the population, its population's demographics are similar to those of the rest of Indiana. The largest county in terms of population size and density is Tippecanoe (148,955; 296.2 pop/sq mile) and the smallest is Warren (8,419; 23 pop/sq mile).

Figure A-15 NCI Demographic Details^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma	41.7%	50.3%	30.5%
Post Secondary Degree	23.3%	38.6%	14.3%
Per Capita Income	\$18,864	\$21,877	\$16,793
Median Age	34.4	38.4	26.9
Unemployment Rate	5.0%	6.9%	2.6%

^a U.S. Census Bureau, Census 2000

Site Visit Details

Date of visit: November 10-14, 2008

Site Visitors: Tommy Smith, BPA; Joshua Shapiro, UCSD

Site Visit Respondents:

- Allison Bryan, Project Manager, Health Care Technical Assistance Program, Purdue Technical Assistance Program
- Sam Cordes, Co-Director, Purdue Center for Regional Development (PCRD)
- Susan Davis, Regional Director, Hoosier Heartland, Small Business Development Center
- Dr. Nathalie Duval-Couetil, Associate Director, Purdue Entrepreneurship Program
- Roger Feldhaus, Executive Director, Tecumseh Area Partnership (TAP)
- Dr. Stuart Green, Chancellor, Indiana University, Kokomo
- Fred Hakes, Director, Division of Continuing Studies, Indiana University, Kokomo
- Jody Hamilton, Director, Economic Development, Greater Lafayette Commerce
- Senator Brandt Hershman, State of Indiana
- Sascha Harrell, Purdue Entrepreneurship Program
- Jan Hendrix, President, Kokomo-Howard County Development Corporation
- Randy Hountz, Assistant Director, Purdue Technical Assistance Program
- Dr. Debra Howe, Superintendent, Rochester Schools
- Dr. Mark Jackson, Associate Professor of Mechanical Engineering, Purdue University





- Scott Hutcheson, Co-Director, PCRD (NCI WIRED Principal Investigator)
- Craig Lamb, Executive Director Workforce & Economic Development, Ivy Tech
- Dr. Victor Lechtenberg, Vice Provost of Engagement, Purdue University
- **Dr. Dave McKinnis**, Director, Purdue Technical Assistance Program
- Paul Mitchell, Policy Director, Economic and Workforce Development, Office of Governor Mitch Daniels
- Richard Myer, Business Growth Services Leader, Purdue Technical Assistance Program
- Connie Neininger, Economic Development Director, White County
- Candy Norman, Leadership Institute, Indiana University, Kokomo
- Dan Ronk, Principal, Zebra New Tech High
- Jeff Sanson, Director of Programs, Indiana Council for Economic Education
- Joseph Seaman, President and CEO, Greater Lafayette Commerce
- Mark Smith, Project Administrator, NCI
- **Dustin Stohler**, General Counsel, Indiana Department of Workforce Development
- **Deb Waymire**, Chief Operations Officer, TAP
- **J.W.** (**Jim**) **Wheeler**, Senior Vice President of Economic Competitiveness Policy and Research, Thomas P. Miller and Associates



Kansas City Initiative (One KC)

Introduction

The goal of the Kansas City initiative (One KC) is to leverage the strength of existing alliances and partnerships in three targeted industries: advanced manufacturing, biotechnology, and healthcare. The aim of One KC is to develop a seamless and comprehensive system of economic and workforce development for these industries, align training and educational programs to meet the industries' growing staffing needs, and market the region as "One KC." Indeed, the region seeks to move beyond thinking only about the Kansas City metropolitan area to "thinking, acting, working, and growing as One KC" within the bi-state region.

The Mid-America Regional Council (MARC), the federally-designated regional Metropolitan Planning Organization,³ functions as the fiscal agent for One KC and hosts the One KC Project Director. Two committees support management of the initiative. The Steering Committee is made up of all of the One KC partners, including grantees. This group oversees implementation of the initiative's projects and meets monthly so that partners who provide grant services can report on their progress. The Executive Committee is a subset of Steering Committee members, and includes representatives from Kansas and Missouri public workforce development systems, educational programs, and the three targeted industry sectors. The Executive Committee is the equivalent of the initiative's Board of Directors, and discusses and decides important or sensitive issues related to the initiative (see Figure A-16).

Significant Findings from Year Two

- Regional collaboration varies across the One KC region, particularly across the Kansas-Missouri state line. Communication is gradually and continually improving among local WIBs and coordination among community college systems is increasing. Industry and labor markets are already operating on a regional level.
- While the initiative has fostered significant developments in the workforce development system, significant challenges to regional cooperation and engagement remain.
- Program managers and executive leadership are keenly concerned about sustainability of programs and initiatives in terms of continuing regional coordination and programmatic funding beyond the grant period.

Key Issues

Partnerships

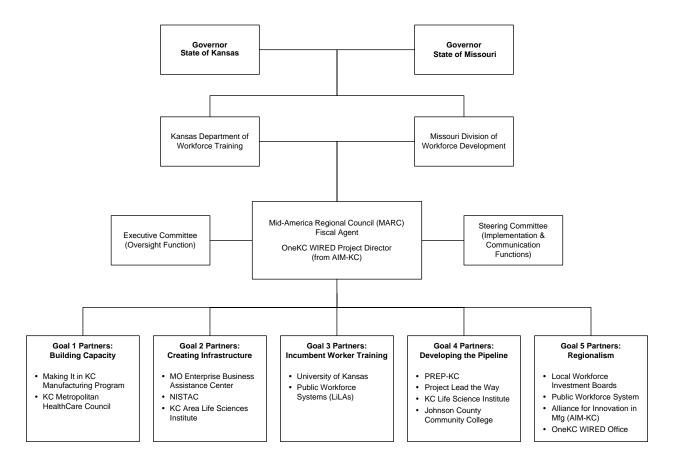
Last year, the evaluation noted the importance of the role of the One KC Project Manager in fostering relationships, brokering partnerships, and promoting the bi-state Kansas City region. The 2008 site visitors noted that—while the One KC Project Manager remains a vital connector of people, organizations, and resources in the region—many of the partnerships are not only taking hold but also developing a life of their own, separate from the influence of the Project Manager. Many respondents said that One KC has been very good at bringing together

³ Metropolitan Planning Organizations plan, program, and coordinate of federal highway and transit funds in urbanized areas, and thus offer an organizational infrastructure useful for developing a regional identity.





Figure A-16
One KC Partner Map



individuals, organizations, and sectors that may have not met otherwise. It has fostered a sense of community and cooperative spirit across the region. One Steering Committee member opined that One KC has "made them all believers in regionalism" by "demonstrating the positive attributes of working at the regional level."

Regionalism

In 2007, site visitors noted that regional collaboration in Kansas City exists along a continuum, with industry and labor markets operating irrespective of the political boundary. At the other end of the spectrum, the 2007 report stated that public sector cooperation across state lines might prove to be challenging. The 2008 visit revealed similar dynamics:

- Business and industry and labor markets operate irrespective of the state line.
- Civic organizations like the Kansas City Area Development Council and the Kansas City Civic Council act regionally.
- Higher education institutions act regionally where grant dollars are involved. They are becoming more collaborative in other ventures due in part to the relationships developed through the grant.





- The metropolitan workforce development system speaks the same language, shares the same goals, and recognizes the value of collaboration in creating a common customer experience for both job seekers and employers. Some rivalry remains, but this has become less of a barrier to cooperation than in previously years.
- With some exceptions, representatives of the workforce system in rural areas tend to be the least collaborative partners. Because their boundaries are not wholly contained in the region, these agencies have constituencies and therefore priorities outside of the region.

Jobs and Training

One KC has awarded subgrants for several job training programs in the targeted industry areas, many of which have been fully implemented and have trained hundreds of participants. Other subgrants were dedicated to developing the jobs pipeline and focused on STEM education in high schools throughout the region. Incumbent worker training has been supported through Life Long Learning Accounts (LiLAs). Training funded by LiLAs must be approved by the current employer and LiLA program manager and advance employees' professional development in their current fields. The programs require employer and employee matching funds. One KC has developed a LiLA Web site and debit card system that can be replicated in other regions throughout the country. Staff members are in the process of promoting this opportunity to other employers and transitioning to a sustainable model that does not rely on grant funds.

With the economic downturn, the media have demonstrated interest in reporting on employment and training opportunities in the Kansas City region. For example, the local NBC affiliate television station (Channel 41) approached Workforce Partnership, the metropolitan workforce system operator on the Kansas side of the border, to appear on their first segment of *Workers Wanted Wednesday*. The episode featured the services provided through Workforce Partnership and listed a hotline number for job seekers seeking career advice. Future episodes will feature job opportunities and employers, and one episode will highlight One KC activities.

Interaction/Influence on the Workforce System

Several interviewees felt that the initiative has encouraged the workforce system to work with partners beyond those mandated by WIA. It has also led to more automation, use of email, online applications, going outside the Career Center, and even being open on Saturdays. "We are learning what we can institutionalize from the concept and better expend resources now that these innovations are in place."

Both states are developing common WorkKeys Assessment/Individual Bi-State Certificates to be used by all local WIBs in the region for assessing job seeker skills and needs. Although some respondents believed that a common assessment tool might have eventually evolved without the grant-funded regional collaborations, they readily admit, "The timetable was greatly accelerated because of the initiative." Another example of coordination resulting from the grant included an invitation extended to Workforce Partnership (located in Kansas) by Missouri's Division of Workforce Development to participate in a large job fair for the laid-off workers of the American Airlines Overhaul facility. Additionally, Workforce Partnership recruited the Wichita WIB (a six-county area in Kansas) to join the fair because of the large number of aerospace employers in its area. This was an unprecedented example of workforce system cooperation across the state line.





Sustainability

Sustainability is becoming a major concern for the initiative's stakeholders. Operational managers of grant-funded programs are faced with the prospect of finding resources to continue their activities after grant funds are exhausted. The One KC Executive Committee is concerned about how to maintain the initiative's collaborative framework, and believe that for the initiative's ethos to really gain traction, they need five to seven years to develop a regional organization that will continue to convene stakeholders to address regional workforce, education, and economic development issues. Some wonder if the Mid-America Regional Council, the fiscal agent of the grant, will be the organization that assumes the convener role.

Challenges

Downturn in the Economy

The regional economy, following the national trend, has taken a turn for the worse. The KC Metropolitan Chamber of Commerce has conducted annual economic forecasts since 1983. Because of their involvement with One KC, 2008 was the first year they included workforce forecasts. Their data shows that job losses are affecting both white- and blue-collar workers despite growth in the healthcare sector, which is one of the One KC targeted industries. The increase in the local unemployment rate (mostly in the financial services, aircraft and manufacturing sectors) has resulted in an increase in job seekers, many of whom are unfamiliar with the public workforce system. The economy is placing a greater burden on the workforce development system, and with decreasing demand for workers job placements are declining.

One KC Administrative Structure

The first interim evaluation reported that the One KC Project Manager is involved with every decision and aspect of the initiative. As One KC grows in scope and complexity stakeholders are concerned such centralization could become a bottleneck; accordingly project management is currently recruiting additional staff so the Project Manager can appropriately delegate duties and responsibilities.

Engagement of the Workforce System

Some respondents identified a significant element of competition between local WIBs. They stated that this competitiveness prevents WIB staff from letting go of parochial approaches in order to think regionally. They have not found a way to develop a regional brand without feeling as if they are losing their local brand. One interviewee observed, "Co-branding is tough but is essential to accomplish so that each workforce system operator develops a common customer experience."

Initially, One KC allocated \$3.8 million to its seven local WIB partners for direct training, representing the largest proportional investment of the grant. Many of the WIBs had difficulty spending down their grant funds, however. Several stakeholders offered two general explanations: 1) three of the seven WIBs had only one of their counties in the One KC region, so they did not prioritize using these funds or did not have an appropriate client base or training opportunities in the included county for using these funds; and 2) the WIBs Priority of Service system required them to spend down their WIA funds before turning to grant funds – essentially they continued to provide individual training accounts only to income-eligible clientele instead of taking advantage of the initiative's flexibility for universal services. The One KC Executive





Committee provided these WIBs with a three-month extension to undertake an extensive spendout planning process that included: reviewing expenditures and obligations of funds; projecting future expenditures and activities; and meeting with the WIB directors, their Board chairs, and the leadership from the respective state's public workforce system. Some WIBs readily identified funds that would not be expended and offered them for reallocation for other activities. As a result, One KC recaptured over \$800,000 in grant funds. One KC is redistributing these funds through a request for applications (RFA) process to all of the sub-recipients of the original grant award for funding proposals of less than \$100,000 to expand current projects.

Successes

Industry Liaisons

To facilitate industry linkages with grant-funded activities, One KC hired four Industry Liaisons – one in biotechnology, one in healthcare, and two in advanced manufacturing. The Industry Liaisons all have the same general function: to build relationships and bridges among industry, post-secondary, high school education, and the workforce development system. Liaison-supported opportunities for students and teachers include visits to businesses, student internships, teacher externships, curriculum development, career mentoring, job shadowing, and an industry speakers' bureau. Industry Liaisons assist employers and industry associations in developing and implementing strategies that promote the retention of incumbent workers. They also provide input into development of certificates, degrees, and training programs based on industry needs. Many respondents stated that the Industry Liaisons have made significant contributions to One KC, and "their efforts help create a competitive advantage for industry in the Kansas City region and therefore enhance economic development."

Regional Facts

List of Counties:

- Missouri, 10 counties: Buchanan, Cass, Clay, Clinton, Jackson, Johnson, Lafayette, Livingston, Platte, Ray
- Kansas, 8 counties: Atchison, Douglas, Franklin, Johnson, Leavenworth, Miami, Shawnee, Wyandotte

Boundaries of Region: Kansas City MSA, Topeka MSA, *plus* 5 rural counties in Missouri, *plus* 4 rural counties in Kansas

Urban vs. Rural: The region covers a mixture of urban, suburban, and rural areas.

Demographics: The Kansas City region represents 21% of Missouri's population and 38% of Kansas' population. The counties with the largest populations are Jackson, MO (654,880) with a density of 1062.7 pop./sq. mile, followed by Johnson County, KS (451,086; 939.9 pop/sq mile). In contrast, Livingston County, MO (14,558; 27 pop./sq. mile) and Atchison County, KS (16,774; 38.6 pop./sq. mile) have the smallest populations.





Figure A-17 Map of One KC Region

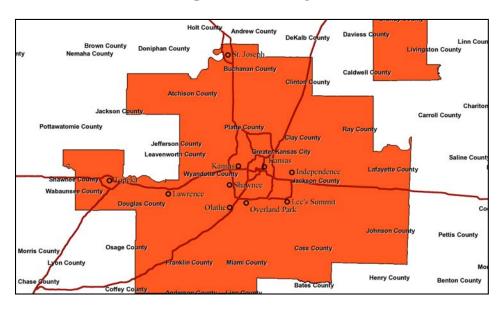


Figure A-18
Demographic Details for One KC Region^a

	Regional	County Range	
Measure	Average	High	Low
Educational Attainment High School Diploma Post Secondary Degree	29.5% 33.5%	45.9% 54.1%	17.5% 14.4%
Per Capita Income	\$22,114	\$30,645	\$14,793
Median Age	34.9	39.7	26.5
Unemployment Rate	4.3%	8.2%	2.3%

^a U.S. Census Bureau, Census 2000

Site Visit Details

Date of Visit: November 17-20, 2008

Site Visitors: Jennifer Kuiper and Tommy Smith, BPA

Site Visit Respondents:





- Scott Anglemyer, Executive Director, Workforce Partnership
- **David Brennan**, Director of Employment Services, Workforce Services, Kansas Department of Commerce
- Dawn Busick, Director, Missouri Division of Workforce Development
- Tim Cowden, Senior Vice President for Business Development, KDADC
- Chuck Croston, Grant Director, Metropolitan Community College Business & Technology
- Michael Dunaway, Senior Vice President Field Operations, Metropolitan Healthcare Council
- **David Hawkins**, Kimball Marsh, Mirella Jones, "Making it in KC" Program, Metropolitan Community College
- Lisa Hostetler, North Central Missouri College-Area Job Training Partnership Administration
- Jan Hunt, Executive Assistant, One KC
- Mark Johnson, Grants Compliance Manager, Mid-America Regional Council
- Karen Krumme, Charlene Elliot, Deborah King Williams, Virginia Alder, Industry Liaisons, One KC
- Suzy Makalous, Director-Lifelong Learning, One KC
- **Bob Marcusse**, President and CEO, Kansas City Area Development Council (KCADC)
- Clyde McQueen, President and CEO, Full Employment Council
- Gary Sage, President, Metropolitan Community College Business & Technology
- Paul Scianna, Executive Director, One KC
- **Jewel Scott**, Executive Director, Civic Council of Greater Kansas City
- **Becky Steele**, LWIB Executive Director, North Central Missouri College-Area Job Training Partnership Administration
- Susan Wally, Executive Director, PREP KC
- Elizabeth Wenske, Program Manager, University of Kansas Continuing Education





Maine's North Star Alliance Initiative

Introduction

The goal of Maine's North Star Alliance Initiative (NSAI) is to integrate education, workforce, and economic development systems in order to create and sustain skilled job opportunities in the region's stronghold industries: boat-building; marine services and repair; and advanced composites. NSAI has identified four "Pillars of Economic Development" and convened committees to develop activities under each Pillar:

- Workforce Development Develops and delivers applied knowledge and skills to both incumbent and new workers, using faculty jointly sponsored by industry and education.
- Research and Development (R&D) Identifies and prioritizes new industry-based research initiatives, leveraging existing R&D resources with the ultimate goal of increasing Maine's industry-focused R&D workforce.
- Outreach and Market Development Works to expand new market development initiatives within the boat-building and composites industries.
- Capitalization and Infrastructure Development Focuses on providing capital and management assistance for business and industry growth, and facility improvement and expansion in order to provide the necessary backdrop for workforce development.

The Governor's Office is the grantee and employs the Program Manager. While the Maine Department of Labor is the fiscal agent, the agency has delegated several fiscal oversight tasks to the Department of Administrative and Financial Services. The state's Department of Economic and Community Development (DECD) is an equal partner in the initiative under Maine's system of administering multi-agency grants, and is responsible for implementing activities under the Market and Business Outreach and the Capitalization and Infrastructure Pillars. Like MDOL, DECD draws down WIRED funds directly from DAFS. DECD contracts out services originally outlined on Maine's grant application but contributes staff time as an in-kind contribution to the initiative. MDOL contracts with the University of Maine for management and activities under the Research and Development Pillar.

Industry participation is integral to NSAI's structure and functioning. Representatives from three major industry associations – Maine Marine Trade Association (MMTA), Maine Built Boats, and Maine Composites Alliance – and a range of businesses participate in the four Pillar Committees and the Executive Committee. All of these committees make decisions by consensus.

Significant Findings from Year Two

• NSAI originally had two oversight committees: 1) the Executive Committee, made up of the heads of the participating state agencies and industry representatives and providing leadership, vision, and final decision making authority; and 2) a Steering Committee, composed of most of the partners involved in the initiative, which provided oversight. Over time, the NSAI partners realized that Steering Committee meetings were serving more of an information sharing function than an oversight or implementation function, and that the number of meetings was becoming nonproductive. NSAI disbanded the Steering Committee





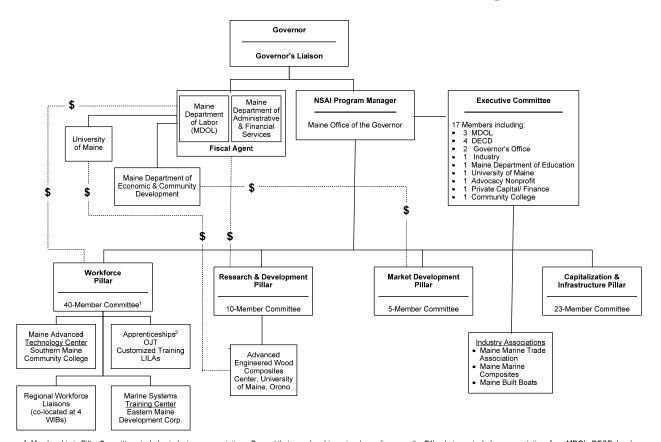


Figure A-19
Maine's North Star Alliance Initiative Partner Map

NSAI has contracted with a number of employers and training providers to train workers using any one of these mechanisms

so that its members could devote their energies to the work of the Pillars, and expanded the Executive Committee by adding representatives from community colleges and the state's Workforce Council (see Figure A-19).

- The bulk of NSAI's target industry is located in Maine's mid-coastal region, where the nearest community college can be up to 90 miles away. "Many Flags, One Campus" is a shared project between the Workforce and the Capitalization and Infrastructure Pillars to establish a bricks and mortar facility where both commercial and academic training providers can offer classes. The project achieved its goal when the Marine Systems Training Center (MSTC) opened in Summer 2008 in Thomaston. The MSTC offers a venue for presenting high quality training in marine systems and specialties, including courses that lead to certification in various specialties from the American Boat and Yacht Council and other boat building industry organizations.
- Three NSAI partners the MMTA, MDOL, and Coastal Enterprises, Inc. created the "Building Bridges" program to educate Maine teachers about NSAI's target industries and to give them a broader understanding of how to best prepare students for future marine trade careers. In this eight-week program (which earns participants continuing education units), teachers spend several hours at six of NSAI's business partners to learn all about the





¹ Membership in Pillar Committees includes industry representatives. Beyond that, membership varies depending upon the Pillar, but may include representatives from MDOL, DECD, local workforce boards, local economic development agencies, local school districts, banks, and foundations.

company. Based on what they learn, participants then develop curriculum to use in their classrooms. Building Bridges also hosts a career awareness day for high school students during which they tour two boatyards. The students then return to the Maine Advanced Technology Center (MATC) to construct toy boats using composites and race the boats to test their seaworthiness.

Maine's Education Commissioner invited NSAI staff and the initiative's industry and R&D partners to a full day meeting of the Department's 21st Century Advisory Council. The purpose of the meeting was to identify collective goals and targets for the next two years. The next meeting was scheduled for January 2009.

Key Issues

ETA Fiscal Audit

ETA's issued its guidance on the use of grant funds after agency staff had already approved NSAI's Implementation Plan. As a result of the H-1B funding requirements, NSAI reallocated some funds that were originally budgeted for the Capitalization and Marketing Pillars into training activities. During its 2008 audit, ETA disallowed the majority of paid expenses associated with the Market Outreach and Development Pillar, basically freezing these activities. NSAI and state staff members were preparing their response to the audit at the time of the evaluation visit, and the question remained whether the initiative would be able to persuade ETA that the costs were allowable, or to cover the disallowed costs from other funding sources.

Worker Training and Talent Development

NSAI partnered with the MMTA to start the Marine Industry Owner Operator College program which uses the agricultural cooperative extension model to provide access to local expertise in specific topics at centrally located venues. The goal of this effort is to provide and promote ongoing, continuing education to businesspersons from within the NSAI cluster to enhance their management skill levels and to ensure the long-term health of the firm and subsequently the industry. The College's first set of courses focused on upper level management training; NSAI plans to expand the training to include classes targeted to mid-level managers and supervisors.

NSAI worked with industry and the State of Maine to create the new Maine Marine Trades Association Maine Apprenticeship Program. This represents a change to the established program from one that requires completion of a community college credential to achieve journeyperson status, to one that requires attainment of an industry-recognized certificate. Trainees can apprentice in six occupations — marine tradesperson, marine engine service technician, marine electrician, marine certified composites technician, boat builder-wood, and marine joiner.

Changes in the Clean Air Act require businesses in NSAI's target industries to reduce volatile organic compound emissions. Companies must adopt more sophisticated closed-mold manufacturing processes, creating the need for training of new and existing employees. Another need is for job applicants with sufficient math skills to perform precise measurements. The initiative had adopted several strategies to address these and other employer needs:

• Identifying employer workforce development needs through the Business Visitation Program (BVP) survey of boat-building and composites companies, and using the results to inform and revise existing training programs. Both Eastern Maine and Southern Maine Community





Colleges have restructured several of their courses and developed new programs and curricula (such as a Marine Trades Certificate) in response to survey results;

- Offering supplemental funding for both apprenticeships and OJT programs, and subsidizing employers' contributions to Lifelong Learning Accounts (LiLAs);
- Supporting development of technical curricula in higher education. The University of Maine's Advanced Engineering Wood Composites (AEWC) Center trains students in research and development methods required by the boat-building and composites industry, and is developing a community college curriculum in quality assurance/control for composites. The University's Engineering School is also discussing the possibility of a three-week "May term" program for engineering majors focused on boat-building and composite design, in cooperation with the Landing School. Additionally, the Maine Advanced Technology Center (MATC) provides training in advanced composites.
- Organizing "T3" (Train The Trainers), a program to certify incumbent workers as trainers so that training can be offered on-site at their companies to minimize disruption of workers' lives and companies' production schedules.

Regional Identity

The geographic range of Maine's major boat builders and composite businesses, covering parts of all four of the state's local workforce investment areas, define the boundaries of the region. During NSAI's first two years, the initiative has functioned more like a sector initiative than a regional initiative since few, if any, activities were focused on developing a regional (vs. industry) identity. NSAI staff does however maintain a relationship with the agency charged with creating an economic redevelopment strategy – and related regional transformation plan – for the Brunswick Naval Air Station base closure in 2011.

Sustainability

At the time of the second evaluation visit, NSAI's project coordinator had begun working on the initiative's sustainability plan. This led to the region establishing a contract with the regional economic development district agency to craft and launch a transformation model that would incorporate the participation of workforce and economic service providers, businesses from the targeted industries, community leaders, and educational partners. The model could then serve as a game plan that could be taken statewide.

In addition, the three industry association partners are discussing strategies to preserve the NSAI logo and collaborative model. One possibility is that these partners would join to create NSAI as a new nonprofit organization. This structure would allow each of the associations to remain separate with its own mission and board, but come together when a collaborative approach would best suit the represented industries.

Challenges

Impact of Economic Downturn

Respondents noted that economic recessions tend to hit Maine later – but then linger longer – than in other states. One of the NSAI liaisons reported that, "People won't buy boats in this economy." Despite the impact of the poor economy on the state as a whole, for NSAI, the larger impact has been on its Capitalization Pillar.





The Capitalization Pillar group had hoped to establish both a revolving loan fund for businesses in the target industries – called the North Star Technology Fund – and a business assistance grant program for marine and composite companies. Restrictions on the use of funds have been a setback for NSAI's industry partners, many of whom said that they cannot create jobs without expanding their facilities. The Capitalization Pillar moved forward in addressing this challenge, however, by creating the North Star Alliance Capital Corporation, a \$6-8 million long-term patient capital revolving loan fund. While initial response from banks was positive and one bank had signed on to participate, the failure of the finance industry brought the project to a dead stop.

Industry Participation

Many companies in the target industries are small shipyards with fewer than 25 employees; these businesses generally lack the resources to plan for, and pay for, employee training. While NSAI has engaged a number of the region's boat builders and composites businesses, participation by these industry partners is "deep" (those who are involved are very involved) but not "wide" (a relatively small number participate). One NSAI liaison noted, "It's very hard to get in the door of these companies, but those who tried [NSAI training] used it again and again."

Successes

Expansion of Training Facilities

With the opening of the MSTC, NSAI established linkages with four training facilities that stretch the entire coastline of Maine. NSAI contracts with the Maine Marine Trades Association to operate the MSTC, with the Eastern Maine Development Corporation as the Center's fiscal agent. Courses at the MSTC complement training provided at the Maine Applied Technology Center (MATC), (which NSAI helped establish) operated by the Southern Maine Community College. Located in Brunswick, MATC provides courses in composites, including those providing certification from the American Composites Manufacturers Association. The Landing School in Arundel and the Boat School Husson in Eastport also offer NSAI-funded training.

Outreach and Communications

NSAI launched an electronic newsletter called the "North Star News" in Spring 2008. This monthly newsletter highlights training opportunities and special events and presents stories about companies, workers, and trainees that are accessing the resources of NSAI. By the end of its first few months, the circulation list included 800 recipients.

The initiative partnered with Maine Built Boats to fund a one-hour documentary on the history of boat building in Maine called, "Art and Soul." The film includes onsite interviews with owners and employees speaking on the craftsmanship of Maine-built boats, the longevity of the boat building companies, and the quality and work ethic of the supporting labor force. NSAI partners plan to show the film at Maine job fairs, educator conferences, schools and training facilities.

Technology Transfer

Working in collaboration with the Advanced Engineered Wood Composites Center (AEWC), one of NSAI's employer partners received a \$12.9 million contract from the Department of Homeland Security for its design and prototype of an anti-tamper shipping container which will detect intrusions through any one of the container's six sides. The containers are constructed





from a composite material that is rated as strong as steel, but is 15% lighter. The Maine Department of Transportation awarded another NSAI employer partner a \$2 million contract to produce bridge girders made from composites. The developer of the technology for producing the girders came to Maine looking for business partners because of the prominence of the state's composite industry, the result of NSAI efforts.

Growing Cohesion in the Target Industries

One of NSAI's key employer partners noted that Maine business owners are very independent, and have never seen the value of collaboration in the past. The degree to which NSAI has helped transform this attitude was evident from two events in 2008:

- The MSTC is located in an historic building that required substantial renovations before the Center could move in. A number of NSAI's employer partners not only volunteered their time to complete the renovations, but also brought their employees to assist with the construction.
- In July, a boat building company with 87 employees suffered the total loss of its boatyard to fire. Within hours, three other boat builders opened their doors and took on the company's temporarily displaced workers and/or provided the infrastructure that allowed the company to continue work on orders already in production. Respondents noted that NSAI's efforts had turned competitors into a cohesive and resource sharing partnership that allowed the other businesses to respond quickly and supportively.

Symposium

In November 2008, over 130 people from 44 companies attended NSAI's third annual symposium. The two-day event offered 15 breakout sessions (including two that were part of the Marine Industry Owner Operator College), a presentation by Richard Seline, and addressed topics such as surviving today's economy for composites manufacturers and the Virtual Website Marketing Incubator Program (a new online training program).

Initiative-Connected Funds

To date, the region has leveraged funds with three federal grants totaling \$9 million: a \$2 million BRAC Implementation Grant from DOL/ETA to provide training to workers secondarily impacted by the Brunswick Naval Air Station Closure; \$5 million from the Office of Naval Research to the AEWC Center and Hodgdon Yachts to build and field test a high-speed composite boat; and a \$2 million Community-Based Job Training Grant from DOL/ETA to establish the MATC. In addition, the Brunswick Economic Development Corporation gave an in-kind contribution of \$1 million in the form of the building in which to locate the ATC.

Regional Facts

List of Counties – York, Cumberland, Sagadahoc, Lincoln, Knox, Hancock, Waldo, Washington, Androscoggin, Kennebec, Penobscot, Piscataquis

Boundaries of Region – The 12 counties in the region are located on the Maine coastline and the inland areas surrounding the Brunswick Naval Air Station.

Urban vs. Rural – The region is largely rural, with Portland as the largest population center (64,250 residents).





Demographics – The region represents roughly 84% of Maine's population. Cumberland County has the largest population (265,612) and Piscataquis County, the smallest (17,235).



Figure A-20 Regional Map for North Star Alliance, Inc.

Figure A-21 Demographic Details for NSAI Region^a

Regional	County Range		
Measure	Average	High	Low
Educational Attainment High School Diploma Post Secondary Degree	35.1% 32.0%	43.7% 42.4%	28.2% 20.0%
Per Capita Income	\$19,989	\$23,616	\$13,847
Median Age	38.4	42.7	37.2
Unemployment Rate	4.5%	8.5%	3.2%

^a U.S. Census Bureau, Census 2000

Site Visit Details

Date of visit: December 2-5, 2008

Site Visitors: Sherry Almandsmith, BPA; Joshua Shapiro, UCSD

Site Visit Respondents:





- Troy Alley, NSAI Industry Liaison, Aroostook/Washington Counties WIB
- **Jeff Armstrong**, Owner Jeff's Marine, Inc.
- Doug Averill, Maine Department of Administrative and Financial Services
- **Betsy Biemann**, President, Maine Technology Institute
- Ginny Carroll, Workforce Program Director, Maine Department of Labor
- **Deborah Elliott**, Business Development Specialist, Maine Department of Economic and Community Development
- Ryan Fisher, Technical Production Manager, Maine Secure Composites
- Laura Fortman, Commissioner, Maine Department of Labor
- Maureen Hassett, Vice President, Custom Composite Technologies
- Bryant Hoffman, Executive Director, Central/Western Maine WIB
- **Tammy Hunt**, Administrative Assistant, Jeff's Marine, Inc.
- Scott Jacqmin, BRAC Community Relations Coordinator, Coastal Counties Workforce, Inc.
- Jonathan Kenerson, Graduate Research Assistant, AEWC Center
- Ian Kopp, Vice President/General Manager, Kenway Corporation
- Robert Lindyberg, Ph.D., Assistant Director for Boat-Building and Composites, AEWC Center; NSAI R&D Pillar Manager
- Jayda Maher, Workforce and Industry Liaison, Tri-County Workforce Investment Board
- Antoinette Mancusi, Director of Operations, Coastal Counties Workforce, Inc.
- Minda McVetty, Director, Marine Systems Training Center
- Joseph Migliaccio, Manager Business Innovation Programs, Maine Technology Institute
- **Jim Nimon**, Director, DECD; NSAI Capitalization Pillar Manager
- Leon Ouimet, Manager, Bath Career Center
- Stacey Palmer, Education/Industry Liaison, Maine Marine Trades Association
- **Joe Pickering**, NSAI Coordinator, Midcoast Council for Business Development and Planning
- **Gerard Roy**, Associate Developer, City of Augusta Office of Economic and Community Development
- Joanna Russell, Executive Director, Tri-County Workforce Investment Board
- Elaine Scott, Marketing and Communications Director, DECD; NSAI Market and Business Outreach Pillar Manager
- Christina Sklarz-Libby, Program Manager, North Star Alliance Initiative
- Susan Swanton, Executive Director, Maine Marine Trades Association; NSAI Co-Chair
- Steve Von Vogt, President, Maine Marine Composites; NSAI Industry Assoc. Coordinator
- James Westhoff, NSAI Industry Liaison, Central/Western Maine WIB
- Paul Williamson, NSAI Industry Liaison, Midcoast Council for Business Development and Planning

A-54

 Dena Winslow, Executive Director, Aroostook & Washington Counties Workforce Investment Board





Mid-Michigan Innovation Team (MMIT)

Introduction

Targeting five industry sectors – health care, the bio-economy, advanced manufacturing, building and construction, and entrepreneurship – the Mid-Michigan Innovation Team (MMIT) aims to foster economic growth in a 13-county region that includes the cities of Lansing, Flint, Saginaw, and Midland. MMIT's vision is to reinvent the region's approach to economic development and its relationship to its traditional industrial base, the automotive industry. Goals for economic transformation are the following:

- **Innovation**: Reinventing the region's industrial base around innovation in future industries and growth in entrepreneurial firms;
- **Talent**: Developing next-generation talent through business- and entrepreneurship-based learning opportunities for workers and students in current and emerging industries; and
- **Collaboration**: Encouraging collaboration among the region's assets, partnerships and networks; ensuring that resources are known and used to support transformation.

Michigan State University (MSU) is the fiscal agent for the grant, under subcontract to the state's Department of Energy, Labor & Economic Growth (DELEG).⁴ The Prima Civitas Foundation (PCF) – a nonprofit regional community and economic development organization – manages the initiative (see Figure A-22).

Significant Findings from Year Two

- The Mid-Michigan initiative has focused on sustainability from the beginning and has put concrete strategies and structures in place to continue the principles of collaboration and economic transformation beyond the end of the grant. PCF has been designated as the management entity going forward, as a permanent governance structure able to function across the region and beyond.
- Respondents in the region agree that the initiative "has changed the environment," and that a culture of collaboration is now assumed and taken for granted.
- The MMIT partners now view regionalism as a strategy, not an identity.
- The MMIT has developed a strong network committed to supporting and promoting economic growth in the region.
- All five WIBs in the region are active participants in initiative activities and partner with a
 wide range of groups in the region in supporting and promoting job creation and talent
 development.
- Economic prospects in the region's traditional manufacturing sectors remain poor, as the area's long-term decline in automotive jobs accelerated in late 2008, with large manufacturing layoffs in several parts of the region.

⁴ Previously called the Department of Labor and Economic Growth. DELEG was created on December 29, 2008, to combine workforce and economic development efforts in order to prepare for Michigan's new energy economy.



₹UCSanDiego Extension always something new™

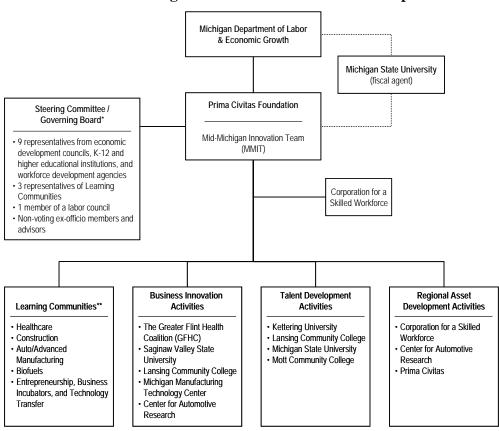


Figure A-22 Mid-Michigan Innovation Team Partner Map

Key Issues

Partnerships

The MMIT brings together the resources of a number of partners in the 13-county region, each of which has a different focus related to economic development and growth. Saginaw Valley State University (SVSU) operates a center for entrepreneurship, innovation, and technology commercialization; Michigan State University (MSU) is taking an active role in training and business development related to the bio-economy; the Greater Flint Health Coalition offers career exploration and advancement services for current health care workers, and retraining programs in health care occupations for unemployed and displaced workers; and Kettering University is involved in science and engineering talent development. With the Prima Civitas Foundation and other key partners – such as the Michigan Manufacturing Technology Center (MMTC), Lansing Community College, Mott Community College (Flint), the MichiganWorks! workforce agencies, the Center for Automotive Research (CAR), local economic developers, and the region's Intermediate School Districts (ISDs) – the MMIT has developed a strong network committed to supporting and promoting economic growth in the region.



^{*} MMIT uses both names in referring to this group.

Workforce Training

Workforce training initiatives include the Greater Flint Health Coalition's retraining programs, along with programs at Lansing Community College and Mott Community College to train workers for existing and emerging high-demand occupations in fields such as health care, advanced manufacturing, and alternative energy. In addition, to date Michigan State University has trained close to 400 individuals in bio-economy careers. Other workforce training programs include those at Delta College, a partner of SVSU, which provides skills training in advanced manufacturing and has developed close partnerships with Dow and other manufacturers in the region. As a result of the initiative's network, DELEG awarded a grant to PCF to retrain autoworkers in healthcare, starting in Flint.

Interaction with the Workforce System

Previously, the degree to which local workforce boards were involved in the initiative was good but somewhat uneven. Now, not only are all five WIBs in active participants in initiative activities, they are enthusiastic partners of the region's schools, businesses, and other groups in supporting and promoting job creation and talent development. Much closer collaboration now exists between the Intermediate School Districts (an intermediate level of school administration) and Michigan Works! than before, and new partnerships between the WIBs and the universities have developed. Staff from several of the WIBs in the region are leaders in the initiative (e.g., serving as members of the MMIT Board), and many of the initiative and PCF leaders serve on their local WIBs, with several serving as Board Chairs.

Challenges

Impact of Economic Changes on the Region

Michigan's economic prognosis remains poor. The precipitous decline of the state's traditional automotive industry economic base has hurt everyone, even those involved in the initiative who "saw it coming." For example, as an auto supplier area, Livingston County, is still dependent on the industry even though they "have been diversifying and repurposing all along." By the time of the second evaluation visit, Saginaw had lost 18,000 jobs, 16,000 of which were in the automobile industry. Flint has lost 70,000 automotive jobs in recent years. Focusing on economic growth and employment outcomes during times of rising unemployment, and what now looks like industry collapse, is a huge challenge.

Many in Mid-Michigan are working hard to position the region for the future with new technology and diversification. Livingston County is on the verge of expanding into alternative energy, such as solar cells and wind energy. A number of companies, those with higher skilled jobs, seem to be holding their own. The biggest of these companies have between 100 to 200 employees, which most respondents in the region agreed was probably the future of manufacturing.

Successes

Sustainability

The MMIT Board unanimously decided in June 2008 that PCF should continue to manage regional collaborative efforts to achieve economic growth once the grant ends. The MMIT will be a division within PCF, which has existing operations and structures into which most aspects





of the initiative can be easily incorporated. The PCF of the future will have an expanded board and will network with the all of the initiative's stakeholders and more. PCF is now focused on four areas with broad appeal to the initiative's stakeholders: entrepreneurship; health and wellbeing; alternative energy; and transportation infrastructure. At the time of the second evaluation visit, partners were at the point of asking *how* these could be accomplished. CAR and MMTC are important contributors to this process because of the extensive roles they are playing in generating data and insights that can inform practice and support for the development of transformative skills and competences in the Mid-Michigan region.

Workforce System Transformation

Respondents in the region agreed that the initiative is moving Michigan Works! to be more innovative and more focused on economic development. The initiative has prompted changes at the state level, such as DELEG's division of the state into 13 regions in order to promote regionalism, and its provision of incentive money to the WIBs that may only be used for collaboration. Participation in the initiative has improved both collaboration and communication within the workforce system, especially among WIB directors: "The WIBs now spend a lot of time in meetings talking about regions." The WIBs now also share resources; in one case, a WIB turned down funds for its Michigan Works! centers so that the money could go to another WIB where the need was greater.

The "ultimate WIRED success story" involves a WIB director who went to local manufacturers and asked them what they wanted. He told them they could get the trained workforce they asked for by joining the WIB's incumbent worker training program (Employment Builders Alliance) for \$10 per worker. Now, "everyone wants to join," and the group brings in over \$50,000 a year.

Collaboration/Investment

A key element of the sustainability of the platform is stakeholder investment. The MMIT/PCF funding strategy is to combine carry-over grant funds with contributions from stakeholders, including the region's five Michigan Works! agencies, college and university partners, economic development partners, and business and industry. As of November 2008, the initiative's partners had contributed \$540,000, demonstrating their trust in the plan and expectation that this effort will help economic growth. Even the private sector, "the toughest nut to crack," is beginning to sign on; the WIB Director with the Employment Builders Alliance asked the group to put in \$1 of the \$10 per worker payment to the Alliance toward sustaining the MMIT, and more than 92% of the businesses involved agreed to do so.

NCRC Credential

A major initiative for MMIT in the past year has been participation in the development of the National Career Readiness Certificate (NCRC) by the West Michigan Strategic Alliance (WMSA) initiative. Based on WorkKeys, the NCRC demonstrates to employers the mastery of core employability skills in three areas: reading, mathematics, and locating information. WMSA and MMIT together championed the NCRC at the state level, which resulted in the legislature making the NCRC mandatory in 2010. During 2008, MMIT reassigned funds from its bio-economy budget to pay for a pilot initiative for over 12,000 Mid-Michigan high school seniors to complete the requirements for the NCRC (these students previously had taken the first two tests as part of the Michigan Merit Exam). MMIT and PCF are working to educate local





businesses about the importance of the NCRC and why they should incorporate this credential into their hiring practices. Respondents agreed that the NCRC credential would not have happened without the initiative.

Learning Communities/Regional Skills Alliances

In the first years of their grant, the MMIT sought to develop the demand side of the labor market via Learning Communities for advanced manufacturing, entrepreneurship, and health care. Funded by the Mott Foundation, the Learning Communities were integral to the implementation of the initiative. These sector-based networks fostered industry growth by providing the opportunity for regional collaboration and networking within each industry and by supporting efforts to attract and retain skilled workforces. Since the foundation funding ended, over the past year, MMIT has been converting the Learning Communities into the Regional Skills Alliances (RSAs), which are industry-driven networks/partnerships in high-demand fields that focus on jobs and job training that will promote economic growth. Each RSA is funded by a grant from the state; after the first year, alliances of private companies provide the funding to maintain the network. Through the new Information Technology RSA, made up of 100 companies, the MMIT has provided the Capital Area Works! WIB with \$100,000 to do on-the-job training in IT at Liquid Web, a Lansing-based server farm for corporate servers. This is the initiative's only contract with a WIB.

Regional Facts

List of Counties: Bay, Midland, Saginaw, Shiawassee, Clinton, Eaton, Ingham, Livingston, Tuscola, Genesee, Huron, Sanilac, Lapeer



Figure A-23
Map of MMIT Region

Boundaries of Region: The 13 county region is anchored by the cities of Flint, Lansing, Midland, and Saginaw, and includes the area called "the Thumb."

Urban vs. Rural: The region is primarily urban, with some rural areas.





Demographics: With a population of two million, the Mid-Michigan WIRED region represents roughly 18% of Michigan's total population. Genesee County has the largest population (436,141) and a density of 671.6 pop./sq mile. The most rural county is Huron (36,079; 43.1 pop./sq. mile).

Figure A-24
Demographic Details for the MMIT Region^a

		County Range	
Measure	Regional Average	High	Low
Educational Attainment High School Diploma	32.9%	43.9%	23.4%
Post Secondary Degree	27.9%	40.6%	15.9%
Per Capita Income	\$21,049	\$27,964	\$16,837
Median Age	35.4	41.3	30.4
Unemployment Rate	5.8%	7.6%	3.0%

^a U.S. Census Bureau, Census 2000

Site Visit Details

Dates of Visit: November 11-14, 2008

Site Visitors: Mary Walshok, UCSD; Kay Magill, BPA

Site Visit Respondents:

- Steve Bennett, Mid-Michigan Innovation Team (MMIT)
- Dr. Joel Berry, Eugene W. Kettering Chair of Power Engineering, Kettering University
- Alicia Booker, Genesee-Shiawassee Michigan Works!
- Barbara Carter, Director of Nursing Program, WIRED/MMIT Healthcare Initiative, LCC
- **Brent Case**, Mid Michigan Innovation Center (MMIC)
- Mark Clevey, Director, Center for Entrepreneurship and Commercialization, SVSU
- Kathy Conklin, Saginaw Business & Education Partnership
- **Tom Crampton**, Executive Dean, Regional Technology Initiatives, Mott Community College
- **JoAnn Crary,** President, Saginaw Future, Inc.
- **Kristen Dzizcek**, Center for Automotive Research (CAR)
- Paul Edwards, Greater Flint Health Coalition
- Toni Glasscoe, Director of Career Preparation & K-12 Articulation, LCC
- Larry Good, Chairman of the Board, Corporation for a Skilled Workforce
- Pat Graves, Delta College
- Christine Greve, Region 5 Director, Michigan Small Business & Technology Development Center
- Holly Hetzner, Prima Civitas Foundation





- **David Hollister**, President & CEO, Prima Civitas Foundation
- Fred Hollister, Bay Future
- Loraine Hudson, MSU Director of Intellectual Property
- **Dr. Paul Hunt**, Associate Vice President for Research, Michigan State University
- Stan Kogut, Superintendent, Ingham Intermediate School District (ISD)
- Charlie Lafeyette, WIRED Grant Coordinator, Mott Community College
- Harry Leaver, Vice-President, Saginaw Valley State University (SVSU)
- Cindy Leyrer, WorkKeys, Ingham Intermediate School District
- Dan Luria, Michigan Manufacturing Technology Center
- Ed Oberski, Michigan Works! Midland/Saginaw
- Monique Owens, Project Coordinator, Center for Entrepreneurship and Commercialization
- Marv Pichla, Thumb Area Michigan Works!, Thumb Joint Economic Development Initiative
- Dr. George Puia, Dow Chemical Chair in Global Business, College of Business and Management, SVSU
- Janet Rentsch, Director, Sponsored Programs, Saginaw Valley State University
- Christopher Rucks, BCON Program Manager, Mott Community College
- Chris Schilling, SVSU
- Robert Schooks, Director, Center for Manufacturing Improvement; Center for Business & Economic Development, Saginaw Valley State University

- Bill Sleight, Michigan Works! Livingston
- **Jim Smiertka**, Prima Civitas Foundation
- **Dennis Sykes**, Executive Director, Prima Civitas Foundation
- Scott Walker, Executive Director, Midland Tomorrow
- Deb Weiland, SBTDC
- Irma Zuckerberg, Director of the MMIT, Prima Civitas Foundation





Initiative for West Michigan

Introduction

The goal of the West Michigan Initiative has been to contribute to the transformation of the region's workforce investment and education systems in order to provide the skilled workers needed for the region to compete in today's innovation economy. As site visit respondents described, an innovation economy is part of the global economy, has shorter product cycles and more rapid market penetration than the traditional economic model, is multi-disciplinary and technologically complex, requires high levels of collaboration, blurs traditional boundaries, and is characterized by high-skill, high-wage jobs. To achieve its goal, West Michigan is developing and managing an Innovations Lab that will both encourage innovation and meet the training and workforce needs of employers in the region. West Michigan's industry partners are drawn from three key sectors – life sciences and health care, alternative energy, and advanced manufacturing. The structure of West Michigan is detailed in Figure A-25.

Significant Findings from Year Two

- West Michigan has implemented two new, major initiatives focused on serving rural areas within the region.
- The region's Internship Initiative is an effort to promote retention of college graduates within the region through creating 3,000 new internships per year in West Michigan by the end of 2011.
- West Michigan is now funding two separate initiatives to specifically address workforce
 issues facing ex-offenders—one program includes training ex-offenders for employment in
 the "Green Jobs" recycling industry, and another educates employers about hiring exoffenders and assists individuals with criminal convictions who face barriers to gaining
 employment.
- The results of ETA's fiscal review were released immediately prior to the evaluation visit. As of August 2009, the state of Michigan is close to resolving 98% of millions of dollars in expenditures the 2008 fiscal audit report questioned.

Key Issues

Regional Identity

In 2000, business and community leaders from the West Michigan Metro Tri-Plex (Grand Rapids, Holland, and Muskegon) formed the West Michigan Strategic Alliance (WMSA) to create a shared vision for the region for the next 25 years and to foster collaboration between government, economic development, workforce, education, and nonprofit organizations. WMSA conducted an 18-month strategic planning process that solicited input from 250 diverse participants and identified six priorities for regional collaboration: 1) creating a regional mindset; 2) ensuring a sustainable environment; 3) revitalizing urban centers; 4) developing a growth strategy for the Tri-Plex; 5) strengthening the community through diversity, and 6) publishing a position paper advocating regional collaboration. The result was the development of a set of regional indicators and establishment of a regional brand for West Michigan - "West Michigan - A best place to live, learn, work, and play."





West Michigan Strategic Allicance GVSU WIRED WIRED Grant Recipient Core Team Fiscal Agent Policy Council Core Team **Group I Innovations** Project Assistant Group 2 Innovations Manager Project Manager **Group 3 Innovations** Completed Innovations Project Communications Discontinued Innovations Administrator Partner IT Ombudsman INNOVATIONS ENTERPRISE MARKET INTELLIGENCE INNOVATION INFRASTRUCTURE WORKFORCE SYSTEM TRANSFORMATION DEVELOPMENT Global School 8 Michigan TEAM West Michigan TALENT' -W. Mich. Global Grand Rapids Univ The Rural Initiative Internship Initiative 2025 Education Network Prep Academy Manufacturing Skills Standards was Michigan Food Ottawa Area New Urban .WMSA WMSA Incorporated . "& Farming" "ISD-"Learning . into Manufacturing SkillsCoop. Rural Prosperity Restoring Lives Second Chance & Entrepreneuri Recycling Job Project Development Resources * Manufacturing Skills Cooperative originally was under the Workforce System Transformation Category as an independent innovation. It was incorporated into Innovation Works in February 2008. Newaygo City Goodwill Ind. of Legal Aid of Western Economic Greater Develop, Office Grand Rapids Michigan

Figure A-25 West Michigan Partner Map





Despite having established a regional identity through WMSA and a management organization, the objective for West Michigan continues to be acting regionally, particularly because the competition between the region's three major cities (Grand Rapids, Holland, and Muskegon) which still exists. While significant progress has been made, the region has independent workforce investment boards (WIBs) and separate economic development agencies, which means that each is motivated to act more locally than regionally. In addition, Grand Rapids is often viewed as the "seat" of the region. In the last year, however, the region invested in both the Rural Initiative and the Rural Prosperity and Enterprise Development programs, both of which serve outlying areas of the region.

Partnerships

Several of the Innovation projects selected for Year 1 funding – such as the West Michigan TEAM employee assistance program and the Health Care Regional Skills Alliance – evolved out of collaborative programs involving government, education, industry, or nonprofits, that were active prior to the grant. For example, the Health Care Regional Skills Alliance brought together five of the region's six WIBs, along with health care employers and other advocates, to develop and retain the health care workforce in the region. New partnerships have formed as the initiative has moved forward, as well. School districts, community colleges, local WIBs, and businesses are collaborating to promote and implement WorkKeys, a skills assessment program that is the basis for the National Career Readiness Certificate. One-Stop Career Centers have been very active in promoting WorkKeys, and some companies now include a career readiness credential level in their job postings.

Sustainability

West Michigan is one of the few Generation I regions that has not requested a no-cost extension of their grant from ETA, and the region's grant funds were to expire in January 2009. However, ETA, unsolicited, gave them an extension to January 2010.

Many of the region's Innovations, such as the Manufacturing Skills Cooperative and West Michigan TEAM, derive revenue from employer or participant fees that will enable the projects to be self-sustaining after grant funding is gone. Another self-sustaining product is the Innovations Curriculum, which consists of three learning modules that address key entrepreneurial skills: 1)"Synthesis," the ability to see patterns and connections; 2) "Iteration," the ability to generate ideas; and 3)"Self-Reflection," the ability to reflect and self assess past events to shape future actions. The region used funding to develop a prototype and now 12 community colleges are paying to use the curriculum. The regionally focused WMSA initiative, the home for regional grant-funded activities, continues and is active in economic and workforce development.

Interaction/Influence on the Workforce Development System

The eight-county West Michigan region covers parts of six different local workforce areas, and only one local area – served by the Kent/Allegan WIB – is located entirely within the West Michigan region. The Project Manager serves on the board of the Kent/Allegan WIB. The initiative has most influenced the WIBs in their promotion of WorkKeys. Local WIB directors reported that they had been aware of WorkKeys – and even had the software – before the initiative started, but that the availability of grant funds really pushed them to start using the tests and to connect more with local schools.





Challenges

Administration

The original Project Manager resigned in November 2006 for personal reasons and a member of the Policy Council took over the position. While turnover of key staff is typically challenging in situations such as this, the new Project Manager had a history of both industry and community involvement and was able to effectively lead West Michigan through the transition period. The Initiative also experienced the departures of its first Innovations Advisor, who was contracted to serve during the first year only, and the project historian and assistant project manager, whose positions were eliminated.

Each Innovation project has been supported by a regional structure that can involve more than 20 partners. West Michigan has been developing the communication mechanisms needed to gather input from stakeholders and integrate the feedback into this complex innovation development cycle. West Michigan has built – and continues to upgrade – a collaborative workspace for the region that enables members to access and share relevant documents.

West Michigan has also faced the challenge of using a vocabulary for its activities and participant roles ("Innovations," "Champions") in a manner that is understandable to both the media and the region's non-initiative leaders. To address this issue, staff hired a communications firm to build regional awareness of the initiative's activities and successes.

ETA Fiscal Review

Both project staff and partners raised concerns about the implications of the recent fiscal audit. Project staff reported that they had not received guidance from ETA about allowable costs until after many project decisions had already been made, and that, in fact, ETA staff had encouraged some of the same programs which subsequently were questioned and/or disallowed. This audit questioned \$8 million of grant funds spent; the State of Michigan asserts that 98% are allowable.

Successes

Collaboration

In August 2007, the Regional Manufacturing Skills Development Co-op Innovation launched a shared portal/website where regional manufacturing companies can complete assessments on best practices. The website allows partners to share "best in class" ideas and experiences to support organizational and skills development activities. The Health Care Regional Skills Alliance is also encouraging collaboration among health care employers, the workforce investment system, and local community colleges and training programs on activities such as developing a forecasting model for regional demand for health care workers.

Workforce Support for Small Businesses

One of the Innovations, West Michigan TEAM (Tri-Sector Employment Advancement Model), is replicating the Grand Rapids-based SOURCE program throughout Western Michigan. The SOURCE project has received national attention and was highlighted at a Workforce Innovations panel on outreach to TANF recipients, moderated by Assistant Secretary for Employment and Training Brent Orell. SOURCE assists small businesses by: 1) providing a state social worker for case management services to employees leaving welfare; 2) connecting employees with





social services to assist with transportation, housing, and other potential barriers to work; and 3) helping workers advance when they are ready to move to a new position. The program is a successful collaboration between the public, private and nonprofit sectors, and West Michigan TEAM's Board of Directors includes members from each of these three sectors.

Credentialing and Skills Development

West Michigan's National Career Readiness Certificate (NCRC) Program far exceeded its 2007 and 2008 goals for testing and issuing National Career Readiness Certificates. The initiative also is on track to meet its goals for increasing the number of employers using the certification. This year, the Michigan Merit Exam for high school students statewide will include all three WorkKeys modules on the junior class exam, indicating successful outreach to the K-12 pipeline. WIBs within the region are also requiring that all participants in WIA-funded programs take the WorkKeys assessment, a clear structural change.

Rural Outreach

West Michigan is actively engaged beyond the greater Grand Rapids area in two major initiatives. The Rural Initiative provides technical assistance and training to local farmers to get their produce into local supermarket chains such as Whole Foods and Meijer. Agriculture is one of the major industries in the rural parts of the region, and this initiative is notable for its consideration of agriculture as an engine of economic development for rural areas. The other rural initiative is Rural Prosperity and Entrepreneurial Development, run out of the Newaygo County Economic Development Office. This project offers business counseling, training, and skills development to new and existing small businesses in four rural counties.

Internship Initiative

To promote retention of college graduates within the region, West Michigan is now funding a statewide Internship Initiative with the goal of creating 3,000 additional internships per year in West Michigan by the end of 2011. Early in 2009, the Internship Initiative was to launch a website portal that matches college students with internship opportunities. Internship Initiative activities also include a public education plan to promote the internship concept to employers, students, and educational institutions. Components of the plan include an employer needs assessment survey and the use of on-campus student interns to promote internships to their peers.

Prisoner Re-Entry

West Michigan is now funding two separate initiatives to specifically address workforce issues facing ex-offenders. "Restoring Lives, Recycling Resources" is a program run by Goodwill Industries of Greater Grand Rapids that trains ex-offenders for employment in the "Green Jobs" recycling industry. The "Second Chance Job Project," run by Legal Aid of Western Michigan, educates employers about hiring ex-offenders and assists individuals with criminal convictions who face barriers to gaining employment. These projects address an important workforce need in the region, as Grand Rapids has the second highest concentration of parolees in the state, after Detroit. It also represents an exemplary environmental initiative.

Regional Facts

List of Counties: Kent, Allegan, Ottawa, Muskegon, Newaygo, Barry, Montcalm and Ionia





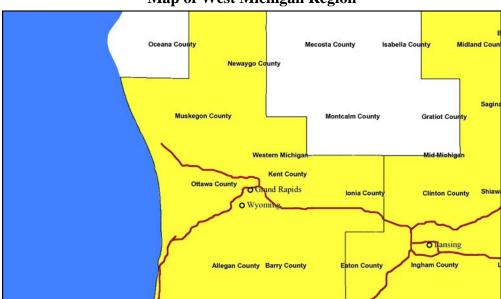


Figure A-26
Map of West Michigan Region

Figure A-27
Demographic Details for West Michigan Region^a

	Regional Average	County Range	
Measure		High	Low
Educational Attainment High School Diploma Post Secondary Degree	32.3% 29.0%	40.4% 33.5%	28.2% 17.3%
Per Capita Income	\$20,205	\$21,318	\$16,738
Median Age	33.5	37.0	32.6
Unemployment Rate	4.5%	5.8%	4.0%

^a U.S. Census Bureau, Census 2000

Boundaries of Region: The Grand Rapids-Muskegon-Holland metropolitan statistical area (MSA) had consisted of 4 counties (Allegan, Kent, Ottawa and Muskegon) until 2003, when OMB redefined the west Michigan region as three separate MSA's: a) Grand Rapids-Wyoming, including Barry, Kent, Ionia, and Newaygo Counties; b) Holland-South Haven, covering Ottawa County, Muskegon-Norton Shores, and Muskegon County; and 3) Allegan County. Unfortunately, the U.S. Census still uses the old four-county MSA, while the BLS provides employment data for each MSA's separately (excluding Allegan).

Urban vs. Rural: The region includes areas that are urban, suburban and rural.





Demographics: The West Michigan region represents roughly 13% of Michigan's population. The most populated county is Kent County (74,335; density of 658.7 pop./sq. mile). The least populated county is Newaygo with 47,874 residents and 55.6 pop./sq. mile.

Site Visit Details

Date: December 2-5, 2008

Site Visitors: Mary Walshok, UCSD; Hannah Betesh, BPA

Site Visit Respondents:

- Miriam Aukerman, Legal Aid of Western Michigan
- **Jim Bachmeier**, Vice President for Finance & Administration, Grand Valley State University
- Cindy Brown, Internship Initiative Project Manager, West Michigan Strategic Alliance
- Elaine Brown, Executive Director, Michigan Food and Farming Systems
- M.J. Bruns, Calhoun ISD Michigan Works!
- **Dan Buron**, Goodwill Industries of Greater Grand Rapids
- Milly Chavez, Michigan Department of Human Services
- **Ashleigh Emmerson**, West Michigan TEAM
- Paul Griffith, Michigan Works! West Central
- **Bill Guest**, Managing Director, Metrics Reporting, Inc.
- Steve Heacock, Chief Administrative Officer, the Van Andel Institute
- **Jim Henley**, Kitchen Manager, The Starting Block
- Win Irwin, President and CEO, Irwin Seating Company
- Rachel Jungblut, Program Manager, Training Solutions, GRCC
- Rachel Kunnath, Program Director, The SOURCE
- Andrew Lofgren, Executive Director, Newaygo County Economic Development Office
- Liz McCormick, Grand Rapids Community College (GRCC)
- Liza Murrieta, Human Resources, Vichem Corporation
- Craig Nobbelin, Regional Skills Alliance Coordinator, Alliance for Health
- J. Gregory Northrup, President, West Michigan Strategic Alliance
- **Phillip Rios**, WIRED Project Manager
- **Jim Ross**, Regional Manager, Advanced Manufacturing Strategies MMTC-West, The Right Place, Inc.

- Leonard Slott, President and CEO, Vichem Corporation
- James VanderHulst, West Michigan TEAM
- Theresa Vickers, Goodwill Industries of Greater Grand Rapids
- Maura Warren, WIRED Administrator
- Carole Williams, Fiscal Agent WIRED Grant, Grand Valley State University





Montana Agro-Energy Plan (MAP)

Introduction

The Montana Agro-Energy Plan (MAP) aims to establish a globally competitive bio-energy and bio-products cluster in Central and Eastern Montana using partnerships with business and industry, education, community development organizations, state and tribal governments, and philanthropic foundations. MAP has four goals for transforming the region:

- Develop a world-class bio-products industry that catalyzes regional economic transformation from an agricultural commodity-driven economy to a value-added economy that supports regional prosperity in Eastern and Central Montana;
- Develop a highly trained and stable/growing workforce to support bio-products and other value-added agricultural products;
- Create an agile, integrated talent development system (workforce, education, and economic development) that is responsive to business needs and will prepare state residents to act quickly to take advantage of new economic opportunities; and
- Create an inclusive and sustainable regional identity and leadership structure that will promote innovation and ensure the long-term success of the transformational initiative.

Montana's Department of Labor and Industry (DLI) is the fiscal agent for the grant and manages the initiative. DLI contracts with the state Departments of Agriculture and Commerce, and the Office of the Commissioner of Higher Education (OCHE), to carry out MAP activities (see Figure A-28). The leaders of these agencies, as well as representatives from the State Workforce Investment Board and the Governor's Office of Economic Development, serve as members of the Executive Committee, which provides guidance to the initiative.

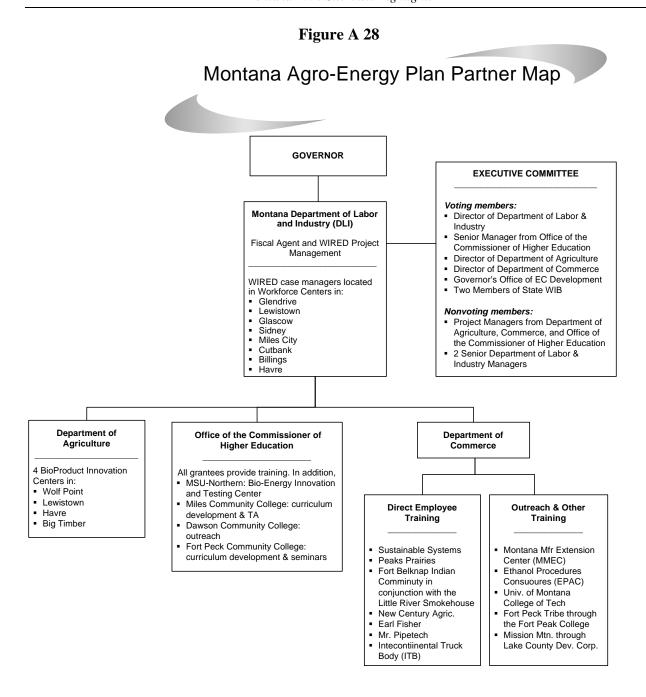
MAP activities include supporting four Bio-Product Innovation Centers (BPICs) in the region, developing a Bio-Energy Innovation and Testing Center at Montana State University, Northern, developing curricula on bio-fuels, providing technical assistance to employers, training workers of bio-energy companies, providing certificate training for unemployed and underemployed individuals in the region, and building collaboration at the local level across the region.

Significant Findings from Year Two

- The region expanded its target industries beyond biofuels to include the larger energy sector, construction, truck driving/transportation, and value-added agriculture.
- Grant partners have developed curricula for Associate level degrees in biofuels, energy technology, and science with a biofuels emphasis.
- MAP activities are expanding into the Crow and other reservations. For example, with two tribal community colleges, Miles Community College developed a 30-credit, two-semester certificate program in entrepreneurship that can be taken at any of the three colleges, or remotely through a combination of online and interactive television courses.
- The initiative funded the Montana Department of Environmental Quality to conduct outreach
 and education for both biofuel producers and businesses that represent major potential
 markets for biodiesel.







Key Issues

Partnerships with Tribal Colleges

The Montana Governor's Office has encouraged MAP to emphasize services to the "last and least;" that is, those individuals who are least likely to obtain training supported from other sources. Given the extremely high unemployment rate on the Tribal reservations, many of this "target group" are Native Americans. To date, the initiative has funded a number of projects that partner with the Tribal colleges or businesses located on the reservation. In addition to the entrepreneurship program mentioned above, examples include:





- Providing truck driver training on the Blackfeet Indian Reservation using Bear Trax Truck Driving School, a Native American-owned company.
- Developing welding curricula for Fort Peck Community College, on the Fort Peck Indian reservation;
- Exploring the provision of training to employees of a tribally-owned manufacturing company on the Fort Peck reservation. The training for both managers and other workers would allow the company to produce new products;
- Providing job training in the production of smoked meat products for workers employed by a tribal enterprise of the Fort Belknap Indian Community. The training allowed the smokehouse to produce their products under USDA inspection and to market nationally.
- Providing business plan training for the employees of the Custer's Last Stand Trading Post;
- Offering a two-week course in heavy equipment operations on the Crow reservation. The
 equipment for the course was provided by the reservation's Transportation Department. MAP
 hired an instructor from Miles Community College on a consultant basis and paid for student
 safety equipment.

Need for Short-Term Training Options

A number of respondents noted that short-term training relevant to occupations in the biofuel industry are not available. As a result, the initiative has are invested significant resources in developing such courses.

Because of Montana's harsh climate in the winter, most workers who labor outdoors (including construction workers and farmers) experience seasonal lay offs. Workforce Center staff observed that most of these workers are not willing to take time off of their limited work days to participate in training, and thus the timing of the training available is also a critical factor in its availability to potential trainees. These partners recommended that training be scheduled during "Cabin Fever" (the winter) so that workers can take advantage of their time in layoff to obtain skills that might land them full-time or full-year work.

Involvement of the Workforce Investment System

Montana has a single workforce investment board (WIB) for the state. Community Management Teams composed of local representatives from both mandatory and other One-Stop partners oversee the operation of most of the state's 23 comprehensive One-Stop Career Centers (called Workforce Centers). These teams provide the state WIB with input about local issues and needs, and represent the concerns of their communities to the MAP initiative.

Scale of Impact

The vast majority (85%) of jobs in Montana are with companies with 10 or fewer employees, and site visit respondents emphasized that because the region's communities are so small, a small number of jobs can change the spirit of a community. As the population of these towns decrease, many high schools in the region have closed, and students are bused many miles to the next town to go to school. This is often the beginning of the end for small towns. If MAP can save five or 10 jobs, the high school can be saved; another 10 or 20 new jobs represent economic transformation for the community.





Challenges

Changes in Commodities Markets

The Montana initiative was conceived as a way to diversify agricultural production when wheat prices were relatively low. To launch the new biofuels industry, the initiative encouraged farmers to grow potentially more lucrative oilseeds for bio-diesel production. The spike in oil prices during Summer 2008 sparked a demand for corn to produce ethanol. The decline in the amount of corn on the market increased the demand for wheat, a complementary good. This, in turn, increased wheat prices, which served as a disincentive to growing oilseeds.

As the price of petroleum has come back down, the cost of biodiesel has become less competitive, and biofuel production has not expanded over the last year. Given the slow growth of the industry, Montana added to its target industries value-added agriculture/bioproducts and energy, along with industries that support these sectors such as transportation and construction. The idea was to create a bridge between the existing economy and the alternative fuels economy of the future, particularly since many of the relevant skill-sets are the same.

Impact of Administrative Processes on Implementation

Securing ETA approval for purchase of equipment for MSUN lab slowed implementation of lab activities significantly. One piece of equipment has been on order for a year. Similarly, the pickup truck that the grant funded Miles Community College to use for hauling equipment to demonstrations broke, and securing the necessary permissions for repair took three weeks. As a result, MAP staff had to cancel three presentations.

Hiring Staff

Finding individuals to staff the initiative's projects, both initially and as turnover has occurred, has been a lengthy process. Few in the state have the skills needed to undertake roles such as developing curricula on biofuels or conducting tests and research at the Bio-Energy Innovation and Testing Center. Respondents reported that one position was posted four times before the initiative found a suitable candidate. This has delayed implementation of several projects.

One way that MAP projects have addressed this issue is by using recent retirees from relevant industries to provide short-term training. A whole generation of experienced workers is retiring. They have relatively flexible schedules, and are in a position to do four to six-week trips to bring training to isolated colleges and work sites. For example, The MSU Billings College of Technology is using retirees as instructors for a two-week course on Process Logic Controller (PCL) troubleshooting, a 40-hour hazardous materials course, and Lockout-Tagout training.⁵

Successes

Bio-Energy Innovation and Testing Center

The Bio-Energy Innovation and Testing Center Montana State University, Northern, funded in part with initiative funds, substantially increased its visibility over the last year. The Center plays several critical roles in supporting the bio-energy industry: 1) providing fuel, performance, and

⁵ Lockout-Tagout is a system used in mines, refineries, chemical plants to ensure that dangerous power sources and other processes are systematically isolated and made inoperative before doing repairs.





emissions testing for all bio-fuels, additives, and bio-lubricants developed for both automotive and diesel engines; 2) fostering the growth of bio-energy businesses with a business incubator that offers assistance with marketing, business plan development, grant writing, and office space; and 3) providing state-of-the-art training to future workers in the industry.

Development of Curricula

Various MAP partners have developed new curricula for certifications and degrees relevant to biofuel production. For example, the Montana Department of Commerce contracted with MSU, Missoula to develop curriculum in biofuels and energy technology, which is being presented both at Miles Community College (MCC) and online. These classes are part of MCC's new two-year Associate of Applied Science (AAS) degrees in biofuels and energy technology. MCC has also created a two-year Associate of Science degree (AS) degree with a biofuels emphasis, designed so that students can transfer the credits toward a four-year BS degree.

As mentioned above, in partnership with two tribal colleges – Chief Dull Knife College (Cheyenne) and Little Big Horn College (Crow) – MCC has developed a certificate course in entrepreneurship. Classes from any of the partner colleges will be accepted and the certificate can be awarded from any of the colleges. The on-line version not only serves to make the training accessible to remote locations, but provides a common base of expertise for all colleges.

Dawson Community College is developing a new wind energy and maintenance course. In preparation, the college is purchasing a wind monitoring tower (which measures the suitability of a site for wind power), and two small wind generators for students to learn on.

Regional Identity

The MAP region covers 32 counties and six Indian reservations, a total of 86,000 square miles with a population of less than 180,000. The largest town in the region has a population of just under 10,000. Forging a distinct regional identity is difficult because of the small population and the distances involved. Furthermore, Montanans are independent and tend to be skeptical of government initiatives. Despite these challenges, respondents observed that the region is starting to develop a regional identity: "We're getting there. There was none at first, but there is now. MAP projects are scattered throughout the region, but they are related. As things are explained to people, they begin to see the need to act together. Identity does build on a much older and more diffuse idea, expressed in the old phrase 'there's the mountains and there's the rest.""

Sustainability

Soon after the grant was awarded, the Montana Governor issued an Executive Order establishing a cooperative agreement between the state agencies involved in the initiative. The Executive Order institutionalizes the cooperative efforts of the four agencies (DLI, Departments of Agriculture and Commerce, and OCHE) focused on the MAP goals, and states that the agencies will continue to work together beyond the three-year grant period. MAP partners believe that this commitment will ensure that the working relationships they are now building will endure.

Bio-Product Innovation Centers

With MAP funding, Montana's Departments of Commerce and Agriculture partnered to create Bio-Product Innovation Centers (BPICs) in four communities in the MAP region. Trained





personnel at these regional centers provide technical assistance to farmers, private entrepreneurs, university officials, and others interested in developing projects to enhance the rural economy of the region through bio-based and value-added agricultural ventures. The BPICs serve the additional functions of aiding the initiative's outreach efforts and sustaining the engagement of producer and local communities.

Initiative-Connected Investments

According to the data that MAP provided to ETA in October 2008, the region has secured over \$34 million in funds from sources outside of the grant. Some of these investments are from state and federal sources for motor oil development, technical assistance, and a community-based job training grant. MSU, Northern has been very successful in obtaining additional grants for equipment and operations from a number of sources, including the Montana Department of Agriculture, OCHE, the National Science Foundation, and private companies such as Northwest Energy and Foundation Coal. MAP's industry partners have secured an additional \$26 million from private capital, industry, and equity investments in small bio-fuel companies. These funds are supporting construction, development, and operation of several small bio-fuel facilities.

Collaboration

The size of the region is a barrier to convening the regular in-person meetings that can be useful for cementing working relationships and moving collaborative efforts forward. Nonetheless, MAP staff from the workforce centers, along with community college representatives, have become involved in Rapid Response activities. In addition, participation in the initiative has forged strong relationships between the Montana State University system and the region's community colleges, which respondents report never would have happened without the grant. For example, MSU, Northern has committed to providing mentoring to Fort Peck Community College staff, and numerous subcontracts have been signed between the community colleges and MSU Billings, Missoula, and Northern.

MSU-Northern has engaged in mentorship/partnership with Mid-South Community College in West Memphis, Arkansas, a partner of the Generation II Arkansas Delta initiative. Mid-South is modeling development of a new program after Northern's two-year diesel engineering program and the Testing Center. MSU-Northern will mentor Mid-South with curriculum development, staff training, and Testing Center set up and configuration.

Regional Facts

List of Counties: Hill, Blaine, Phillips, Valley, Daniels, Sheridan, Chouteau, Fergus, Petroleum, Garfield, McCone, Roosevelt, Richland, Dawson, Judith Basin, Wheatland, Golden Valley, Musselshell, Rosebud, Prairie, Wibaux, Bighorn, Treasure, Powder River, Carter, Fallon, Custer, Glacier, Pondera, Teton, Toole, Liberty

Boundaries of Region: The eastern, agricultural portion of the state encompassing 32 counties and 6 Indian Reservations

Demographics: The Central & Eastern Montana region represents roughly 20% of Montana's population, but 80% of its land area. Hill County has the largest population (16,673), and Petroleum County the smallest (493).





Figure A-29 Regional Map

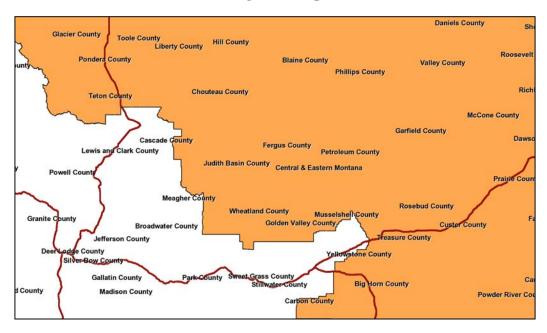


Figure A-30 Demographic Details of Montana Region^a

		County Range		
Measure	Regional Average	High	Low	
Educational Attainment High School Diploma	33.0%	43.4%	25.1%	
Post Secondary Degree	26.4%	29.0%	17.3%	
Per Capita Income	\$13,992	\$15,960	\$10,375	
Median Age	38.1	48.7	29.8	
Unemployment Rate	7.6%	15.7%	1.9%	

^a U.S. Census Bureau, Census 2000

Urban vs. Rural: The entire region is rural.

Site Visit Details

Date of visit: November 18 – 21, 2008

Site Visitors: Sherry Almandsmith and David Drury, BPA





Site Visit Respondents:

- Jeanna Adkins, Bio-Products Counselor, Great Northern Development Corporation
- Ramona Amundson, Manager, Northeast Montana Job Service Workforce Center, Montana Department of Labor and Industry (DLI)
- Bruce Bainbridge, MAP Grant Manager, Dawson Community College
- Connie Balcer, Business Advocate, Glendive Job Service Workforce Center, Montana DLI
- **Joel Bertolino**, Agricultural Program Technician, Beartooth Resource Conservation & Development Area, Inc.
- Kristin Buck, MAP Community Coordinator, Miles Community College
- Jacklyn Damm, Workforce Consultant, Sidney Job Service Workforce Center, Montana DLI
- Adam De Yong, MAP Project Director, Montana DLI
- Chance Eaton, Farm/Ranch Business Management Instructor, Dawson Community College
- Brenda Evans, Workforce Consultant, Havre Job Service, Montana DLI
- Tom Friese, MAP Project Case Manager, Northeast Montana Job Service Workforce Center, Montana DLI
- Tom Frisby, Regional Manager, Montana DLI
- Nancy Faroni Guccione, MAP Program Manager, Montana Department of Commerce
- **Howard Haines**, Bio-Energy Program Manager, Montana Department of Environmental Quality (DEQ)
- Bev Hagen, Workforce Consultant, Havre Job Service, Montana DLI
- David Hall, MAP Grants Manager, OCHE
- **James Hughs**, Process Plant Director, College of Technology, Montana State University, Billings
- Tracey Jette, Bio-Product Innovation Center Network Coordinator, Montana Department of Agriculture
- Carol Lamey, Manager, Havre Job Service, Montana DLI
- Pam Lemer, Value-Added Agriculture Coordinator, Bear Paw Development Corporation of Northern Montana
- Chris Martinez, Project Director, Agriculture with Global Vision, Fort Peck Community College
- Paul T. Miller, President and CEO, Sustainable Systems
- Gary Morehouse, Administrator, Montana Department of Commerce
- John Munsell, MAP Bioproduct Coordinator, Miles Community College
- Anthony Priete, Director, Montana Department of Commerce
- John Rife, Business Advocate, Billings Job Service Workforce Center, Montana DLI
- Mark Sansaver, Economic Development Specialist, Fort Peck Community College
- **Lisa Skriner**, Project Director, Energy for Tomorrow DOL Grant, College of Technology, Montana State University, Billings
- **Jon Soriano**, Research Scientist, Bio-Energy Innovation and Testing Center, Montana State University, Northern
- Brian Spangler, Business and Community Assistance Program Manager, Montana DEQ
- Susan Stewart, Director of Administrative Operations, College of Technology, Montana State University, Billings
- Vernette Torgerson, Manager, Sidney Job Service Workforce Center, Montana DLI
- Jessica Alcorn Windyboy, Director Bio-Energy Innovation and Testing Center, Montana State University, Northern





Initiative for Finger Lakes

Introduction

The Finger Lakes Region is focused on becoming a premier place in which to innovate, invest in entrepreneurial ventures, and educate workers. The region has lost tens of thousands of jobs over the past quarter century, as Kodak, Bausch & Lomb, Xerox, and their supplier networks have suffered successive rounds of cutbacks. The region, once ranked as third nationally in per capita income, now ranks number 238. Colleges and universities are some of the largest employers in the region, and the most promising source of ideas and talent for rebuilding the economy. Because of the long history of ongoing layoffs in the manufacturing sector, the Finger Lakes region has not experienced the 2008 recession as an especially significant downturn.

The Finger Lakes initiative has targeted the following growth clusters: optics and imaging, biotech and life sciences, food and agriculture, and alternative energy. The initiative also aims to leverage regional competencies in advanced manufacturing, information technology, and business support services.

The lead organization and fiscal agent for the effort is RochesterWorks, Inc., the local workforce investment board (WIB) for one of the three local workforce areas covered by the region. The Governing Board sets the overall strategy for the initiative. The Board's 33 members represent a cross section of economic development and workforce development organizations, education, and trade associations. Board members are presidents, CEOs and Chairs from partner organizations, and elected officials from throughout the region. A subset of Governing Board members comprises the Steering Committee, which functions as the executive committee of the Board (see Figure A-31). In addition, the Governing Board has engaged a nationally prestigious advisory committee to provide guidance, feedback, and ideas for increasing the effectiveness of the initiative.

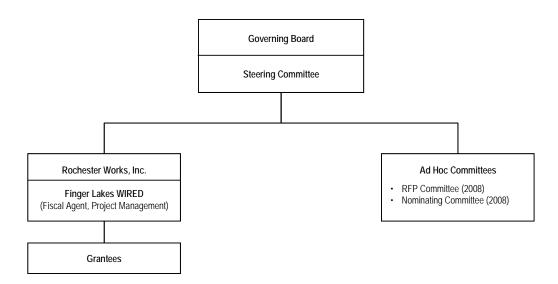
Significant Findings from Year Two

- As of mid-2008, the Governing Board and Steering Committee added new members and established a number of new Committees. A bottom-up strategic planning process resulted in creation of 1) a Nominating Committee to search for a new Director, and 2) an RFP Committee to shape the region's final major investments. This process reinforced the sense of "ownership" among a wide range of stakeholders, especially among some members representing rural counties who had initially expressed concern that the interests of Rochester related entities were driving the initiative.
- The Nominating Committee selected from among its ranks David Zorn, who is also the Executive Director of the Genesee/Finger Lakes Regional Planning Council (G/FLRPC), to lead the closing phase of the initiative in response to the resignation of the previous manager to take another position in Rochester. Zorn was described by a number of interviewees as having "opened up" the initiative and as improving prospects for sustainability, since Zorn's two roles represent compatible goals, overlapping stakeholders, and the same region-wide focus. G/FLRPC, operating for over 30 years, has among its primary functions resources planning, economic development, strategic planning, and managing regional technology and data.





Figure A-31
Finger Lakes WIRED Partner Map



- The RFP Committee took on responsibility for shaping the design and selection process for the remaining grants awarded in 2008, emphasizing that proposals be regional, sustainable, inclusive, innovative, collaborative, and transformative. The result was two regionwide grants totaling \$699,000: the region's three WIBs are creating Regional Skills Alliances; and the region's community colleges are creating a Regional Center for Workforce Excellence. The two collaborative groups were then instructed to work together to coordinate their efforts and eliminate duplication.
- The scholarship program, consisting of matched grants to companies in the region for training of incumbent workers, has far outpaced initial expectations, investing over \$3 million and training more than 5,000 workers.
- Finger Lakes has facilitated coordination and information sharing among those engaged in technology commercialization. Several leaders of university-based entrepreneurship initiatives and operators of incubators have coordinated their efforts, have significantly accelerated technical assistance and funding for companies through the Rochester Incubator, and uniformly express optimism that their cooperative learning process is leading to the region developing a new and re-energized leadership role in innovation.

Key Issues

Ongoing Effects of the Region's History

The Finger Lakes region is distinctive in that 100 years ago, it was one of the most innovative hubs in the United States. It was home to start up companies, which became global leaders, including Kodak, Bausch & Lomb, and Xerox. These multinational corporations created enormous prosperity in the region, however, in some ways they also gave rise to a relatively closed society with leadership being dominated by a few companies and families. The Rochester





region for more than a decade has been developing databases and partnership opportunities through The Council on Competitiveness, NSF Partnerships for Prosperity grants and more recently, the initiative. The tight timeline for securing initiative grant funds resulted in a small group of Finger Lakes based organizations developing their plans. Funding was initially preallocated for many projects. Representatives of rural counties early on expressed concerns about the resource allocation process and about whether they genuinely had a voice in shaping the initiative and reported they now do. As a result, a better sense of regional identity has been achieved thanks to a lot of effort over the past two years

The region's history of dominance by a few giant firms, followed by a protracted economic downturn, has resulted in a dampening of entrepreneurial spirit and hesitancy among the area's private investors. While some of the region's most active and successful programs center around entrepreneurship, technology commercialization, and capital formation, to date there are few outcomes to point to.

The prospects for sustainability of Finger Lakes appear promising as of 2008. One reason is the appointments of the new Managing Director and the new Executive Director of RochesterWorks, who has been a Regional Administrator for NYS DOL, are seen as well positioned to solidify and continue the closeout of the grant's partnerships and activities. Another aspect of sustainability that appears to be growing is the stability of partnerships among many of the organizations funded by the grant. Most notable are collaborations among 1) the region's WIB and organizations conducting grant-funded training, 2) the collaborative certificates and degrees now being offered by community colleges across the region, and 3) organizations involved in fostering entrepreneurship and technology commercialization.

Challenges

Ongoing Barriers to Change and Collaboration

As is true in other regions, the community college system is not well suited to collaborating across jurisdictional boundaries. Traditionally competing with each other for enrollments and reputational advantage, community colleges appear to cooperate, but not yet to form genuine partnerships. The Regional Center for Workforce Excellence, still being formed at the time of the evaluation visit, appears likely to break down barriers. Collaboration among them, however, appears to be limited to specific workforce-focused programs within the colleges, and may not pervade the colleges more broadly.

Private Sector Involvement

The private sector was not significantly involved in the initiative in its first year. More recently, the Governing Board has invited CEOs of private companies to join the Board. Trade associations and workforce development programs that connect directly with employers are becoming increasingly involved. Although improving, the involvement of the private sector is still a work in progress. A notable development is the number of companies that have utilized the initiative's scholarship program affecting 5000 workers. Leaders of those companies have emerged as advocates and spokespersons.





Successes to Date

Regional Collaboration

Interview respondents reported significant improvement in collaboration, both across the nine counties and among professionals engaged in the workforce, education, and business communities. Many pointed to the two major joint proposals that were recently funded: one from the region's three WIBs to create a Regional Skills Alliances, and the other from the region's community colleges to create a Regional Center for Workforce Excellence. Collaboration between these two joint efforts, while only beginning at the time of the visit, appeared promising.

In addition, coordination and cooperative learning among university-based entrepreneurship initiatives and operators of incubators is evident. Leaders of those efforts share information and expertise, are knowledgeable about and support each other's efforts, and believe that they can jointly foster a renewed growth of entrepreneurship within the region. One program is convening semi-annual conferences across industries and including multiple academic programs to discuss the potential synergies between high technology and ventures in the agricultural/food processing industries.

Entrepreneur Support

Several initiative-supported entrepreneurship programs have received high visibility and praise across the region. The Entrepreneurship Network (TEN) has trained over 100 executives of start-up companies, and they in turn have created over 70 jobs, increased their revenues by roughly \$6 million, and secured over \$7 million in angel and venture capital investments. Community colleges have enrolled at least 60 students in their Fast Track Entrepreneur Program offering college credit and links to the Small Business Development Center. The Young Entrepreneurs Academy (YEA) has supported at least 40 students, several of whom have started viable business operations.

Training for Incumbent Workers

Finger Lakes' program of scholarship grants to companies has outperformed all expectations. Scholarships have a maximum award of \$25,000 and require a company match. To date, the program has provided businesses in targeted industries with over \$3 million dollars in funding for workforce training and skills upgrades that has resulted in over 5,000 workers being trained, helping businesses and their workers to stay competitive. Training is short-term and leads to industry-recognized certifications/credentials, supervisory and managerial skills training, process/productivity improvement, and/or in-demand technical and occupational skills. The training is reported to have made a critical difference in the sustainability and future of the grant recipient companies.

Regional Facts

List of Counties: Orleans, Genesee, Monroe, Wayne, Wyoming, Livingston, Ontario, Yates, Seneca.

Boundaries of Region: The Finger Lakes region is a nine-county area that with a correspondent population of 1,203,918 residents, according to 2004 US Census Bureau estimates.





Urban vs. Rural: The region is centered on the City of Rochester, its suburbs, and outlying rural areas.

Demographics: Only 6% of New York's population resides in the Finger Lakes Initiative region. Monroe County is by far has the largest population in the initiative region (735,343) and a density of 1,103.8 pop/sq mile. Yates County has the smallest populations (24,621).

Figure A-32 Map of Finger Lakes Region



Figure A-33
Demographic Details for Finger Lakes Region^a

		County	Range
Measure	Regional Average	High	Low
Educational Attainment High School Diploma	29.9%	39.7%	26.1%
Post Secondary Degree	36.1%	40.9%	20.7%
Per Capita Income	\$20,839	\$22,481	\$15,752
Median Age	36.4	38.2	35.3
Unemployment Rate	5.8%	6.9%	4.3%

^aSource: U.S. Census Bureau, Census 2000

Site Visit Details

Date of Visit: October 27-31, 2008

Site Visit Team: Mary Walshok, UCSD; and Mary Vencill, BPA

Interviewees:





- **Donna Augustine**, Project Director, Science & Technology Entry Program, Monroe Community College (MCC)
- Lana Barron, Associate Dean, SUNY Brockport Rochester Educational Opportunity Center
- Bill Betteridge, President, Mastro Graphic Arts
- Rich Bonneville, Chair, Finger Lakes Workforce Investment Board
- **Deborah Culeton**, Director of Human Resources, Info Directions, Inc.
- Christopher Dahl, President, SUNY Geneseo
- Tim Davis, Extension Issue Leader 4-H Youth Development, Cornell Cooperative Extension
- John DeCamilla, Executive Director, The Academy for Career Development
- **Richard DeMartino**, Director, Albert J. Simone Center for Innovation and Entrepreneurship, Rochester Institute of Technology
- Robert Dorn, Council Scout Executive, Finger Lakes Council, Boy Scouts of America
- **Deb Dunlevy**, Tech Prep Project Director, Genesee Community College
- Mary Lou Hamm, Area Manager, GLOW Workforce Investment Board
- Mary Pat Hancock, Chair, Genesee County Legislature
- John Hart, President, Lumetrics
- David Hessler, Interim President, High Tech Rochester
- James Hoffman, Chair, Wayne County Board of Supervisors
- Matt Hurlbutt, Managing Director, Business Development, Greater Rochester Enterprise
- Steve Isaacs, Yates County Industrial Development Agency
- Gayle Jagel, Founder and Executive Director, Young Entrepreneurs Network
- Sheila James, Vice President for Program Planning, Research & Evaluation, Urban League of Rochester, NY
- Carol Ann Joki, Director Business Development Services, Finger Lakes Community College
- **Jean Kase**, Executive Director, The Entrepreneurs Network
- Rami Katz, Director of Technology Commercialization, High Tech Rochester
- Gary Kone, President, FTT Manufacturing
- Susan Kurtz, Director of Outreach, Kids on Campus Programs, Rochester Institute of Technology
- Esther Leadley, County Legislator, Genesee County
- Mike Mandina, President and Founder, Optimax
- Ross Micali, Special Projects Coordinator, Workforce Development, MCC
- **Duncan Moore**, Vice Provost, Center for Entrepreneurship, University of Rochester
- **Peter Pecor**, Executive Director, RochesterWorks, Inc.
- Mark Peterson, Interim President, Greater Rochester Enterprises
- Pat Piles, Program Manager, RochesterWorks, Inc., Finger Lakes
- Peter Robinson, Chief Operating Officer, University of Rochester Medical Center
- Robert Seem President, Cornell Agriculture & Food Technology Park
- Judy Seil, Acting Director, Monroe County Department of Planning & Economic Develop.
- **Jim Senall**, Managing Director, Business Development, Greater Rochester Enterprise
- Karen Springmeyer, Executive Director, Finger Lakes WIB
- James Winston, Assistant to President for Workforce Development, MCC
- Jim Zavislan, Associate Professor of Optics, University of Rochester Medical Center
- **David Zorn**, Executive Director, Genesee/Finger Lakes Regional Planning Council and Managing Director, Finger Lakes





Initiative for Piedmont Triad

Introduction

The goal of Piedmont Triad initiative is to create high-skill, high-wage jobs across the 12-county region and to significantly strengthen the region's global competitiveness through integration of workforce, education, economic development, innovation, and entrepreneurship. Piedmont Triad has a strong emphasis on business involvement and focuses on four industry clusters: advanced manufacturing; health care; creative enterprises/arts; and logistics/distribution.

Four Cluster Roundtables consist of representatives from each of the targeted industries. These groups are charged with identifying demand-driven needs for the industry, establishing desired outcomes, and determining training program priorities. Each Roundtable Director researched the targeted industry with care, selected executives who are respected in the community, and invited them to participate.

Piedmont Triad contracts with the Piedmont Triad Entrepreneurial Network (PTEN) and with local workforce boards to review grant applications and to manage a series of Focus Grants that serve as an initial impetus to delivering innovative, collaborative training demonstration projects related to the Industry Clusters and entrepreneurial job creation. Local WIBs administer Workforce Training Focus Grants. An initiative stakeholder review team oversees: 1) the Talent Development Focus Grants, which focus on curriculum development, identification and dissemination of career information, and supply chain education; and 2) a newer grant program, Transformation Grants, which aim to reach underserved populations and foster innovative approaches and systemic change in the region's economic development. The structure of the Piedmont Triad is depicted below in Figure A-34.

Significant Findings from Year Two

Transformation Grants

Piedmont Triad's Transformation Grants are designed to: 1) encourage alternative approaches to innovation, entrepreneurship, education and workforce development; 2) ensure that these new opportunities are accessible to the region's minority, underserved, and rural communities; and 3) create systemic change that advances the region's ability to compete in the global economy. At the time of the evaluation visit, the region had awarded 11 Transformation Grants totaling \$733,000 (with \$657,000 leveraged—Transformation Grants require a 40% match).

Career Readiness Certificate

Piedmont Triad is promoting the National Career Readiness Certificate's (NCRC) WorkKeys system through a Focus Grant for the Regional Partnership WorkKeys project. This partnership promotes the use of the WorkKeys assessment through the collaborative efforts of high schools, community colleges, and the workforce system. Five regional high schools are now using WorkKeys to assess their students, and community colleges are now using WorkKeys as a prerequisite for some of their programs. Major area employers - such as Guilford County





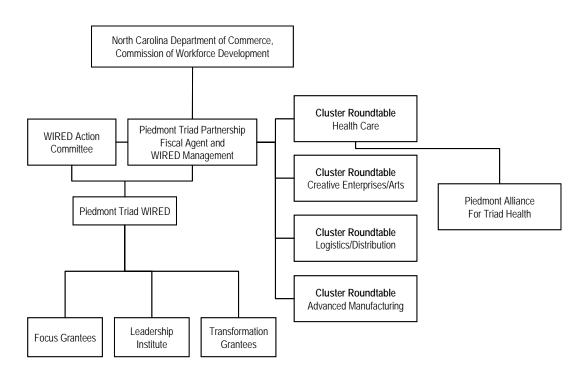


Figure A-34
Piedmont Triad Partnership WIRED Map

Schools, Goodyear, and Energizer - are now using WorkKeys in their hiring processes, and report a reduction in turnover as a result.

Outreach to Underserved Populations

Through the Transformation Grants, the region has made notable attempts to direct outreach to minority and working poor communities to better target programs to serve these populations. Piedmont Triad's minority advisory committee is tasked with identifying options to further engage ethnic minority communities in the region in activities. Pilot projects funded by the committee will develop and demonstrate successful approaches to building the number and capacity of minority-owned businesses, while also helping businesses to identify opportunities for continued success and growth. The initiative is also funding a needs assessment survey of the working poor in the region, using a 13,000-person sample of childcare subsidy recipients in eight counties. Finally, the WorkKeys assessment is available in Spanish at the community colleges.

Manufacturing Extension Partnership (MEP)

In partnership with Industrial Extension Services at the University of North Carolina (the primary MEP partner for the state), Piedmont Triad is now funding a Business Innovation Agent (BIA). The role of the BIA is to facilitate the deployment of technology within and into the region through networking, technology assistance to regional companies, and presentations. For example, the BIA facilitated a connection between a local textile manufacturing company and a University of Massachusetts team seeking a source for prototyping a newly patented fabric.





Key Issues

Regional Identity

The 12-county Piedmont Triad Region is well established; many years ago the North Carolina General Assembly designated it as one of seven economic development regions in the state. The Piedmont Triad "brand" is widely recognized; hundreds of companies in the region use the words "Piedmont" or "Triad" in their names, though those words are also used to designate areas smaller than the 12-county region. On the other hand, the fact that the region has an established name does not mean that economic development organizations or units of local government appreciate the value of thinking regionally. Inter-jurisdictional competition remains the norm. Partners in the rural counties (counties other than Forsyth and Guilford, where Greensboro, High Point, and Winston-Salem are located) still tend to feel left out. Initiative leaders and staff have made substantial efforts to include all 12 counties, and most respondents believe that the initiative is making progress toward the goal of fostering a genuine regional identity.

Readiness for Collaboration

A region-wide study by an outside consulting firm preceded the grant, culminating in the publication in 2005 of the *Regional Vision Plan for the Piedmont Triad Region*. Many of grant's goals and strategies grew out of this Vision Plan, and this planning process has given legitimacy to the initiative's goals and activities. Similarly, because the Piedmont Triad Partnership is an established and recognized region-wide economic development organization, the region has a sound framework for discussing and resolving barriers to collaboration.

Partnerships

Partnerships with educators have developed easily and continue to grow, especially among the operators of the ten Talent Development Focus Grants. Individuals within the community college system in particular report having benefited from their new partnerships, which often extend across county lines. Partnerships between community colleges and four-year universities are disadvantaged, however, by the fact that these two entities have different administrations, different missions, and different credentialing systems. Transferring community college credits to a four-year degree is not always possible, which can impede collaboration in higher education.

Sustainability

Piedmont Triad's most tangible plan for sustainability is embodied in its contract with the Center for Creative Leadership to operate the Leadership Development Institute (LDI), with the goal of changing "the behavior, relationships, activities, and actions of the people, groups, and organizations that comprise key components of the regional economic development system." The Institute uses innovative "action learning" methods with senior leaders from throughout the region to both enhance leadership capacity and build skills in "whole system collaboration." The LDI is expected to support and sustain the work of the Cluster Roundtables after the grant is complete. The region has also made substantial progress towards financial sustainability by far exceeding its 50% leverage requirement—program staff had assumed that all the leveraged resources would be in-kind, but in fact, they have received significant cash as well. The economic downturn and the state budget deficit are anticipated to result in reduced tax revenues and state appropriations for the region, however, and several respondents were apprehensive about the future of initiative efforts given this financial uncertainty.





Challenges

Involvement of the Workforce System

The initiative's partnerships with the workforce system are complicated by two factors. First, while the Piedmont Triad region fully encompasses three local workforce areas (covering eight counties), each of the four other counties in the region belongs to one of three workforce areas that include counties beyond the region. In these areas, local workforce board directors do not view the initiative as central to their mission. The second complicating factor is fear that at the regional level, grant funds coming to the initiative are diminishing the funds available for ongoing WIB operations, and fear that the initiative overall is a harbinger of change that will ultimately prove disruptive. To counteract these concerns, the initiative is engaging workforce system leaders in making decisions about grant-funded activities, especially related to Focus Grants, and is contracting with WIBs to manage the workforce development grants. Workforce development stakeholders expressed dismay that they were not invited to the table earlier, however, and they resent stakeholders taking credit for collaboration between local WIBs that was going on well before the grant began.

Sectoral Diversity

The industries targeted within both the advanced manufacturing and creative arts clusters are very diverse. This heterogeneity can create difficulties in explaining the cluster concepts, narrowing the focus for the cluster activities, and ensuring that needs and issues for all industries are adequately addressed by the cluster work.

Cultural Legacy in the Region

Innovation and entrepreneurship appear to have been "bred out of the culture" in the Piedmont Triad, as it has in many communities with a manufacturing legacy. Historically, large manufacturing companies offered students a monetary incentive to drop out of school and go to work in their factories. Many generations have been shaped by this mindset, and the majority of the population does not value education and does not believe that risk-taking is reasonable. Piedmont Triad has awarded Focus Grants and Transformation Grants in the area of entrepreneurship to address this challenge. For example, one Transformation Grant funds a youth entrepreneurship program in a rural county to raise awareness about entrepreneurship and matches students with small businesses to promote mentoring.

Transformation

Piedmont Triad stakeholders appear not to believe that genuine economic transformation is feasible, or even to know what that transformation might look like. They see a distinct possibility of marginal improvements in the industries targeted for attention, but they cannot visualize dramatic outcomes. When asked about transformation, site visit respondents most often answered, "We're working on transition; we'll have to wait and see about transformation."

Youth Programming

ETA restrictions on the use of H-1B funds have presented roadblocks to several planned projects in economic development and youth-focused activities. Initiative partners expressed some frustration that limiting youth programs to individuals who are 16 and older means that a





large percentage of the region's youth will have already dropped out of high school before interventions can take place.

Successes

Industry Involvement

The private sector is strongly represented among Piedmont Triad's stakeholders. Company representatives serve on the initiative's Action Committee, and they are the sole members of the Cluster Roundtables.

Focus Grants

Several aspects of the Focus Grants awards process have contributed to the success of the grants and to enthusiasm for the resulting programs. First, the region gives preference to projects that are operated by new partnerships. Second, the initiative has instructed its sub-grantees to transform existing training delivery, and finally, the region gives preference to applicants who can demonstrate sustainability beyond the grant period. Piedmont Triad accepts Focus Grant applications monthly, and the region had awarded a total of 24 grants as of the second evaluation visit, with total funding of over \$1.35 million. Sub-grantee matches total \$2.15 million. Stakeholders are enthusiastic about the grants' innovative, practical, and industry-responsive features. One example is a K-12 education project that uses well-researched techniques to teach business-relevant problem-solving skills to elementary school students.

Cluster Roundtables

Reports from the roundtables indicate that unprecedented conversations are taking place. The Logistics and Distribution roundtable especially has been a source of insights for its members about the extent to which 1) different types of companies confront common challenges, and 2) how these challenges can be addressed most effectively at a regional level.

The Health Care and Logistics and Distribution roundtables have made substantial progress in the last year. The health care group has funded six training and retention projects (in addition to six Focus Grants and one Transformation Grant related to health care), held numerous events – including a 50-member Allied Health Workforce Solutions Summit, and developed a collaborative workspace with 70 members that is updated at least twice a week. The logistics and distribution roundtable is leading an effort to plan an aerotropolis around the regional airport to leverage the region's distribution capacities and location along major freeways. Community colleges, universities, and local logistics companies all have been extensively involved in this planning, and the group released an implementation plan during the 2008 evaluation visit.

Regional Facts

Counties: Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Montgomery, Randolph, Rockingham, Stokes, Surry, Yadkin

Boundaries of Region: The Piedmont Triad is made up of 12 counties that form a rough triangle just northwest of state's central region.

Urban vs. Rural: The region includes the cities of Greensboro, High Point, and Winston-Salem and their outlying rural areas.





Demographics: The Piedmont Triad region represents roughly 18% of North Carolina's population and closely reflects the state's overall population characteristics.

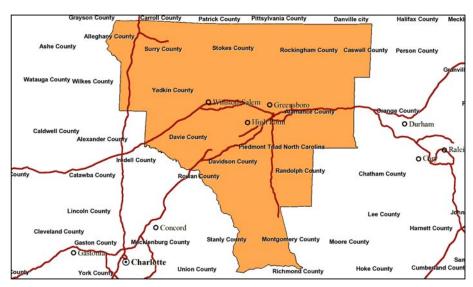


Figure A-35
Map of Piedmont Triad Region

Figure A-36
Demographic Details for Piedmont Triad Region^a

		County Range		
Measure	Regional Average	High	Low	
Educational Attainment High School Diploma	29.9%	40.1%	25.1%	
Post Secondary Degree	27.3%	36.3%	15.1%	
Per Capita Income	\$20,497	\$23,030	\$16,348	
Median Age	36.3	38.5	34.9	
Unemployment Rate	4.8%	6.5%	3.1%	

^aSource: U.S. Census Bureau, Census 2000

Site Visit Details

Dates of Visit: November 18-21, 2008

Site Visitors: Mary Vencill, BPA; Hannah Betesh, BPA





Site Visit Respondents:

- Patricia Adkins, Director, Health Care, Piedmont Triad Partnership
- G. Douglas Atkinson, Vice President of Business Development, Wake Forest Healthcare
- **Joyendu** (**Joy**) **Bhadury**, Associate Dean for Graduate Programs and Research, Bryan School of Business and Economics, the University of North Carolina, Greensboro
- Donald Cameron, President, Guilford Technical Community College
- L.B. Clayton, Vice President of MidSouth Region, Old Dominion Freight Lines
- Margaret Collins, Director, Creative Enterprises/Arts, Piedmont Triad Partnership
- Diane Creech, Dislocated Worker Liaison, ConnectInc
- Victor Dau, Director, Small Business Center, Randolph Community College (RCC)
- **Kathryn Dobie**, Director of the Transportation Institute, North Carolina Agricultural and Technical State University
- Jim Donnelly, Vice President, Innovation & Outreach, Piedmont Triad Partnership
- Shannon Edwards, CTE Curriculum Coordinator, Randolph County Schools
- Pam Freeze, Human Resource Development Coordinator, Randolph Community College
- Mary L. Garner, WIA Information Specialist and WorkKeys Coordinator, RCC
- Nancy Gottovi, Executive Director, Central Park NC
- Bob Hall, Business Innovation Agent, North Carolina State University
- C. David Hauser, Director, Logistics & Distribution, Piedmont Triad Partnership
- Shera Johnson-Clark, Manager, Non-Profit Sector, Center for Creative Leadership
- Frances Jones, Executive Director, Piedmont Triad Education Consortium (PTEC)
- **Brad Kemmerer**, President, ABCO Automation, Inc.
- Don Kirkman, President and CEO, Piedmont Triad Partnership
- Diane Kriesel, Call Center Supervisor, ConnectInc
- Nancy Landis, JobLink Director, Randolph Community College
- Curt Lorimer, Director of Workforce Development, Asheboro City Schools
- Paul Marceau, Director of Corporate Training, Guilford Technical Community College
- Tess McMorrow-Jordan, Regional Workforce Development Director, PTP
- Darris R. Means, Assistant Director, Elon Academy, Elon University
- Judy Miller, President, RSVP Communications
- Jim Morgan, Morgan Herring Morgan Green & Rosenblutt, LLC
- Margaret O'Brien, Director of Extension Services, North Carolina State University
- Jonnette O'Callahan, Center for Creative Leadership
- **Linda Parker**, Executive Director, Regional Partnership Workforce Development Board and Executive Director, PeeDee Region Workforce Development Board
- Lillian Plummer, Director, Greensboro/High Point/Guilford Workforce Development Board
- Stephen W. Protheroe, Glass Studio Manager, STARWorks Glass Central Park NC
- Theresa Reynolds, Senior Vice President/ Project Manager, Piedmont Triad Partnership
- Robin Rhyne, President, Surry County Economic Development Partnership
- Jackie Savage, President, ConnectInc
- Laura Spivey, Business Services Unit Manager, State of North Carolina Department of Commerce, Division of Workforce Development
- Lee Thompson, Marketing Consultant, LNT Consulting
- Jeanine Woody, Associate Dean of Health Technology, Davidson Community College





Wall Street West

Introduction

Located in ten counties of northeast Pennsylvania, Wall Street West (WSW) aims to develop the regional workforce's ability to participate in a knowledge- and technology-based economy, with an emphasis on financial services and business continuity. While WSW has not formally abandoned its initial goal of building a disaster recovery capability for New York-based financial services firms, it now emphasizes building transferable skills and career pathways to support a wider range of industries.

Ben Franklin Technology Partners of Northeast Pennsylvania (BFTP/NEP) – part of a state-funded economic development network linking entrepreneurs with funding, talent, technology, and universities – is WSW's fiscal agent and management organization. Pennsylvania's Department of Labor and Industry is the grant recipient.

The WSW initiative operates as an independent unit within BFTP/NEP. A 17-member Executive Committee leads the initiative, made up of representatives from the Commonwealth of Pennsylvania, economic development agencies, the workforce system, and universities. The Human Resource Committee is one of the most active standing committees as it is responsible for managing the subgrants. The Grants Committee has been renamed the Sustainability Committee to more accurately reflect its role of developing strategies for continuing WSW's activities beyond the grant period. The recently formed Business Advisory Group offers private sector representation in leadership roles, particularly from senior executives in the targeted industries. The Legislative Affairs and Industry and Community Engagement committees were inactive over the past year.

Significant Findings from Year Two

- WSW's first year was about "planning the work" and its second year was "working the
 plan." The grant financed both a Regional Innovation Asset Map (completed in August
 2008) and Workforce and Workforce System Gap Analysis (completed in October 2007),
 and used the resulting data to develop criteria for partner subgrants addressing priority areas
 of need.
- In order to support a regional economy that is less vulnerable to financial cycles, the Executive Committee expanded WSW's talent development strategy beyond financial services by adding information technology, STEM (science, technology, engineering, and math) occupations, and related industries requiring transferable skill capacity.
- WSW has increased its financial support of the WIB Collaborative to continue strengthening partnerships among the region's five Workforce Investment Boards (WIBs). To date, the Collaborative has established a common individual training account allocation and developed outreach materials, and is pursuing consistent service delivery targets.

A - 90





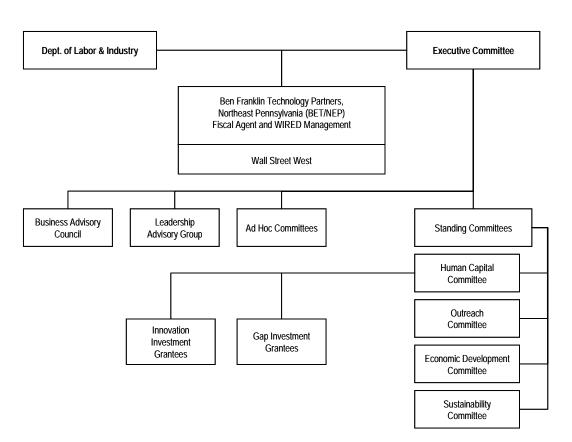


Figure A-37 Northeast Pennsylvania WIRED Partner Map

- WSW has decreased its original emphasis on economic development and business attraction
 as key to transforming the region's economy and increased its investments in workforce
 development resources.
- The Executive Committee has charged the Sustainability Committee with developing proposals for continuing goals and activities beyond the grant period.

Key Issues

Requested Change in Scope of Work

WSW requested a modification in its scope of work from ETA; these changes are pending. Among the requested changes are:

- Addition of Schuylkill County to the region, largely because this county is included in one of the region's Workforce Investment Boards; and
- In diversifying its targeted industries and occupations, WSW recognizes that its former focus on attracting investment from financial services firms depended on completion of a fiber optic cable linking Northeastern Pennsylvania to Lower Manhattan, and that the cable is not likely to be completed within the timeframe of the grant.





Regional Identity

The WSW region continues to face barriers to forming a cohesive regional identity. First, the region as a whole is large, the size of the state of Connecticut. At least 80 miles separate component counties, and intervening mountains create psychological as well as physical distance. The region contains at least four distinct labor market areas. Second, the region includes ten counties, four labor markets, five local workforce areas, and three regional economic development councils. It is a "patchwork" of previously-defined economic development sub-regions and outlying counties. The sub-regions have very different economic histories and a tradition of competing with each other.

Partnerships

Site visit respondents credit Wall Street West with creating unprecedented cooperation among organizations within the region. The five WIBs in the region have come together to create several joint projects and are collaborating to develop priorities for broadening the region's list of targeted industries. Economic development agencies recognize increasingly that their success depends on building a strong and industry-responsive workforce, and they are working more closely with educators and WIBs than they had done prior to grant implementation. Educators have formed concrete cross-sector partnerships with each other to develop joint projects funded by WSW's Innovation Investment Grants and Gap Investment Grants. These partnerships include a Higher Education Consortium that facilitates industry participation in curriculum development. Perhaps the largest funded partnership is the NEPA Business Education Workforce Partnerships, a collaboration of the region's five WIBs, 69 school superintendents, four business education partnerships and the state Department of Education, aimed at providing a regionalized career pathway awareness program.

Sustainability

Leaders within the region are devoting considerable attention to the question of sustainability. While they disagree on the desirability of emphasizing the "Wall Street West" brand and the likelihood of perpetuating a centralized leadership structure to promote ongoing region-wide collaboration, they cite individual projects and partnerships created by the initiative that are likely to be self-sustaining. Several respondents highlighted the statewide efforts to support STEM industry career pathways in Pennsylvania high schools as a potential forum for continuing the grant objectives of demand driven workforce development and regionalism. The formation of a Sustainability Committee, whose members have agreed to meet monthly, signals leaders' commitment to developing the structures and momentum that will sustain the initiative's achievements.

Challenges

Adapting to a Changed Economic Environment

WSW leaders recognized quickly that the collapse of the financial services sector in 2008 forced them to place "on the back burner" their initial goal of building a fiber optic cable to enable synchronous back-up operations for Wall Street. That initial goal had galvanized significant energy for collaboration, especially among economic development agencies. The challenge of rebuilding enthusiasm amongst these original partners for a vision centered primarily on strengthening the existing and emerging workforce has been significant.





Communications

Although members of the Executive Committee share an understanding of and commitment to the WSW vision, communications with larger audiences are more difficult. Opinions differ about the extent to which the general population is aware of WSW and its goals. In particular, communications with private companies in the region have not been strong, and only a few corporate executives have become engaged in the initiative. Last year, WSW worked closely with Peppercom to promote the region in New York City as an ideal location for disaster recovery data back-up operations. In 2008, WSW hired a Director of Communications for regional-level communications that focus on long-term transformation through workforce development, outreach to incumbent businesses, and integration of legislative outreach efforts.

Allowable Costs

WSW has faced growing challenges with interpreting ETA restrictions on allowable costs of the grant. In particular, WSW staff and the Executive Committee have had to review costs and priorities related to the economic development components of their implementation plan. Given the region's initial emphasis on attracting investments from New York-based financial services firms, a great deal of effort was expended on business outreach and related activities, and the uncertainty about how to cover the costs of supporting these efforts remains a critical concern.

Gradual Start-Up

Building Wall Street West staff and selecting the outreach and infrastructure contractors took a great deal of time, in part because of the initiative's initial emphasis on finding New York business partners. In August 2007, 18 months after the grant was awarded, the Executive Committee reviewed the first Innovation Investment grant application. With the completion of the gap analysis at the end of 2007 and the setting of investment priorities for the Innovation grants, however, the Human Capital Committee succeeded in distributing nearly \$10 million in subgrants for educational and training resources through an integrated economic and workforce system.

Successes

Regionwide Collaboration among WIBs

The five WIBs in the region have collaborated to create and expand business education partnerships, develop structured models for career exploration, and provide a regionalized career pathway awareness program. They have also streamlined service delivery across WIBs and CareerLink Offices regionwide, with particular emphasis on increasing educational attainment in the region.

New Investors in the Region

A small New York-based company, SECCAS, has located a back office operation in Scranton. SECCAS's CEO has emerged as one of WSW's key private sector advocates. With the help of state economic development funding, Data Based Systems International, Inc. (DBSi), a disaster recovery and data systems provider, is building a 228,600-square-foot Advanced Technology Center in Lehigh County. This facility is expected to create and retain 90 jobs in the area.





Nearly \$10 Million Invested in Strengthening the Region's Workforce

Between August 2007 and November 2008, WSW accelerated its efforts to fund a wide variety of subgrants. The initial Innovation Investments awards of over \$2 million in two rounds of funding supported efforts that included internships, new degree and certificate programs, curriculum development, professional development, summer camps and institutes, financial literacy, and enhancement of career development and pathways. Proposals required a 25% match to be eligible for funding. After the release of the region's Gap Analysis Report, WSW provided over \$7.6 million for investments specifically geared to remedy some of the identified gaps. In addition to the projects funded through Innovation Investments, Gap grants included entrepreneurship, financial services education, business continuity training, WIB collaboration, global language initiatives, STEM initiatives, and building business-education partnerships. Gap grants required a one-to-one match, doubling the amount of the grant investment.

Regional Facts

List of Counties: Berks, Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Wayne.

Urban vs. Rural: The nine county region is largely rural and includes population centers such as Scranton, Reading, Wilkes-Barre, Allentown, and Bethlehem.

Demographics: The region's population (14% of Pennsylvania's total) is less diverse than the state as a whole. Education attainment is lower than the national average; Berks County has the highest population while Pike County has the lowest. The three northern counties have the highest poverty rates, while the two counties closest to New York City have the highest income levels.

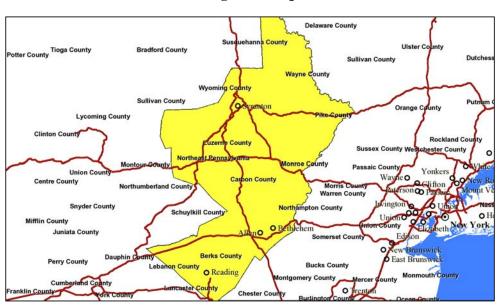


Figure A-38 Regional Map





Figure A-39 Demographic Details^a

		County Range		
Measure	Regional Average	High	Low	
Educational Attainment High School Diploma	39.1%	47.9%	35.0%	
Post Secondary Degree	25.7%	30.4%	17.2%	
Per Capita Income	\$19,801	\$21,597	\$16,520	
Median Age	38.9	40.8	37.2	
Unemployment Rate	5.1%	6.6%	4.4%	

Source: U.S. Census Bureau, Census 2000

Site Visit Details

Dates of Visit: November 11-14, 2008

Site Visitors: Mary Vencill and Jennifer Kuiper, BPA

Site Visit Respondents:

- Matt Bieber, Senior Associate, Originate Ventures
- Matthew Connell, Dean, Northampton Community College
- Robin Costenbader-Jacobson, President and CEO, Junior Achievement of Greater Reading and Lehigh Valley
- Laura DeGroot, Project Coordinator, Wall Street West
- Joseph DeStaci, Wall Street West Contact, Pennsylvania Department of Labor & Industry
- Nancy Dischinat, Executive Director, Lehigh Valley Workforce Investment Board
- Christine Donnolo, Associate Dean, Luzerne County Community College
- **Gerald Ephault**, Regional Manager, Pocono Northeast Ben Franklin Technology Partners of Northeast Pennsylvania
- Vito Gallo, Assistant Vice President for State Relations, Lehigh University
- Christopher Haran, President/CEO, the Northeastern Pennsylvania Technology Institute
- Joann Hudak, Director, Secondary Education, Wallenpaupack Area School District
- Rose Ann Kisilewicz, Quality Improvement Specialist, Lehigh Valley WIB
- Gina Kormanik, Assistant Director, Lehigh Valley Workforce Investment Board
- Edward McCann, Chief Operating Officer, Berks County Workforce Investment Board
- Greg Morgan, Director of Communications, Wall Street West
- Chad Paul, CEO, Ben Franklin Technology Partners of Northeast Pennsylvania
- Jim Ryan, Director, Outreach and Network Development, Wall Street West
- Joe Sebelin, Executive Director, Pocono Counties Workforce Investment Board
- Susan Shaffer, Director, Workforce Initiatives, Wall Street West
- Daniel Summa, President, SECCAS
- Lucyann Vierling, Economic Planner, Lackawanna County Workforce Investment Board
- Robert Wendt, Regional Coordinator, Lehigh Valley Economic Development Corporation





Appendix B

Generation I WIRED Goals

B-1:	Generation	I Regions'	Economic	Develo	pment	Goal	S
------	------------	------------	----------	--------	-------	------	---

- B-2: Generation I Regions' Workforce Development Goals
- B-3: Generation I Regions' Social and Community Development Goals
- B-4: Piedmont Triad Partnership 2008 Industry Cluster Goals



Figure B-1 Generation I Regions' Economic Development Goals

Region	Increase Innovation	Increase Competitiveness	Identify, Assess & Align Regional Resources	Adapt to Global Manufacturing Transformation	Develop Toolkits to Assess Sustainability & Replicability of Models	Expand Current Markets & Create New Ones	Increase Investment from External Sources
WAEM		X	X	X		X	
California Corridor	Х	Х	X	X	Х		
Metro Denver		Х					
Northwest Florida	Х	Х	Х			Х	Х
NCI	Х			Х			
Kansas City		Х	Х				
North Star Alliance	Х	Х		Х	Х	Х	Х
Mid-Michigan	Х			Х			
West Michigan	Х			Х			
Montana			Х			Х	Х
Finger Lakes	Х		Х				
Piedmont Triad	Х		Х	Х		Х	
Wall Street West	Х						



Figure B-2 Generation I Regions' Workforce Development Goals

Region	Create Quality, High- Skilled Jobs	Assess Labor Needs & Worker Skill Gaps	Retain workers in Region	Create High Skilled Workforce	Train Entrepreneurs	Increase Knowledge of Global Competitiveness	Increase Graduation Rates	Train K-12 Teachers	Mentor High School Math & Science Students
WAEM	Х		Х	Х	Х				
California Corridor	Х	Х		Х	Х	Х		Х	Х
Metro Denver	Х			Х					Х
Northwest Florida	Х	Х	Х	Х		Х	Х		Х
NCI	Х		Х		Х	Х			Х
Kansas City	Х	Х		Х	Х	Х		Х	Х
North Star Alliance	Х	Х	Х	Х	Х	Х			
Mid-Michigan	Х			Х	Х	Х	Х		Х
West Michigan	Х			Х	Х				Х
Montana	Х		Х		Х	Х			
Finger Lakes					х	Х			Х
Piedmont Triad	х	Х		Х			Х		Х
Wall Street West		Х		Х	Х				Х



Figure B-3 Generation I Regions' Social and Community Development Goals

Region	Build New Organizational Relationships	Increase Support Network	Create & Adopt Regional Identity & Mindset	Change Employment Expectations	Create Leadership Structure	Increase Collaboration Across Business, Education & Government	Broad Community Engagement	Create Entrepreneurial Culture
WAEM	Х		X	Х	X	Х	X	Х
California Corridor	Х	Х				Х		Х
Metro Denver	Х					Х		
Northwest Florida	Х	Х		Х		Х		
NCI			Х	Х			Х	Х
Kansas City	Х		Х		Х	Х		Х
North Star Alliance		Х				Х		
Mid-Michigan	Х	Х	Х	Х			Х	Х
West Michigan				Х		Х		Х
Montana		Х	Х			Х	Х	
Finger Lakes	Х		Х			Х		Х
Piedmont Triad		Х	Х	Х	Х	Х		Х
Wall Street West	Х					Х		



Figure B-4 Piedmont Triad Partnership 2008 Industry Cluster Goals

• Creative Enterprises and the Arts:

- Develop a comprehensive regional strategy and action plan in collaboration with the Alliance for Creative Advantage.
- Develop an Innovative Workforce- Using industry input, leverage higher education to prepare students and professionals to work in the Triad's creative industries and develop the talent needed in the region.
- Advance the PT Creative cluster regionally and globally

Advanced Manufacturing:

- Teachers, counselors, school administrators, and parents get information about STEM-related and advanced manufacturing careers
- The most important of the nine competencies defined by industry
- Businesses, educators, workforce and economic development professionals have the information needed to make this region best in class

Logistics and Distribution

- Promoting the Piedmont Triad Region as the premier Logistics Center on the US East Coast
- Logistics Education
- Promoting Logistics to Youth as a Career Path

Health Care

- To increase the regional health care workforce by creating employer-led and -driven funding programs designed to 1) advance careers of incumbent workers, 2) career pathway "reconciliation" between employers and community college offerings, 3) sector specific strategies for highly specialized or high need sectors, 4) minority recruitment into health care professions, and 5) building program capacity.
- To increase awareness of health care workforce promising practices/solutions implemented nationally that may be replicated in the Piedmont Triad Region
- To secure sustainability funding for Piedmont Triad Allied Health Regional Skills Partnership for year 2 and 3 program operations.
- To build a common vision toward defining future initiatives, resources and activities deemed necessary to ensure continued growth and development of the health care workforce.
- To build relationships with state organizations to advance the 2008-09 initiatives of Health Care Cluster.
- To create interactive media allowing career exploration on a regional level for students interested in health careers.

Education

- Piedmont Triad Aspiring Principals: To retain the best and brightest principal candidates here in the Piedmont Triad.
- Develop a series of programmatic responses to the drop out crisis.
- Inform educators of the region's high wage high skilled jobs for their students
- Planning and implementing a curricula design for students' senior projects.
- Provide "Best in Class" School to Work Programs to all 17 school districts for replication.

B-4

- Teacher retention
- Parental involvement in the education process

Workforce Development

- Enhanced Communication
- WDB Awareness Tools
- Diversification of Funding
- Workforce System Structure and Governance
- Service Delivery Strategies





Figure B.5 Wall Street West Original and Revised Goals

Original Initiative Goals Initiative Goals June 2008 1. Connectivity: Building the Infrastructure: In I. Talent Development: To Create the Talent Pool order to meet the redundant telecommunications to Ensure a Qualified Workforce Essential to needs for secondary operations for SEC regulated Attract, Retain and Grow Financial Services financial institutions, appropriate connectivity is Businesses while developing a comprehensive needed. As a contribution to this project, the workforce development system to support all Commonwealth is committing a combination of private industries. Wall Street West will implement a and public sector resources to build the necessary demand driven approach to create industry specified redundant, self-heading broadband network between curriculum, provide retraining for the region's northeast PA and New York City necessary to meet dislocated workers, develop career ladders and the nation's homeland security needs and to incumbent worker training to help workers advance, transform the region and build a pipeline of workers through high school programs aimed at increasing the numbers of students engaged and completing post-secondary education enhanced by internships for high school and college students. 2. Creating the Talent Pool: Wall Street West will II. Technology: To Build the Technology conduct a gap analysis that will inform that project's Infrastructure to enhance the Business Case to Attract, Retain and Grow the Financial Services subsequent activities in the financial services sector to create industry specified curriculum, provide retraining Sector to Nine County Region and to expand to the region's large population of dislocated workers, access to and delivery of education and training opportunities leading to careers in the Business develop career ladders and incumbent work training to help workers advance, and build a pipeline of and Financial Service Industry. Wall Street West workers through high school programs aimed at dual will emphasize the redundant telecommunications enrollment, increasing the numbers of students who needs for secondary operations for SEC regulated engage in and complete post-secondary, and creating industries and the emerging information technology internships for high school and college students. businesses connectivity requirements. ???? 3. An innovation environment: Wall Street West will make permanent and systemic the regional environment that supports technology transfer. research partnership, and entrepreneurial activity. Strategic Investment will be made in expansion of Keystone Innovation Zones and University partnerships with community-based organizations; technology development in the financial services sector; and streamlined access to existing regional economic development and investment resources. 4. Integrated and sustainable economic and III. Transformation: To Develop an Integrated and workforce development system: Wall Street West **Sustainable Economic and Workforce** will build on the best practices demonstrated Development System. Wall Street West will build on throughout the nine county region to achieve a "new the best practices demonstrated throughout the nine economy" economic and workforce development county region that foster innovation and creativity to achieve a "new economy" economic and workforce system. Success will be attained through strategic collaborations, actions, and investment initiated development system. Success will be attained through transformational decision-making among through strategic collaborations, actions, and workforce organizations, education, and economic investments initiated through transformational development partners. decision-making among workforce organizations, education, and economic development partners.





Appendix C

Social Network Data for Generation I Regions

- C-1: Social Network Analysis Codes for Type of Organization for 2007 and 2008
- C-2: Types of Organizations in the Regional Social Networks
- C-3: Types of Organizations of Site Visit Respondents
- C-4: Organizational Roles of Collaborators in the Regional Social Networks
- C-5: Organizational Roles of Site Visit Respondents
- C-6: Frequency of Contact in the Regional Social Networks





Table C-1 Social Network Analysis Codes for Type of Organization for 2007 and 2008

Type of Organization Codes 2007	Type of Organization Codes 2008
1. Business & Industry	Business & Industry Association
2. State Workforce Investment Board	2. For Profit Business
3. Local Workforce Investment Board	3. State Workforce Investment Board
4. Other Workforce & Training	Local Workforce Investment Board
5. Economic Development Agency	5. State Workforce Investment Agency
6. Investors	6. Other Workforce & Training Org.
7. Research Institution (Univ. or private)	7. State Economic Development Agency
8. Education (K-12, College)	Local Economic Development Agency
9. Foundation	9. Regional Economic Development Agency
10. Labor	10. Business Incubator
11. Media	11. Investor
12. Local Elected Officials	12. Research Institution (University or Private)
13. Other	13. Education (K-12, College
14. Government	14. Foundation
15. Non-Profit	15. Labor Organization
16. State Workforce Agency	16. Media
17. State Economic Development Agency	17. Local Elected Official
	18. Other Government Agency
	19. Faith or Community Based Nonprofit
	20. Other





Table C-2
Types of Organizations in the Regional Social Networks

Region	Econ. Dev.	Workforce	Industry	Research	Education	Other Govt.	Other
WAEM	8.6%	14.3%	20%	0%	32.9%	15.7%	8.6%
California Corridor	11.5%	14.4%	42.3%	1.9%	21.2%	5.8%	2.9%
Metro Denver	18.6%	16.3%	19.8%	2.3%	30.2%	5.8%	7%
Northwest Florida	21.1%	14.1%	35.2%	2.8%	19.7%	5.6%	1.4%
NCI	12.1%	13.6%	24.2%	12.1%	28.8%	3%	6.1%
Kansas City	17.2%	12.1%	32.8%	0%	31%	1.7%	5.2%
North Star Alliance	16.7%	19.4%	40.3%	4.2%	11.1%	6.9%	1.4%
Mid-Michigan	10.5%	5.3%	32.9%	3.9%	26.3%	1.3%	19.7%
West Michigan	10.8%	16.9%	30.8%	0%	15.4%	6.2%	20%
Montana	10.5%	14%	17.5%	0.9%	28.1%	11.4%	17.5%
Finger Lakes	7.3%	15.5%	29.3%	1.2%	32.9%	9.8%	3.7%
Piedmont Triad	13.2%	14%	28.1%	1.7%	26.4%	4.1%	12.4%
Wall Street West	27%	17.5%	20.6%	3.2%	25.4%	1.6%	4.8%
Across All Regions	13.8%	14.4%	28.8%	2.5%	25.5%	6.3%	8.9%



Table C-3
Types of Organizations of Site Visit Respondents

Region	Econ. Dev.	Workforce	Industry	Research	Education	Other Govt.	Other
WAEM	13.3%	13.3%	13.3%	0%	46.7%	0%	13.3%
California Corridor	13.3%	16.7%	40%	3.3%	23.3%	0%	3.3%
Metro Denver	25.9%	22.2%	11.1%	3.7%	33.3%	0%	3.7%
Northwest Florida	23.5%	23.5%	35.3%	0%	17.6%	0%	0%
NCI	4.8%	28.6%	9.5%	23.8%	28.6%	0%	4.8%
Kansas City	16.7%	22.2%	38.9%	0%	11.1%	5.6%	5.6%
North Star Alliance	16.7%	45.8%	25%	8.3%	0%	4.2%	0%
Mid-Michigan	5%	15%	10%	0%	45%	0%	25%
West Michigan	11.8%	11.8%	5.9%	0%	17.6%	0%	52.9%
Montana	15.6%	37.5%	0%	0%	34.4%	9.4%	3.1%
Finger Lakes	3.7%	25.9%	18.5%	0%	33.3%	11.1%	7.4%
Piedmont Triad	25%	11.1%	22.2%	0%	30.6%	0%	11.1%
Wall Street West	37.5%	25%	12.5%	0%	18.8%	0%	6.3%
Across All Regions	16.3%	23.3%	18.7%	3%	26.7%	2.7%	9.3%



Table C-4
Organizational Roles of Collaborators in the Regional Social Networks

Region	Leaders, Strategists, Visionaries, Decision-Makers	Implementers, Managers, Administrators	Day-to-Day Staff
WAEM	41.4%	47.1%	11.4%
California Corridor	39.4%	55.8%	4.8%
Metro Denver	46.5%	45.3%	8.1%
Northwest Florida	53.5%	38%	8.5%
NCI	43.9%	36.4%	19.7%
Kansas City	36.2%	44.8%	19%
North Star Alliance	47.2%	31.9%	20.8%
Mid-Michigan	55.3%	31.6%	13.2%
West Michigan	47.7%	49.2%	3.1%
Montana	24.6%	46.5%	28.9%
Finger Lakes	39%	46.3%	14.6%
Piedmont Triad	45.5%	46.3%	8.3%
Wall Street West	46%	44.4%	9.5%
Across All Regions	42.8%	44%	13.2%





Table C-5 Organizational Roles of Site Visit Respondents

Region	Leaders, Strategists, Visionaries, Decision-Makers	Implementers, Managers, Administrators	Day-to-Day Staff
WAEM	26.7%	53.3%	20%
California Corridor	36.7%	56.7%	6.7%
Metro Denver	55.6%	33.3%	11.1%
Northwest Florida	64.7%	17.6%	17.6%
NCI	28.6%	66.7%	4.8%
Kansas City	50%	44.4%	5.6%
North Star Alliance	41.7%	33.3%	25%
Mid-Michigan	50%	35%	15%
West Michigan	47.1%	47.4%	5.9%
Montana	3.1%	59.4%	37.5%
Finger Lakes	40.7%	55.6%	3.7%
Piedmont Triad	36.1%	55.6%	8.3%
Wall Street West	37.5%	56.3%	6.3%
Across All Regions	38.3%	48.3%	13.3%





Table C-6 Frequency of Contact in the Regional Social Networks

Region	3+ Times/ Week	1-2 Times/ Week	2-3 Times/ Month	Monthly	6-11 Times/ Year	1-5 Times/ Year	Average
WAEM	24.7%	20.5%	24.7%	26%	0%	4.1%	4.32
California Corridor	9.5%	26.5%	27.9%	25.9%	7.5%	2.7%	3.97
Metro Denver	13.6%	31.8%	21.2%	23.5%	1.5%	8.3%	4.08
Northwest Florida	3.8%	31.6%	17.7%	44.3%	1.3%	1.3%	3.89
NCI	7.8%	21.6%	31.4%	28.4%	5.9%	4.9%	3.82
Kansas City	9.2%	31%	14.9%	36.8%	1.1%	6.9%	3.90
North Star Alliance	16.2%	25.6%	20.5%	23.1%	4.3%	10.3%	3.96
Mid-Michigan	15.5%	26.8%	23.7%	23.7%	1.0%	9.3%	4.04
West Michigan	13.6%	30.9%	28.4%	13.6%	2.5%	11.1%	4.06
Montana	6.6%	25.8%	33.1%	25.2%	3.3%	6%	3.89
Finger Lakes	3.8%	22.3%	25.4%	33.1%	3.8%	11.5%	3.55
Piedmont Triad	2.3%	33.1%	18.3%	34.9%	5.7%	5.7%	3.74
Wall Street West	3.9%	39%	19.5%	18.2%	3.9%	15.6%	3.74
Across All Regions	9.4%	28.1%	23.9%	27.7%	4%	7.3%	



Appendix D

Supplementary Quantitative Data on Generation I Regions

- Details of Extant Data Analysis for the Generation I Regions
- Table D.a: Demographic Measures: Comparing Generation I Regions with Their States
- Table D.b: Evaluation's Definition of STEM Subjects







Details of Extant Data Analysis for the Generation I Regions

Introduction

Although data from many sources are available on an annual basis, the year used as the time unit differs from data set to data set. Data from U.S. government agencies are usually organized by the federal agency's fiscal year (FY), i.e., October 1 through September 30. The charts in this report use the abbreviated label for these data, "FYyyyy," with the labeled year being the later of the two calendar years included in the fiscal year. (FY2007 runs from October 1 of 2006 through September 30 of 2007). Academic measures are collected by academic year (abbreviated AYyyyy in this report), which varies slightly from institution to institution, but usually runs from September of the labeled year through August of the following year. Thus, AY2006 is nearly identical to FY2007. Some primary data are aggregated by calendar year (abbreviated CYyyyy in this report). For each of the data sets described within this chapter, the evaluation team has used the most recently released data available.

Workforce and Job Measures

Data Sources: National Bureau of Labor Statistics, Dun and Bradstreet, and US Internal Revenue Service

The evaluation team acquired workforce and wage data from the Quarterly Census of Employment and Wages (QCEW) database of the US Bureau of Labor Statistics (BLS). This data is available both at the state and county levels, so regional data may be rolled up county by county and then compared to state totals.

QCEW collects data from the states on employment and wage information for all workers covered by state unemployment insurance (UI) laws, representing 98% of U.S. jobs. Yearly data is usually available eight to nine months after the end of the year. Members of the armed forces, individuals who are self-employed, sole proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system are not included in QCEW data, but partial information is available for agricultural industries and paid employees in private households. Limitations in reporting for agricultural industries poses an obstacle for reporting data in rural regions; and non-disclosure rules to guard privacy of individuals and individual enterprise also limits the availability of data in regions with low numbers of businesses, such as the North Star Alliance and Montana, even though the businesses themselves might be large. Also, county level data contains a few records that are missing a county location (designated by county code 999), but only 2% of the records fall into this category so it is not expected that these unidentified records will skew results. BLS receives data from the individual states, and has no control over whether states choose to change definitions of establishments, and so data on number of businesses is acquired from Dun and Bradstreet instead.





The evaluation team acquired QCEW data for the regions and their host states on:

- Average Annual Wages calculated by dividing the sum of total annual wages for the geographic area by the average number of workers employed during the year. According to QCEW's website, "[w]ages represent total compensation paid during the calendar quarter, regardless of when services were performed. Included in wages are pay for vacation and other paid leave, bonuses, stock options, tips, the cash value of meals and lodging, and in some states, contributions to deferred compensation plans (such as 401(k) plans);" Average wages as an indicator of Initiative impact will be a lagging indicator, just as unemployment is an economic lagging indicator. Workforce initiatives have an associated training time before newly trained workers begin drawing new levels of wages. In addition, there is a datareporting lag associated with the yearly averaging. If a worker achieves a better paying job in the middle of the year, that gain when averaged over the year shows up at the end of the year as a smaller effect. The full effect is seen in the next year when the higher wages are achieved throughout the entire year.
- **Number of Employees** a yearly average computed by QCEW of number of employees for the identified year, geographical unit. Some records also have data segregated by industry, using groups of NAICS⁷ codes at various levels of the NAICS hierarchy.

The charts below present data on these measures for the CY2006 (baseline) calendar year compared to the same measures for the CY2007 calendar year, the analyses compare the measures for each region to those for the surrounding (or host) state. In two-state regions (Kansas City and WAEM), measures are reported for the entire region compared to the average of the two surrounding states. Wage figures have not been adjusted for inflation because the metric used – the ratio comparing the region's performance to the host state – will have inflation accounted for in both the numerator and denominator. The difference in this ratio over the years will be relatively insensitive to inflation and other external factors such as changes in the overall economy.

Average Wages

As Figure D-1 demonstrates, many of the regions' average annual wages are below those of the surrounding state(s). Note that wage data for rural regions with strong agricultural economies, such as Montana, are less reliable in the QCEW data than that for more urban areas, as most family farmers are not included in the state unemployment insurance data furnished to QCEW. In addition, and as previously noted, the QCEW masks data from areas with fewer businesses in order to protect the privacy of individual businesses. The most noticeable gap between region and state is that of the Finger Lakes region. This is probably due to the unusually high wages of the New York City metropolitan area, but may also be due in part to the uncertainty of rural

⁷ North American Industry Classification System is the standard coding system used by US statistical agencies. It is a hierarchical system categorizing the type of industry of the business being coded. Higher levels of aggregation yield codes with fewer digits. http://www.census.gov/eos/www/naics/





⁶ Bureau of Labor Statistics. "Quarterly Census of Employment and Wages Overview," http://www.bls.gov/cew/cewover.htm

wage reporting, since six of the seven Finger Lakes counties have significant agriculture. The size of the gap did not change between 2006 and 2007.

Although all average wages rose by a few thousand dollars per year, the regions progressed in step with their host states between 2006 and 2007, with no significant changes in comparison to their states. The wage numbers are uncorrected for inflation, so some rise is expected in all wages for both regions and their host states.

■ 06 Region ■ 06 State □ 07 Region ■ 07 State \$70,000 \$60,000 \$50,000 \$40,000 \$30,000 \$20,000 \$10,000 Picamoni Trian Street West \$0 North Star Allance California Corrido, Metro Denver Mic. Michigan ringer lakes NN Florida Montana tansas Cin NC/

Figure D-1 Average Yearly Wages for Regions and Their Host States, 2006 and 2007

Source: Quarterly Census of Employment and Wages (QCEW) database of the U.S. Bureau of Labor Statistics (BLS)

Number of Employees

Figure D-2 indicates the distribution of employment across various industrial sectors for each region, giving a snapshot of the overall employment landscape for each region to provide context when considering the initiatives some regions have begun, targeting specific sub-industries. Generally, the targeted industries are small subsets of the broad NAICS code categories shown here, so the untargeted portion of each of these larger categories will mask changes in targetindustry employment. Retail employment is substantial in all regions, as is manufacturing except in Montana, Metro Denver and Northwest Florida. As expected, Metro Denver and California Corridor have substantial professional and scientific services representation.





Figure D-2
Distribution of Employees Across Industries, By Region

								, ,	0				
	WAEM	California Corridor	Metro Denver	NW Florida	NCI	Kansas City	North Star Alliance	Mid- Michigan	West Michigan	Montana*	Finger Lakes	Piedmont Triad	Wall Street West
Total # of Employees in Region	38,6616	11,076,388	1,584,304	545,627	218,448	1,193,788	516,159	629,441	584,118	62,126	548,761	723,934	793,379
Proportion of Region's Workforce	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region	% Region
Other Services (except Public Adm.)	3	5	3	4	3	4	4	5	4	4	4	3	4
Agriculture & Mining *	4	2	1	0	1	0	0	1	2	7	1	0	1
Construction	7	6	8	10	5	6	7	6	5	7	5	7	6
Manufacturing	28	12	8	5	37	11	13	18	28	3	20	21	16
Utilities, Wholesale, Retail, Transportation	25	22	24	23	22	25	28	24	22	28	21	24	27
Information	1	4	5	3	1	5	3	2	2	3	3	2	3
Finance, Insurance, Real Estate, Mgmt of Companies and Enterprises	5	8	11	8	5	10	8	8	7	6	8	9	8
Professional, Scientific/Technical Services, Administrative/Support Waste Mgmt/Remediation	7	15	18	14	6	15	10	12	14	4	12	12	11
Education, Health Care, Social Assistance	4	8	5	1	2	6	8	4	3	10	9	9	7
Arts, Entertainment, Recreation, Food Service, Accommodation	10	12	12	16	11	12	13	14	11	16	11	11	12
Public Administration	6	5	5	16	5	6	6	8	4	12	6	4	5

^{*} Data for agriculture and Montana region may not be accurate, since many agricultural establishments are not covered by unemployment insurance, also because agriculture tends to predominate in regions with low population, thus few businesses, where QCEW data is censored.

Source: Quarterly Census of Employment and Wages, US Bureau of Labor





Figure D-3 depicts the size of the region's employed labor force as a percentage of that of the whole host state or states. The regions vary widely, with Northwest Florida and North Central Indiana having only 7% of their state's workforce, while California Corridor, Metro Denver and Maine's North Star Alliance have 70-85% of their state's workforce. Percentages for both 2006 and 2007 show *no significant shifts* in these percentages during the time period.

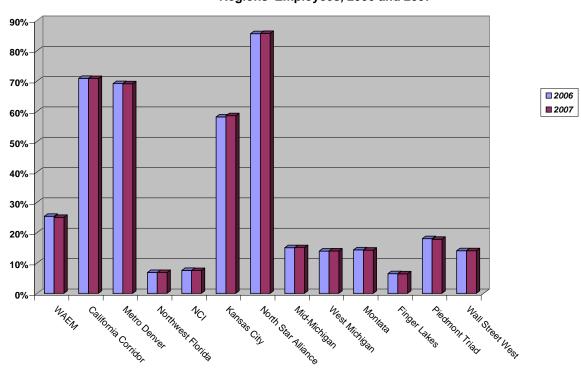


Figure D-3

Regions vs. Host States: Proportion of State Labor Force Represented by Regions' Employees, 2006 and 2007

Values for two-state regions calculated by averaging. Source; Quarterly Census of Employment and Wages, US National Bureau of Standards

Worker Migration

The Internal Revenue Service offers a much-underutilized data resource, a county by county tracking of the number of tax filers who change mailing addresses between filings. Although some caveats exist in using this data the data set appears to be a valuable proxy for worker

⁹ Limitations of the use of this data are several. If a family has more than one wage earner and only one return is filed, this will lead to underestimating the number of workers moving, but not the amount of their adjusted gross income leaving or entering, assuming they continue to file jointly. This method also misses workers who make so





⁸ IRS Address Change Data: If a taxpayer files a return with a return address in region R in year 2005 and files elsewhere in year 2006, then (s)he will be counted as an "outflow return" for region R in the years 2005-6. Typically returns are mailed in during early spring, so a return with a changed address to an out-of-region location between spring of 2005 and spring of 2006 is assumed in this analysis to have indicated a move out of the region in 2005.

movements, as well as their income. The data allow researchers to track migration between any pair of counties in the U.S., migration to other states, and migration to foreign countries.

The evaluation's analysis will track the number of returns (a proxy for worker migration) and more importantly, migration of adjusted gross income, a proxy for wage income flowing into or out of a region or state along with the worker flow. (A worker who does not move but has a change in income will not be counted here; only income associated with migrating workers will appear in the following figures).

As Figure D-4 illustrates, net worker migration is positive into all of the regions and states for both 2005 and 2006, years before the Initiative began, and the most recent data available at this time. Worker migration is shown for each region, and in the column adjacent, for its host state or states.

Migration of Workers, Regions and Host States, 2005, 2006 **2005 2**006 600,000 Net flow of workers (+ means inflow) 500,000 400,000 300,000 200,000 100,000 NN Plotice North Ster Allence Picdnon Prida Netro Denver

Figure D-4

Source: US Internal Revenue Service Statistics of Income Program

Figure D-5 shows the net gross adjusted income flow for the regions and their home states, preceding the start of the Initiative. Each region is shown with its host state in the adjacent column just above. The net gross adjusted income flow is the difference between the incomes of individuals who moved into the region and those who moved out of the region in a specific year. Even though more workers moved into all of the regions than moved out, the net gross adjusted income flow, which is the metric more closely correlated with the economic health of the region

little that they do not need to file a 1040 form. Workers who die or cease to make enough wages to require filing during the period do not have matching forms in the year pair, and are not counted. Workers who cease filing jointly will have the new filer not counted in the first year of separate filing, as there is no matching earlier return to use to judge migration.





than sheer number of workers, shows that for three regions (California Corridor, Mid-Michigan and Finger Lakes), the workers who moved in were earning less on average than the (smaller number of) workers who moved out. Even though there were net workers coming into these regions, income was still flowing out. On the other hand, Florida and North Carolina apparently attracted higher paid workers coming into their states and regions than those that may have left, since their adjusted gross income flow was positive. These observations describe the economic situations for regions as they begin their initiatives.

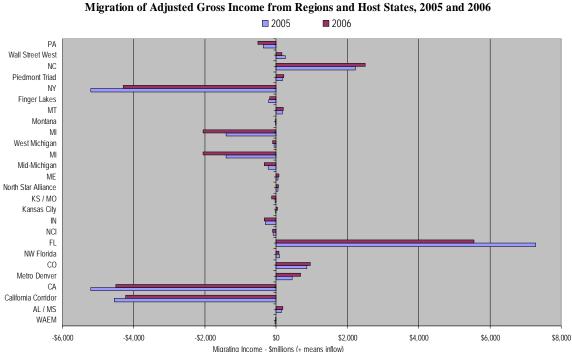


Figure D-5
Migration of Adjusted Gross Income from Regions and Host States 2005

Source: US Internal Revenue Service Statistics of Income Program

Innovation and Commercialization Measures

In addition to the growth of strong collaborative networks, an important measure of transformation is the extent to which a region can improve the innovativeness of its businesses, and thus increase regional business vitality. To track this aspect of regional transformation over time, the evaluation team is collecting data for measures such as number of new business starts, the number of new patent applications per year, amount of grant funding from the National Institutes of Health (NIH) and National Science Foundation (NSF), number of grants to the regions and host states, and the number of angel networks in the region. This section discusses those measures.



New Business Starts

One measure of the future dynamism of a region is the number of new businesses being started. Since businesses must have a DUNS Dun and Bradstreet number to do business with the US Government, or to apply for certain types of business credit, and because application for the number is free, the Dun and Bradstreet database is a reliable source of information on new business starts. New business starts as a percentage of the starts in the host state or states, shown in Figure D-6, vary widely across regions. Northwest Florida, NCI and Finger Lakes have only a small percentage of their states' business starts, whereas California Corridor, Metro Denver, Kansas City and the North Star Alliance have the lion's share of their states' new business activity.

READING CHARTS WITH ERROR BARS

The convention in this document is to plot error bars as 95% confidence intervals. That means that if the same quantity were to be measured in many different experiments with random statistical variability, the measured value of the quantity will lay within the error bars 95% of the time. Thus in looking at a chart, if the colored column of one measurement extends outside the error bars of another, as in this example, we can say that they are truly different with 95% confidence.

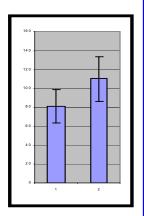
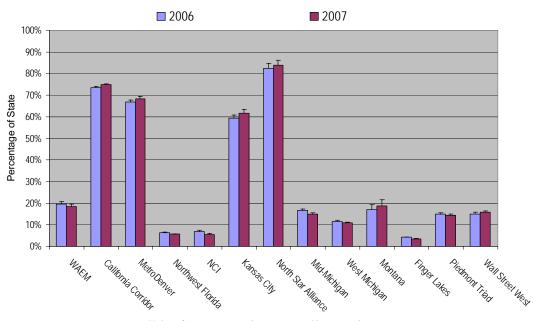




Figure D-6 New Business Starts, Region as Percentage of State, CY2006 and CY2007



Values for two-state regions computed by averaging Source: Dun and Bradstreet custom report, 2008

Changes between 2006 and 2007 were small in all regions when regions were compared to their host states. California Corridor and Metro Denver made small gains compared to the state as a whole (the error bars shown are 95% confidence intervals) while Northwest Florida, NCI, Mid-Michigan and Finger Lakes fell slightly behind. Finger Lakes went from roughly 900 businesses started in 2006 to 800 started in 2007, while Metro Denver went from 4,800 in 2006 to 6,000 in 2007.

Federal Small Business Innovation Research (SBIR) and Small Technology Transfer (STTR) Grants

SBIR and STTR grants are leading indicators of increased research and development activity in small technology companies because they are important sources of early stage capital for technology-based entrepreneurs. Congress established the SBIR program to increase opportunities for small businesses to stimulate technological innovation by funding high-risk R&D that may have commercial potential. Both the number and total dollar amount of active SBIR and STTR grants in a given year are indicative of innovative activity in the small business community. Regions vary notably in the number of SBIR/STTR projects active in any of the recent years, as seen in Figure D-7. The number of SBIR awards in the California Corridor region in both 2006 and 2007 was over 800, whereas the Montana region had only one in 2006 and none in 2007. Likewise, the awards garnered by each region as a proportion of all awards in the state varies widely, from over 80% in the Metro Denver and California Corridor regions, to only 2% or 3% in West Michigan, WAEM, and the Wall Street West regions.

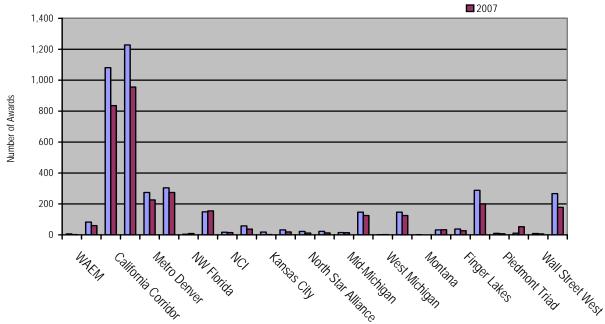




Figure D-7

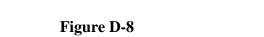
Number of Active SBIR and STTR Grants, Regions and Host States, Phase I and II
CY 2006 and 2007

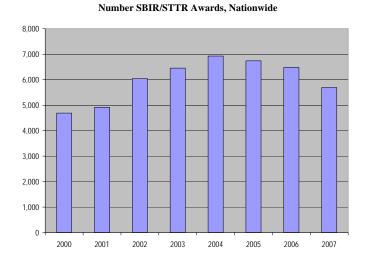
2007



Source: Small Business Administration TechNet Database

Nationwide, the number of SBIR/STTR awards has been trending downward since 2004, as shown in Figure D-8.





Although the absolute number of awards in the WIRED regions declined between 2006 and 2007, the regions have largely fared as well as their host states. NCI actually enjoyed better





results than Indiana as a whole, as the number of Indiana's Phase II awards from outside the region dropped substantially in 2007.

Figure D-9 displays the aggregate dollar amounts of SBIR and STTR awards to the WIRED regions in 2006 and 2007. The \$300 and \$200 million dollar awards to California Corridor are truncated to display data for the other regions more clearly. Only California Corridor, Metro Denver, and – to a lesser extent – Finger Lakes, brought in any important revenue from SBIR/STTR grants. Since these awards are seed grants, however, the number of grants is equally likely to be a good measure of the region's innovation as the amount of the grants awarded. Larger dollar amounts may also point to a higher success rate of Phase I companies moving to Phase II grants. Phase II grants are intended to bring products closer to commercialization, an important step toward maturity for an entrepreneurial company.

Figure D-9

Source: U.S. Small Business Administration TechNet

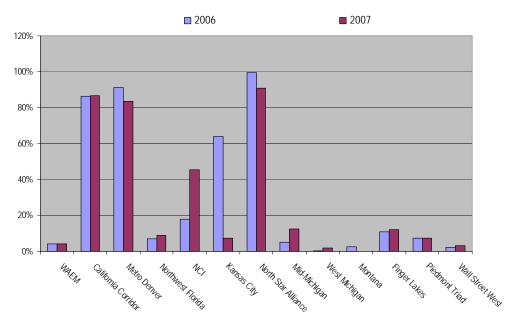
The regions' award amounts as a percentage of the awards to their host states are shown in Figure D-10. As with many measures in this evaluation, the regions vary widely. California Corridor, North Star Alliance, and Metro Denver enjoy a large percentage of their states' total SBIR/STTR activity, while the other regions receive smaller grant amounts. The features that are most intriguing, however, are the apparent large jumps between 2006 and 2007 made upward by NCI and downward by Kansas City. The NCI region actually had a small decrease in its





SBIR/STTR funding level between the two years, but the rest of the state of Indiana had a marked decrease in Phase II (larger dollar amount) awards.

Figure D-10
SBIR and STTR Dollar Amounts, Region as % Host State
CY2006 and CY2007



Source: U.S. Small Business Administration TechNet

In the case of Kansas City, its award amount decreased from \$6M to \$1M, while the Kansas and Missouri average decreased from \$10M to \$5M – less than Kansas City, but also substantial. The small drop in regional percentage for North Star Alliance reflects the fact that one company outside the region won a grant in 2007.

Federal Research and Development (R&D) Grants from National Institutes of Health and National Science Foundation

For the evaluation's 2007 interim report, the evaluation team was able to assess total federal R&D funding via the RaDiUS database, a data gathering effort then being funded by NSF. That data collection effort has been discontinued, leaving this study to use only the two major sources of R&D funding, NIH and NSF, as a surrogate for total R&D funding. This surrogate does not include R&D activity undertaken for the Department of Defense, creating a possible source of bias in the data.

Figure D-11 presents the number of NIH and NSF awards to the regions as a proportion of the awards made in their home states, for the years 2006 and 2007. The figure also shows the grant amounts for the regions and their states in the same ratio.





FY2006 and FY2007

PY2006 number of grants FY2007 number of grants FY2007 total grant amount FY2

Figure D-11
NIH Plus NSF Awards, Region as % Host State

Source: US National Institutes of Health and National Science Foundation

California Corridor, Metro Denver and North Star Alliance enjoy the majority of NSF and NIH grants in their states, both in amount and in number of grants. WAEM has proportionately smaller grants than Alabama and Mississippi, due to the presence of research institutions with medical schools outside the WAEM region, which tend to receive larger NIH grants. Little change in the level of Federal R&D activity, as compared to the host states, occurred between FY2006 and FY2007.

Number of New Patent Applications

An increased number of patent applications from a region may indicate increased innovation and business activity. The evaluation team tracked published applications instead of granted patents because the length of time between an application and the granting of a patent may be so long that granted patents might be indicative of innovation during the previous decade. Note that if a patent has applicants in more than one region or more than one state, the patent is credited to each relevant region and state.

The diversity across regions is demonstrated again by the variability in patent application activity as seen in Figure D-12. The North Star Alliance region appears to encompass most of the technology activity that leads to patent applications in Maine, as does the California Corridor for

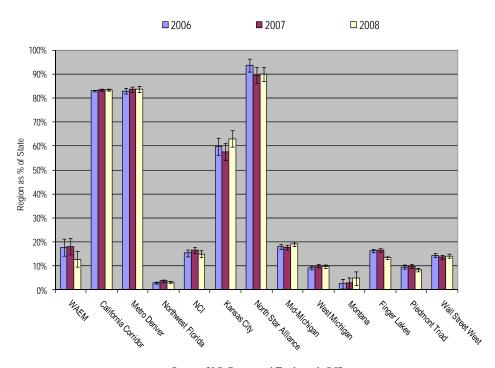
¹⁰ Popp, David, Ted Juhl, and D.K.N Johnson. 2003. "Time in Purgatory: Determinants of the Grant Lag for US Patent Applications." National Bureau of Economic Research.





California. The Metro Denver region also dominates its host state with more than 80% of Colorado's patent application activity. Most regions track their states over the period FY2006 – FY2008, in patent innovation. As expected, the rural regions such as WAEM, Montana, and Finger Lakes have much lower patent activity than the metropolitan regions. The regions that stated a goal to increase innovation were California Corridor, Northwest Florida, NCI, North Star Alliance, Mid-Michigan, West Michigan, Finger Lakes, Piedmont Triad and Wall Street West. WAEM has lost ground slightly in 2008, although as a rural region, the absolute number of patent applications was small, dropping from 84 applications in 2007 to 58 in 2008. Finger Lakes' and Piedmont Triad's patent applications stayed roughly constant, while their host states' increased. Northwest Florida experienced a delay in being allowed to award its planned Entrepreneurship grants. Kansas City had a slight increase over its host states Kansas and Missouri in 2008 when compared to FY2007. Error bars shown here are 95% confidence intervals.

Figure D-12
Patent Applications, Regions as % of Host State,
FY2006-FY2008



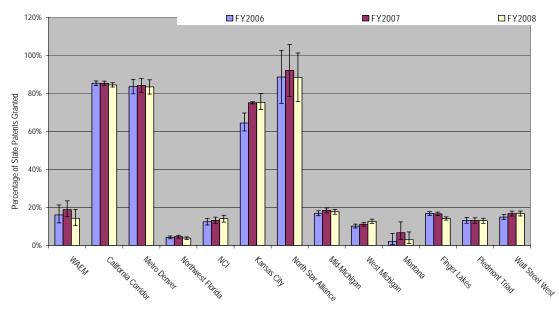
Source: U.S. Patent and Trademark Office

Patents granted (as opposed to patent applications) are also tracked, as shown in Figure D-13. The patterns are similar, with the number of patents granted each year being roughly half the number of patent applications.





Figure D-13
Patents Granted to Regions as % of State(s),
FY2006-2008

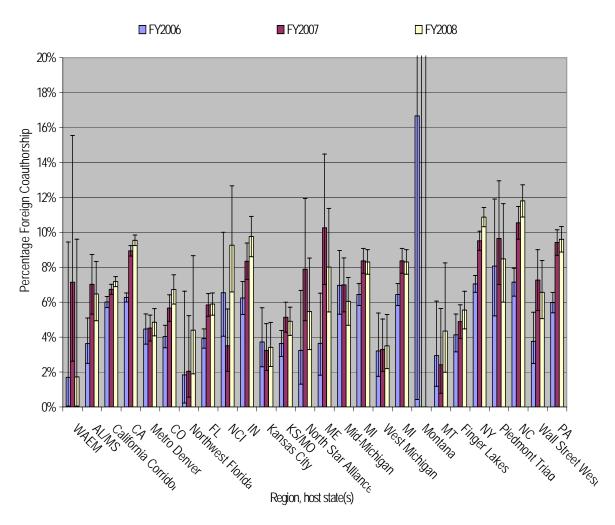


Source: U.S. Patent and Trademark Office

One measure of the extent to which regions participate in global innovation is the number of patent applications with at least one non-US co-author, as shown in Figure D-14. In all cases, the fraction of U.S. patent applications with foreign coauthors is rather small, and for many regions the margins of error are too large to permit a meaningful trend analysis. The California Corridor, Mid-Michigan, Wall Street West, and Piedmont Triad are notable for their substantial numbers of globally collaborative patents.



Figure D-14
Percent of Patent Applications with Foreign Coauthors



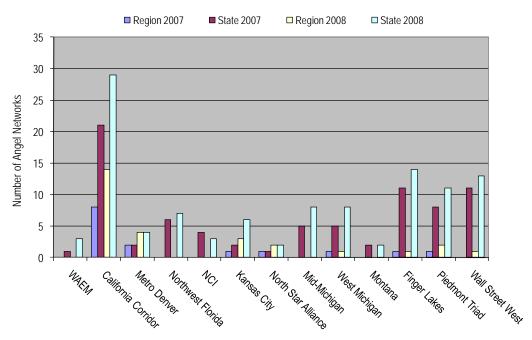
Source: U.S. Patent and Trademark Office

Number of Angel Networks

"Angels" are individuals who invest personal wealth in a start-up company at the earliest stage of its development. These investors often participate in networks of like-minded individuals. The data on angel networks in Figure D-15 are from a survey by the Angel Capital Education Foundation.



Figure D-15
Number of Angel Networks, Regions and Host States
CY2007 and CY2008



Source: Angel Capital Education Foundation

Because data on the actual level of angel activity (dollars and number of deals) is proprietary, the evaluation team used the number of angel networks as an indicator of angel activity. Research has shown¹¹ that a large proportion of angel activity involved investments in local companies. Thus, if the data show that a network exists in a region, angel investing is likely to be occurring in that region.

Even though the absolute numbers of networks are small, there has been some increase in angel network formation from 2007 to 2008. Six of the regions had an increase in the number of networks, and only WAEM, Northwest Florida, NCI and Montana had no networks registered with the ACEF by 2008. The California Corridor region's growth is due partly to entirely new networks forming and, in a few cases, to existing networks starting new chapters in a different part of the state. Most regions did not explicitly target angel investors in their programs, although Finger Lakes supported The Entrepreneurship Network, which trained 100 executives of startup companies who in turn, tapped existing venture capital and angel funding of over \$7 million.

¹¹ Prowse, Stephen, "Angel Investors and the Market for Angel Investments", J. Banking Finance – 22 Aug 1998, pp 785-792. Branscomb, Lewis; Phillip Auerswald, "Between Invention and Innovation: An Analysis of Funding for Early-Stage Technology Development" NIST GCR02-841, 2002.





Education and Talent Development

A region's attention to its talent pipeline, and the ability of the region's education and training organizations to respond to new and existing demands from regional industry for an appropriately trained workforce, are important keys to expanding economic success.

Educational achievement metrics are lagging indicators of Initiative success, because of the need to coordinate new programs to start with the academic year, and because of the length of time a program must be in existence for graduates to emerge into the workforce: 2 years for community college programs at minimum, or as long as six to eight years for professional degrees. Enrollment figures lag less than completion figures, of course. Generally enrollment changes would be seen at the end of the first full year of a program's operation.

The primary data source for postsecondary educational information is the Integrated Postsecondary Education Data System (IPEDS), the data collection program of the National Center for Education Statistics, U.S. Department of Education. All primary providers of postsecondary education receiving Title IV funding must forward data to the IPEDS. Special training programs, such as those run by contractors without Title IV funding are not included in IPEDS data.

The measures chosen for tracking in the WIRED regions are:

- Total enrollment (12-month unduplicated head count);
- Number of entering students;
- Number of degree completions;
- Number of degree completions in science, technology, engineering, and mathematics (STEM) majors;
- Number of instructional staff full-time-equivalents (FTEs);
- Number of new faculty hires. 12

The IPEDS provides data for each of these measures broken out by institution type according to the highest degree granted by the institution. Types of institutions include:

- Two-year, degree-granting (Associate degree);
- Four-year, Bachelor's degree-granting only; and
- Post-baccalaureate degree-granting (Masters, PhDs, professional).

This analysis combines the four-year and post-baccalaureate-granting institutions in order to characterize all bachelor's degrees in the regions and host states, regardless of whether the institution grants other higher degrees or not.

As might be expected, the IPEDS collects data by academic year. The baseline year for this evaluation is AY2005, which, for most institutions, ran from September 2005 through August of

¹² This data required to be submitted only in odd-numbered academic years





2006.¹³ Since WIRED funding generally became accessible in the March 2006 time frame and since new academic programs usually must be synchronized to the academic year, AY2005 (running through or to the summer of 2006) provides an accurate assessment of the pre-WIRED educational system.

Instructional staff FTEs include some teaching staff who are not considered faculty (such as teaching assistants), so those numbers run slightly higher than actual faculty counts. Since all instructional staff included in this measure has teaching responsibilities, FTE count is still a valid measure of teaching activity, but the new faculty hires will be slightly lower than if the datum captured new instructional staff hires.

Entering students and new faculty hires (in years when data coverage is complete) are leading indicators of change in the educational systems of both the regions and the states. Total enrollment and completions tell the story further down the pipeline.

Total Enrollment, Degree Completions, Number of Entering Students as a Leading Indicator

This section presents entering student counts, total enrollment, and degree completions for each region for academic years 2005-6 and 2006-7 as a proportion of the same measure for the host state. Comparisons are done for two-year schools (junior colleges, community colleges or technical colleges) and for schools granting bachelor's degrees or higher.

The number of entering students is a leading indicator of growth, shrinkage, or stability in the educational system. As such, comparing this measure to total enrollment over time can provide useful information. Two factors could cause the two measures to differ: 1) the region may be enrolling fewer or more entering students in comparison to the state than in previous years; and/or 2) the region has greater or lesser success in retaining students to graduation (a large entering class with a smaller total number of students may mean higher numbers of drop-outs). Comparing the ratio of enrollments to completions helps distinguish the possibilities, as shown below in Figures D-18 and D-19. A region with a higher completion rate than its state is probably not experiencing high dropout rates.

 $^{^{\}rm 13}$ Some institutions have July as the starting month.

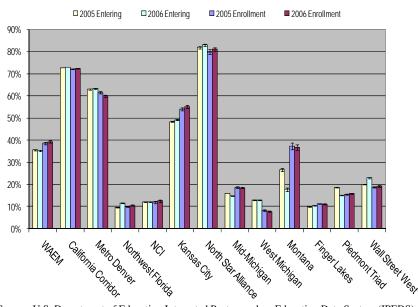




Figure D-16 shows entering students vs. total enrollment for two-year colleges in the regions.

Figure D-16

Two-Year and Technical Colleges: Entering Students vs. Total Enrollment Regions as Percentage of Host State, AY2005-6 and AY2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

All the educational comparisons in this section highlight the diversity across regions in the number of students enrolled, the number of students entering, and the number of degree completions for the various types of colleges. For example, the North Star Alliance region has nearly the entire two-year student enrollment in Maine, while the Northwest Florida and West Michigan regions have very little activity in two-year colleges.

Many regions stayed exactly in step with their host states in both enrollment and number of entering students. The decrease in Montana's community college entering student population came mostly from one school, Little Big Horn College. Piedmont Triad's and Mid-Michigan's entering classes also decreased compared to their states, while Kansas City, Metro Denver, Wall Street West and North Star Alliance were up slightly. Metro Denver's total enrollment decreased slightly from 2005-6 to 2006-7, compared to its state, at the same time as its entering class percentage was rising slightly.

Figure D-17 shows the entering cohort and total enrollment for four-year colleges and universities granting both Bachelor's and post baccalaureate degrees (shorthanded as BS+ in this report). In general, the proportions of enrollments and entering students for BS+ schools are similar to those for two-year colleges (compare Figure D-16 with Figure D-17), except for Montana, where the region has half a dozen two-year colleges and only one bachelor degree-granting school. As with the two-year college baseline, the regions vary considerably in terms of the proportion of their host states' enrollments and completions that they represent, with regions in urban areas having a larger proportion of the state's students. The regions generally kept pace

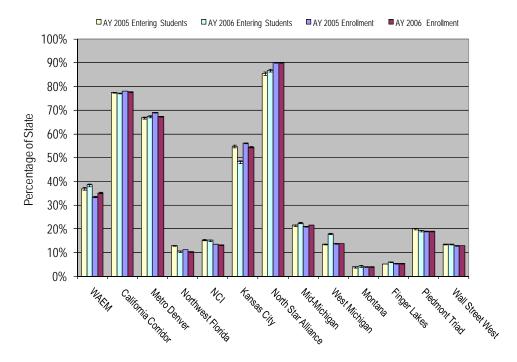




with their host states. Kansas City had a downturn in entering students in 2006-7 due mainly to decreased matriculation into University of Missouri, Kansas City.

Figure D-17

Bachelors and Postbaccalaureate Institutions: Entering Students vs. Total Enrollment, Regions as % Host State, AY2005-6 and AY2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

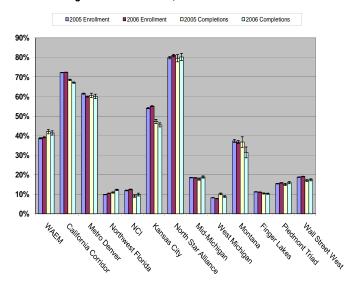
Figure D-18 compares enrollment with completions for two-year colleges. Generally, completions track enrollments fairly closely, showing that the region's completion rate is similar to that of the state as a whole. Kansas City's completion rate for two-year institutions is lower than total enrollments when compared to the states.

D-21



Figure D-18

Two Year and Technical Colleges: Enrollment vs. Completions, Regions as % host state, AY2005-6 and AY2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

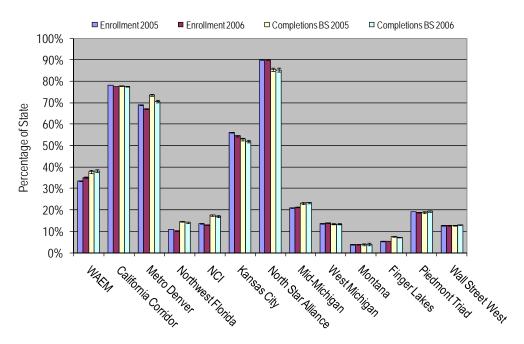
Figure D-19 compares Bachelor's degree completions to enrollment for BS+ institutions. Bachelor's level completions also tracked enrollment as well in the region as in their surrounding states. Little change was observed between the 2005-6 and 2006-7 academic years. Northwest Florida, Mid-Michigan and Piedmont Triad have goals to increase graduation rates, which since the level was unspecified, might include all levels of graduation from high school through community college and 4-year colleges. All regions except NCI, Montana and Finger Lakes have the goal to create high skilled workforces. Since completions lag any program to encourage enrollment by at least 4 years at the baccalaureate level, this metric should be monitored from 2010 onward, comparing completion rates then to completion rates in these early years where it is yet too early to see effects.

D-22



Figure D-19

Bachelors and Postbaccalaureate Institutions: Enrollments vs. BS Completions Region as % Host State, AY2005-6 and AY2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

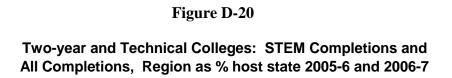
STEM Degree Completions

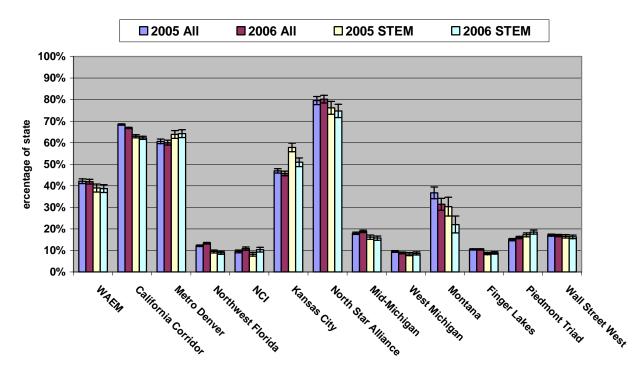
The WIRED Initiative places special emphasis on science, technology, engineering, and mathematics (STEM) education, as STEM graduates may be the drivers behind the development and dissemination of innovative technology. The question of which subjects constitute STEM fields has not been definitively answered: the Carnegie Foundation has one definition, while the U.S. General Accounting Office (GAO) uses another. Although the Carnegie Foundation's definition corresponds more closely to what most scientists would view as STEM, it is missing many of the fields appropriate for two-year graduates, such as laboratory technician skills, computer programming (as differentiated from theoretical computer science), and fields training health care workers, including physicians and other professionals, so the evaluation team added these fields to the definition. The complete list of the evaluation's choice of STEM subjects can be found at the end of this Appendix. Mid-Michigan, West Michigan, Northwest Florida and Piedmont Triad have made health care worker training one of their goals. In some cases, Title IV does not fund certificate programs aimed at reconciling differences between community college offerings and employer needs, however, and thus those graduates will not be counted in the IPEDS totals.





Figure D-20 compares two-year STEM completions to all completions for the 2005-6 and 2006-7 academic years. Many of the regions have a slightly lower rate of STEM completions than all completions than their host states but in most cases STEM completions did not decrease in AY2006-7. Kansas City and Montana lost ground in STEM completions in comparison to their states in AY2006-7, although Kansas City's STEM completions outdid the states' in both years.





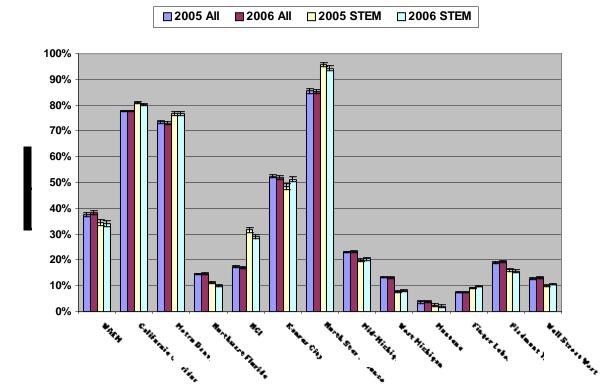
Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

The evaluation also tracks STEM completions versus all completions for four-year colleges and universities in the Generation I WIRED regions. Figure D-21 presents these data for STEM completions and all completions for bachelors' and advanced degrees. California Corridor, Metro Denver, NCI and North Star Alliance have proportionately more STEM completions that their states. Kansas City's STEM completions increased significantly in 2006 so that its STEM completions matched those of the states.



Figure D-21

STEM Completions and All Completions of Bachelor's Degrees and Above 2005-6 and 2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

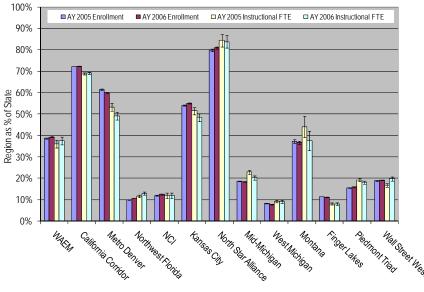
Staffing and Enrollment

Figure D-22 compares regional enrollment and instructional staff levels (FTEs) for two-year institutions, again as a proportion of the same measures for the state. This comparison indicates whether the student-teacher ratio is similar for the region as for the state as a whole, and whether the ratio is changing over time. Not surprisingly, those regions that are home to the state's major educational institutions represent the majority of the state's instructional staff and enrollment. Denver had both falling enrollment and instructional staffing during the period, with the proportion of instructional staff being lower than the enrollment, in comparison to the state. Northwest Florida had a slight proportional increase in instructional FTEs, as did Wall Street West. Wall Street West's increase brought the teaching staff proportion into better alignment with the enrollment proportion. Kansas City's instructional staff proportion went down slightly at the same time as its enrollment fraction went up slightly. Mid-Michigan's instructional staffing level went down slightly but stayed in line with the enrollment load, as did Montana's.





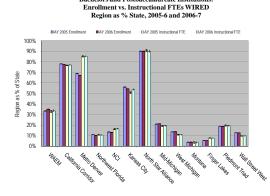
Figure D-22
Two-year Colleges and Technical Colleges: Enrollment vs. Instructional FTEs Region as % State, 2005-6 and 2006-7



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)

For the four-year colleges and universities, the change between AY2005-6 and AY2006-7 has been minimal, as shown in Figure D-23. The only notable difference between enrollment fraction and teaching staff fraction is in the Metro Denver region, where the region has a substantially higher teaching fraction than would be expected from enrollment figures.

Figure D-23



Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)





K-12 Education

Late in 2007, ETA issued a guidance letter to the regions¹⁴ stating that educational programs are appropriate use of grant funds only for students 16 and older. In states where the legal work age is 14, programs for 14-15 year olds might also be allowed, if the state requests a waiver and ETA grants one.

The evaluation team searched for appropriate extant K-12 education data sets, however, none were identified that could be filtered accurately by region and state. Where programs target single schools or single specialty programs, privacy concerns prevent state and school districts from sharing detailed information. Therefore, site visit information gained from the program providers and/or participants is the best source of knowledge about K-12 educational advances. California Corridor, West Michigan, Wall Street West and NCI applied for, and received waivers for programs targeting younger students. Some regions may have designed programs limited to high school students aged 16 and older. California Corridor site visitors documented startup difficulties with STEMCAP, their educational program, but stated that STEMCAP is now receiving valuable attention at the highest state policy levels. No other K-12 programs have been highlighted during the most recent site visits, although Northwest Florida's important high school program was described in the first round of site visits.

Changes in Selected Measures Using Existing Data

The data items discussed in this chapter offer quantitative measurement of changes in the regions as they move toward transformation. The evaluation team is comparing the baseline "pre-WIRED" year to more recent extant data as the Initiative proceeds and data becomes available. Since transformation is likely to take much longer than the grant period, the team has focused on leading indicators where possible. Nonetheless, given the current downward turn in the economy and the long timeline needed to transform a region's economy, the evaluation team may only be able to document initial small changes using data from existing sources.

The evaluation team is continuously seeking new sources of extant data to improve the evaluation of the regions' transformation. In 2008, the demise of NSF's RaDiUS database, previously maintained by RAND Corporation, left a gap in the evaluation's data on federal R&D funding. A replacement database may be in place before the grant period ends. In the meantime, the evaluation is tracking NIH and NSF funding as a surrogate for a more complete federal R&D funding picture.

The US Small Business Administration has furnished data on SBIR and STTR programs. Since the Small Business Administration is maintaining its database slightly differently than RAND did, the evaluation team now has newly acquired data for all analysis years from the SBA dataset, to insure consistency. The SBIR/STTR data now includes all active grants, not just new

¹⁴ Memo to WIRED regions from Emily Stover DeRocco, November 19, 2007, "WIRED Policy on Investments in Activities for Secondary School Age Youth."





grants, as was possible with RaDiUS data. The team has also purchased additional data on new business starts from Dun and Bradstreet.

Because of the regions' emphasis on health care, and the puzzling lack of health care fields in the lists of STEM fields from OMB and Carnegie, the evaluation team has added health care training to its STEM categories, which allows the tracking of the education of nurses, physicians, dentists and other health care technologists.

Due to a computational error, the extent of employment in industries previously identified by the evaluation team as "targeted industries" was overestimated, and the small number of employees in the identified NAICS codes caused censoring of much of the information due to the disclosure policy¹⁵ of the Bureau of Labor Statistics Quarterly Census of Employment and Wages. This censoring resulted in unreliable data, and the evaluation team had to discontinue the quantitative analysis of employment in targeted industries. Also some government employees were excluded from the analysis done for the 2007 interim report. The evaluation team repeated the 2007 analysis with the missing group reinstated so that comparable groups would be used in this year's analysis, as well as future analyses of QCEW data.

IPEDS does not require all data in every year from institutions receiving Title IV funding; therefore comparisons will only be done for years when the data element (such as New Faculty Hires) is required, since the "optional years" have poor data submission compliance, as might be expected.

¹⁵ Federal Committee on Statistical Methodology, Office of Management and Budget, "Statistical Policy Working Paper 22 (Revised 2005)- Report on Statistical Disclosure Limitation Methodology" http://www.fcsm.gov/working-papers/spwp22.html



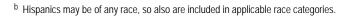


Table D.a

Demographic Measures: Comparing Generation I WIRED Regions with Their States

	WA	WAEM		a Corridor	Metro	Denver	Northwe	st Florida	N	ICI
Measure	Region	State	Region	State	Region	State	Region	State	Region	State
Total Population	2,844,658	4,447,100	24,278,841	33,871,648	2,833,000	4,301,261	1,222,492	15,982,378	535,700	6,080,485
Population Density ^a	59.7	86.1	415.6	214.2	253.3	41.3	105.9	281.8	95.5	168.0
Male	48%	48%	50%	50%	50%	50%	49.8%	48.8%	49.9%	49.1%
Race/Ethnicity										
White	61%	71%	57%	60%	82%	83%	76%	78%	93%	88%
Black	36%	26%	7%	7%	4%	4%	19%	15%	2%	8%
American Indian	0.4%	0.5%	1%	1%	1%	1%	1%	0.3%	0.4%	0.3%
Asian or Pacific Islander	1%	1%	12%	11%	3%	2%	2%	2%	2%	1%
Other/Multiple Race	1%	1%	23%	22%	11%	10%	3%	5%	3%	3%
Hispanic Ethnicity®	1%	1%	36%	32%	18%	17%	3%	17%	4%	4%
Age										
Median Age	33.8	35.9	32.7	33.3	33.8	34.4	35.5	38.7	34.4	35.2
15 to 19	8%	7%	7%	7%	7%	7%	8%	6%	8%	8%
20 to 24	8%	7%	7%	7%	7%	7%	88%	6%	9%	7%
25 to 34	13%	14%	16%	15%	16%	15%	14%	13%	13%	14%
35 to 44	15%	15%	16%	16%	17%	17%	16%	16%	15%	16%
45 to 54	13%	14%	12%	13%	14%	14%	13%	13%	13%	13%
55 to 64	9%	9%	8%	8%	8%	8%	9%	10%	9%	9%
65 and older	12%	13%	10%	11%	9%	10%	12%	18%	13%	12%
Income										
Average for Household	\$42,315	\$45,923	\$66,144	\$65,628	\$65,707	\$61,437	\$47,539	\$53,504	\$49,145	\$52,229
Median for Household	\$31,489	\$34,250	\$48,179	\$47,692	\$51,119	\$47,338	\$36,425	\$38,924	\$40,733	\$41,771
Education Level										
Less than HS Diploma	27%	25%	24%	23%	13%	13%	18%	20%	16%	18%
High School Graduate	29%	30 %	20%	20%	22%	23%	28%	29%	42%	37%
Some College, No Degree	30%	21%	22%	23%	23%	24%	23%	22%	19%	20%
Advanced Degree	23%	24%	34%	34%	42%	40%	31%	29%	23%	25%

^a Population density is population per square mile







^C Education level for population age 25 and older

Table D.a (continued)

	Kansa	as City	North Sta	r Alliance	Mid-Mi	ichigan	West N	/lichigan	Finge	r Lakes
Measure	Region	State	Region	State	Region	State	Region	State	Region	State
Total Population	5,595,211	2,688,418	1,742,373	9,938,444	1,254,661	9,938,444	1,199,588	18,976,457	1,199,588	18,976,457
Population Density ^a	80.3	32.7	203.6	170.9	259.4	170.9	248.6	390.2	248.6	390.2
Male	49%	49%	49%	49%	50%	49%	49%	48%	49%	48%
Race/Ethnicity										
White	85%	86%	97%	97%	86%	80%	87%	80%	85%	68%
Black	11%	6%	1%	1%	10%	14%	7%	14%	10%	16%
American Indian	1%	1%	1%	1%	1%	1%	1%	1%	0.3%	0.4%
Asian or Pacific Islander	1%	2%	1%	1%	1%	2%	1%	2%	2%	6%
Other/Multiple Race	2%	6%	1%	1%	3%	3%	5%	3%	3%	10%
Hispanic Ethnicity®	2%	7%	1%	1%	4%	3%	6%	3%	4%	15%
Age										
Median Age	36.1	35.2	38.4	38.6	35.4	35.5	33.5	35.5	36.4	35.9
15 to 19	8%	8%	7%	7%	8%	7%	8%	7%	7%	7%
20 to 24	7%	7%	6%	6%	7%	7%	7%	7%	6%	7%
25 to 34	13%	13%	13%	12%	13%	14%	14%	14%	13%	15%
35 to 44	16%	16%	17%	17%	16%	16%	16%	16%	17%	16%
45 to 54	13%	13. %	15%	15%	14%	14%	13%	14%	14%	14%
55 to 64	9%	8%	10%	10%	9%	9%	8%	9%	9%	9%
65 and older	14%	13%	14%	14%	12%	12%	11%	12%	13%	13%
Income										
Average for Household	\$49,956	\$52,080	\$49,179	\$47,383	\$55,210	\$57,400	\$55,681	\$57,400	\$54,745	\$61,856
Median for Household	\$38,114	\$40,687	\$38,750	\$37,368	\$44,114	\$44,702	\$45,694	\$44,702	\$43,488	\$43,642
Education Level										
Less than HS Diploma	19%	14%	14%	15%	15%	17%	16%	17%	16%	21%
High School Graduate	30%	30%	35%	36%	33%	31%	32%	31%	30%	28%
Some College, No Degree	22%	25%	19%	19%	24%	23%	23%	23%	18%	17%
Advanced Degree	27%	32%	32%	30%	28%	29%	29%	29%	36%	35%

^a Population density is population per square mile





^C Education level for population age 25 and older

b Hispanics may be of any race, so also are included in applicable race categories.

Table D.a (continued)

	Montana	Piedmont Triad		Wall Street West			
Measure	Region	State	Region	State	Region	State	
Total Population	179,639	902,195	1,464,979	8,049,313	1,776,855	12,281,054	
Population Density ^a	2.1	6.1	245.7	162.9	336.3	271.1	
Male	50%	50%	48%	49%	49%	48%	
Race/Ethnicity							
White	78%	91%	75%	72%	92%	85%	
Black	0.1%	0.3%	20%	22%	3%	10%	
American Indian	19%	6%	0.4%	1%	0.2%	0.2%	
Asian or Pacific Islander	0.3%	1%	1%	2%	1.1%	2%	
Other/Multiple Race	2%	2%	4%	4%	4%	3%	
Hispanic Ethnicity®	1%	2%	5%	5%	6%	3%	
Age							
Median Age	38.1	37.5	36.3	35.3	38.9	38.0	
15 to 19	9%	8%	7%	7%	7%	7%	
20 to 24	5%	7%	7%	7%	6%	6%	
25 to 34	10%	11%	15%	15%	12%	13%	
35 to 44	15%	16%	16%	16%	16%	16%	
45 to 54	14%	15%	14%	14%	14%	14%	
55 to 64	9%	9%	9%	9%	9%	9%	
65 and older	15%	13%	13%	12%	17%	16%	
Income							
Average for Household	\$36,887	\$42,471	\$50,926	\$52,682	\$50,926	\$52,682	
Median for Household	\$29,448	\$33,195	\$40,571	\$40,115	\$40,571	\$40,115	
Education Level							
Less than HS Diploma	17%	13%	23%	22%	19%	18%	
High School Graduate	33%	31%	30%	29%	39%	38%	
Some College, No Degree	25%	26%	20%	21%	16%	16%	
Advanced Degree	25%	30%	27%	29%	26%	28%	

^a Population density is population per square mile

Source: Workforce Innovation and Technical Solutions (WITS)





b Hispanics may be of any race, so also are included in applicable race categories.

 $^{^{\}rm C}$ Education level for population age 25 and older

Table D.b Evaluation's Definition of STEM Subjects (Science, Technology, Engineering, and Mathematics)

CIP code - 2000 Classification	Evaluation	CEAT	CAO
	Evaluation	CFAT	GAO
01-Agriculture, agriculture operations, and related sciences.			
01.00-Agriculture, General			
01.0905-Dairy Science			Х
01.0906-Livestock Management			
01.0907-Poultry Science			Х
03-Natural resources and conservation.			
03.01-Natural Resources Conservation and Research	X	Χ	
03.0101-Natural Resources/Conservation, General	Х	Χ	
03.0103-Environmental Studies	Х	Χ	
03.0104-Environmental Science	Х	Χ	
03.0199-Natural Resources Conservation and Research, Other	Х	Χ	
03.02-Natural Resources Management and Policy	Х		
03.0201-Natural Resources Management and Policy	Х		
03.0204-Natural Resource Economics	Х		
03.0205-Water, Wetlands, and Marine Resources Management	Х		
03.0206-Land Use Planning and Management/Development	Х		
03.0299-Natural Resources Management and Policy, Other	Х		
03.03-Fishing and Fisheries Sciences and Management	Х		
03.05-Forestry	Х		Х
03.0501-Forestry, General	Х		Х
03.0502-Forest Sciences and Biology	Х		Х
03.0506-Forest Management/Forest Resources Management	Х		Х
03.0508-Urban Forestry	Х		Х
03.0509-Wood Science and Wood Products/Pulp and Paper Technology	Х		Х
03.0510-Forest Resources Production and Management	Х		Х
03.0511-Forest Technology/Technician	Х		Х
03.0599-Forestry, Other	X		Х
03.06-Wildlife and Wildlands Science and Management			Х
11-Computer and information sciences and support services.	Х		
11.01-Computer and Information Sciences, General	X	Х	
11.0101-Computer and Information Sciences, General	X	X	
11.0102-Artificial Intelligence and Robotics	X	X	
11.0103-Information Technology	X	X	
11.0199-Computer and Information Sciences, Other	X	X	
11.02-Computer Programming	X		Х
11.0201-Computer Programming/Programmer, General	X		X
11.0202-Computer Programming, Specific Applications	X		X
11.0203-Computer Programming, Specific Applications 11.0203-Computer Programming, Vendor/Product Certification	X		X
11.0299-Computer Programming, Vendo/Product Certification	X		X
11.03-Data Processing	X		X
11.0301-Data Processing and Data Processing Technology/Technician	X		X
11.0301-Data Processing and Data Processing Technology, Technician 11.04-Information Science/Studies	X	X	_ ^
11.04-IIIIOIIIIalioii Science/Studies	۸	٨	1





CIP code - 2000 Classification	Evaluation	CFAT	GAO
11.05-Computer Systems Analysis	X		
11.06-Data Entry/Microcomputer Applications			
11.07-Computer Science	Х	Χ	
11.08-Computer Software and Media Applications	Х		
11.0801-Web Page, Digital/Multimedia and Information Resources Design	Х		
11.0802-Data Modeling/Warehousing and Database Administration	Х		
11.0803-Computer Graphics	Х		
11.0899-Computer Software and Media Applications, Other	Х		
11.09-Computer Systems Networking and Telecommunications	Х		
11.10-Computer/Information Technology Administration and Management	Х		
11.1001-System Administration/Administrator	Х		
11.1002-System, Networking, and LAN/WAN Management/Manager	Х		
11.1003-Computer and Information Systems Security	Х		
11.1004-Web/Multimedia Management and Webmaster	X		
11.1099-Computer/Info Tech Services Administration & Management, Other	Х		
11.99-Computer and Information Sciences and Support Services, Other.	X		
14-Engineering.	Х	Х	
14.01-Engineering, General	X	X	
14.02-Aerospace, Aeronautical and Astronautical Engineering	X	X	X
14.03-Agricultural/Biological Engineering and Bioengineering	X	X	
14.04-Architectural Engineering	X	X	Х
14.05-Biomedical/Medical Engineering	X	X	
14.06-Ceramic Sciences and Engineering	X	X	
14.07-Chemical Engineering	X	X	Х
14.08-Civil Engineering	X	X	X
14.0801-Civil Engineering, General	Х	Χ	Х
14.0802-Geotechnical Engineering	Х	Х	Х
14.0803-Structural Engineering	Х	Χ	Х
14.0804-Transportation and Highway Engineering	Х	Χ	Х
14.0805-Water Resources Engineering	Х	Χ	Х
14.0899-Civil Engineering, Other	X	Χ	Х
14.09-Computer Engineering, General	X	Х	
14.0901-Computer Engineering, General	Х	Χ	
14.0903-Computer Software Engineering	Х	Χ	
14.0999-Computer Engineering, Other	X	Χ	
14.10-Electrical, Electronics and Communications Engineering	Х	Χ	Х
14.11-Engineering Mechanics	Х	Χ	
14.12-Engineering Physics	Х	Χ	
14.13-Engineering Science	X	Χ	
14.14-Environmental/Environmental Health Engineering	X	X	
14.18-Materials Engineering	X	Х	1
14.19-Mechanical Engineering	X	X	1
14.20-Metallurgical Engineering	X	X	1
14.21-Mining and Mineral Engineering	X	X	
14.22-Naval Architecture and Marine Engineering	Х	Χ	
14.23-Nuclear Engineering	X	X	Х





CIP code - 2000 Classification	Evaluation	CFAT	GAO
14.24-Ocean Engineering	Х	Χ	
14.25-Petroleum Engineering	Х	Χ	
14.27-Systems Engineering	Х	Χ	
14.28-Textile Sciences and Engineering	Х	Χ	
14.31-Materials Science	Х	Χ	
14.32-Polymer/Plastics Engineering	Х	Χ	
14.33-Construction Engineering	Х	Χ	
14.34-Forest Engineering	X	Χ	
14.35-Industrial Engineering	X	Χ	
14.36-Manufacturing Engineering	Х	Χ	
14.37-Operations Research	X	Χ	
14.38-Surveying Engineering	X	Χ	
14.39-Geological/Geophysical Engineering	X	Χ	
14.99-Engineering, Other	X	Χ	
15-Engineering technologies/technicians.	Х	Χ	
15.00-Engineering Technology, General	Х	Χ	
15.01-Architectural Engineering Technologies/Technicians	Х	Χ	
15.02-Civil Engineering Technologies/Technicians	Х	Χ	
15.03-Electrical Engineering Technologies/Technicians	Х	Χ	
15.0303-Electrical/Electronic/Communications Engineer Technology/Technician	Х	Χ	
15.0304-Laser and Optical Technology/Technician	Х	Χ	
15.0305-Telecommunications Technology/Technician	Х	Χ	
15.0399-Electrical/Electronic Engineering Technologies/Technicians, Other	Х	Χ	
15.04-Electromechanical Instrumentation and Maintenance			
Technologies/Technicians	X	Χ	
15.0401-Biomedical Technology/Technician	X	Χ	
15.0403-Electromechanical Technology/Electromechanical Engineering Tech	X	Χ	
15.0404-Instrumentation Technology/Technician	X	Χ	
15.0405-Robotics Technology/Technician	X	Χ	
15.0499-Electromechanical Instrumentation/Maintenance Techs, Other	X	Χ	
15.05-Environmental Control Technologies/Technicians	X	Χ	
15.0501-Heating/AC/Refrigeration Technology/Technician	X	Χ	
15.0503-Energy Management and Systems Technology/Technician	X	Χ	
15.0505-Solar Energy Technology/Technician	X	Χ	Х
15.0506-Water Quality & Wastewater Treatment Mgmt & Recycling Tech	X	Χ	
15.0507-Environmental Engineering Technology/Environmental Technology	X	Χ	
15.0508-Hazardous Materials Management and Waste Technology/Technician	X	Χ	
15.0599-Environmental Control Technologies/Technicians, Other	X	Χ	
15.06-Industrial Production Technologies/Technicians	X	Χ	
15.0607-Plastics Engineering Technology/Technician	X	Χ	
15.0611-Metallurgical Technology/Technician	X	Χ	
15.0612-Industrial Technology/Technician	X	Χ	
15.0613-Manufacturing Technology/Technician	X	Χ	
15.0699-Industrial Production Technologies/Technicians, Other	X	Χ	
15.07-Quality Control and Safety Technologies/Technicians	Х	Χ	
15.0701-Occupational Safety and Health Technology/Technician	X	Χ	





CIP code - 2000 Classification	Evaluation	CFAT	GAO
15.0702-Quality Control Technology/Technician	Х	Х	
15.0703-Industrial Safety Technology/Technician	Х	Χ	
15.0704-Hazardous Materials Information Systems Technology/Technician	Х	Χ	
15.0799-Quality Control and Safety Technologies/Technicians, Other	Х	Χ	
15.08-Mechanical Engineering Related Technologies/Technicians	Х	Χ	
15.0801-Aeronautical/Aerospace Engineering Technology/Technician	Х	Χ	
15.0803-Automotive Engineering Technology/Technician	Х	Χ	Х
15.0805-Mechanical Engineering/Mechanical Technology/Technician	Х	Χ	
15.0899-Mechanical Engineering Related Technologies/Technicians, Other	Х	Χ	
15.09-Mining and Petroleum Technologies/Technicians	Х	Χ	
15.0901-Mining Technology/Technician	Х	Χ	
15.0903-Petroleum Technology/Technician	Х	Χ	
15.0999-Mining and Petroleum Technologies/Technicians, Other	Х	Χ	
15.10-Construction Engineering Technologies	Х	Χ	
15.11-Engineering-Related Technologies	Х	Χ	
15.1102-Surveying Technology/Surveying	Х	Χ	
15.1103-Hydraulics and Fluid Power Technology/Technician	Х	Χ	
15.1199-Engineering-Related Technologies, Other	Х	Χ	
15.12-Computer Engineering Technologies/Technicians	Х	Χ	
15.1201-Computer Engineering Technology/Technician	Х	Χ	
15.1202-Computer Technology/Computer Systems Technology	Х	Χ	
15.1203-Computer Hardware Technology/Technician	Х	Χ	
15.1204-Computer Software Technology/Technician	Х	Χ	
15.1299-Computer Engineering Technologies/Technicians, Other	Х	Χ	
15.13-Drafting/Design Engineering Technologies/Technicians	Х	Χ	
15.1301-Drafting and Design Technology/Technician, General	Х	Χ	
15.1302-CAD/CADD Drafting and/or Design Technology/Technician	Х	Χ	
15.1303-Architectural Drafting and Architectural CAD/CADD	Х	Χ	
15.1304-Civil Drafting and Civil Engineering CAD/CADD	Х	Χ	
15.1305-Electrical/Electronics Drafting and Electrical/Elect CAD/CADD	Х	Χ	
15.1306-Mechanical Drafting and Mechanical Drafting CAD/CADD	Х	Χ	
15.1399-Drafting/Design Engineering Technologies/Technicians, Other	Х	Χ	
15.14-Nuclear Engineering Technologies/Technicians	Х	Χ	
15.15-Engineering-Related Fields	Х	Χ	
15.1501-Engineering/Industrial Management	Х	Χ	
15.99-Engineering Technologies/Technicians, Other	Х	Χ	
26-Biological and biomedical sciences.	Х	Χ	
26.01-Biology, General	Х	Χ	
26.0101-Biology/Biological Sciences, General	Х	Χ	
26.0102-Biomedical Sciences, General	Х	Χ	
26.02-Biochemistry, Biophysics and Molecular Biology	Х	Χ	
26.0202-Biochemistry	Х	Х	
26.0203-Biophysics	Х	Χ	
26.0204-Molecular Biology	Х	Χ	
26.0205-Molecular Biochemistry	Х	Х	
26.0206-Molecular Biophysics	Х	Χ	





CIP code - 2000 Classification	Evaluation	CFAT	GAO
26.0207-Structural Biology	Х	Χ	
26.0209-Radiation Biology/Radiobiology	Х	Χ	
26.0210-Biochemistry/Biophysics and Molecular Biology	Х	Χ	
26.0299-Biochemistry, Biophysics and Molecular Biology, Other	Х	Χ	
26.03-Botany/Plant Biology	Х	Χ	Х
26.0301-Botany/Plant Biology	Х	Χ	Х
26.0305-Plant Pathology/Phytopathology	Х	Χ	Х
26.0307-Plant Physiology	Х	Χ	Х
26.0308-Plant Molecular Biology	Х	Χ	Х
26.0399-Botany/Plant Biology, Other	Х	Χ	Х
26.04-Cell/Cellular Biology and Anatomical Sciences	Х	Χ	
26.0401-Cell/Cellular Biology and Histology	Х	Χ	
26.0403-Anatomy	Х	Χ	
26.0404-Developmental Biology and Embryology	Х	Χ	
26.0405-Neuroanatomy	Х	Χ	
26.0406-Cell/Cellular and Molecular Biology	Х	Χ	
26.0407-Cell Biology and Anatomy	Х	Χ	
26.0499-Cell/Cellular Biology and Anatomical Sciences, Other	Х	Χ	
26.05-Microbiological Sciences and Immunology	Х	Χ	
26.0502-Microbiology, General	Х	Χ	
26.0503-Medical Microbiology and Bacteriology	Х	Χ	
26.0504-Virology	Х	Χ	
26.0505-Parasitology	Х	Χ	
26.0507-Immunology	Х	Χ	
26.0599-Microbiological Sciences and Immunology, Other	Х	Χ	
26.07-Zoology/Animal Biology	Х	Χ	Х
26.0701-Zoology/Animal Biology	Х	Χ	Х
26.0702-Entomology	Х	Χ	Х
26.0707-Animal Physiology	Х	Χ	Х
26.0708-Animal Behavior and Ethology	Х	Χ	Х
26.0709-Wildlife Biology	Х	Χ	Х
26.0799-Zoology/Animal Biology, Other	Х	Χ	Х
26.08-Genetics	Х	Χ	
26.0801-Genetics, General	Х	Χ	
26.0802-Molecular Genetics	Х	Χ	
26.0804-Animal Genetics	Х	Χ	
26.0805-Plant Genetics	Х	Χ	
26.0806-Human/Medical Genetics	Х	Χ	
26.0899-Genetics, Other	Х	Χ	
26.09-Physiology, Pathology and Related Sciences	Х	Χ	
26.0901-Physiology, General	Х	Χ	
26.0902-Molecular Physiology	Х	Χ	
26.0903-Cell Physiology	Х	Χ	
26.0904-Endocrinology	Х	Χ	
26.0905-Reproductive Biology	Х	Χ	
26.0906-Neurobiology and Neurophysiology	Х	Χ	





CIP code - 2000 Classification	Evaluation	CFAT	GAO
26.0907-Cardiovascular Science	Х	Χ	
26.0908-Exercise Physiology	Х	Х	
26.0909-Vision Science/Physiological Optics	Х	Χ	
26.0910-Pathology/Experimental Pathology	Х	Χ	
26.0911-Oncology and Cancer Biology	Х	Χ	
26.0999-Physiology, Pathology, and Related Sciences, Other	X	Χ	
26.10-Pharmacology and Toxicology	Х	Χ	
26.1001-Pharmacology	X	Χ	
26.1002-Molecular Pharmacology	X	Χ	
26.1003-Neuropharmacology	Х	Χ	
26.1004-Toxicology	Х	Χ	
26.1005-Molecular Toxicology	Х	Χ	
26.1006-Environmental Toxicology	Х	Х	
26.1007-Pharmacology and Toxicology	Х	Χ	
26.11-Biomathematics and Bioinformatics	Х	Χ	
26.1101-Biometry/Biometrics	Х	Χ	
26.1102-Biostatistics	Х	Χ	
26.1103-Bioinformatics	X	Χ	
26.1199-Biomathematics and Bioinformatics, Other	Х	Χ	
26.12-Biotechnology	X	Χ	
26.13-Ecology, Evolution, Systematics and Population Biology	X	Χ	
26.1301-Ecology	Х	Χ	
26.1302-Marine Biology and Biological Oceanography	X	Χ	
26.1303-Evolutionary Biology	X	Χ	
26.1304-Aquatic Biology/Limnology	X	Χ	
26.1305-Environmental Biology	X	Χ	
26.1306-Population Biology	X	Χ	
26.1307-Conservation Biology	X	Χ	
26.1309-Epidemiology	X	Χ	
26.1399-Ecology, Evolution, Systematics and Population Biology, Other	X	Χ	
26.99-Biological and Biomedical Sciences, Other	X	Χ	
27-Mathematics and statistics.	Χ	Χ	
27.01-Mathematics	Х	Х	
27.0101-Mathematics, General	Х	Х	
27.0199-Mathematics, Other	Х	Х	
27.03-Applied Mathematics	Х	Х	Х
27.0301-Applied Mathematics	X	Χ	Х
27.0303-Computational Mathematics	X	Χ	Х
27.0399-Applied Mathematics, Other	Х	Х	Х
27.05-Statistics	X	Χ	
27.0501-Statistics, General	Х	Х	
27.0502-Mathematical Statistics and Probability	X	Χ	Х
27.0599-Statistics, Other	X	Χ	
27.99-Mathematics and Statistics, Other	Х	Х	
29-Military technologies.	Х	Χ	
29.01-Military Technologies	Х	Х	





CIP code - 2000 Classification	Evaluation	CFAT	GAO
30-Multi/interdisciplinary studies.			
30.01-Biological and Physical Sciences	Х	Χ	
30.05-Peace Studies and Conflict Resolution			
30.06-Systems Science and Theory	Х	Χ	
30.08-Mathematics and Computer Science	Х	Χ	
30.10-Biopsychology	Х	Χ	
30.11-Gerontology	Х	Χ	
30.15-Science, Technology and Society	Х	Χ	
30.16-Accounting and Computer Science	Х	Χ	
30.17-Behavioral Sciences	Х		
30.18-Natural Sciences	Х	Χ	
30.19-Nutrition Sciences	Х	Χ	
30.24-Neuroscience	Х	Χ	
30.25-Cognitive Science	Х	Χ	
30.99-Multi/Interdisciplinary Studies, Other			
40-Physical sciences.	Х	Х	Х
41-Science technologies/technicians.	Х	Х	
42-Psychology.			
42.01-Psychology, General			
42.0101-Psychology, General			
42.02-Clinical Psychology	Х		Х
42.03-Cognitive Psychology and Psycholinguistics	Х		
42.04-Community Psychology			
42.06-Counseling Psychology			
42.07-Developmental and Child Psychology			
42.08-Experimental Psychology	Х		
42.09-Industrial and Organizational Psychology			
42.10-Personality Psychology			
42.11-Physiological Psychology/Psychobiology			
42.16-Social Psychology			Х
42.17-School Psychology			7.
42.18-Educational Psychology			
42.19-Psychometrics and Quantitative Psychology	Х		
42.20-Clinical Child Psychology	X		
42.21-Environmental Psychology			
42.23-Health Psychology			
42.24-Psychopharmacology	X		
42.25-Family Psychology			
42.26-Forensic Psychology			
42.99-Psychology, Other			
45-Social sciences.			
45.01-Social Sciences, General			
45.02-Anthropology			
45.0201-Anthropology			
45.0201-Antitropology 45.0202-Physical Anthropology			
TO:02027 Hysical Allilliopology			





CIP code - 2000 Classification	Evaluation	CFAT	GAO
45.0299-Anthropology, Other			
45.03-Archeology			
45.04-Criminology			
45.05-Demography and Population Studies			
45.06-Economics			
45.0601-Economics, General			
45.0602-Applied Economics	Х		
45.0603-Econometrics and Quantitative Economics	Х		
45.0604-Development Economics and International Development			
45.0605-International Economics			
45.0699-Economics, Other			
45.07-Geography and Cartography	Х		
45.09-International Relations and Affairs			
45.10-Political Science and Government			Χ
45.1001-Political Science and Government, General			Χ
45.1002-American Government and Politics (United States)			Х
45.1099-Political Science and Government, Other			Х
45.11-Sociology			Χ

Sources:

CFAT: Carnegie Foundation - Mapping of CIP codes to disciplinary domains file (http://www.carnegiefoundation.org/classifications/index.asp?key=809)
GAO: US Government of Accountability Office report GAO-06-114: Federal Science, Technology, Engineering, and Mathematics Programs and Related Trends (2005), estimated from table on p.6 (http://www.gao.gov/new.items/d06114.pdf)

WIRED: choices made for WIRED project

