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Workforce Development as a Catalyst for Economic Revitalization:

Final Report of the Evaluation of Generation II and III Workforce Innovation in Regional Economic Development (WIRED) Grants

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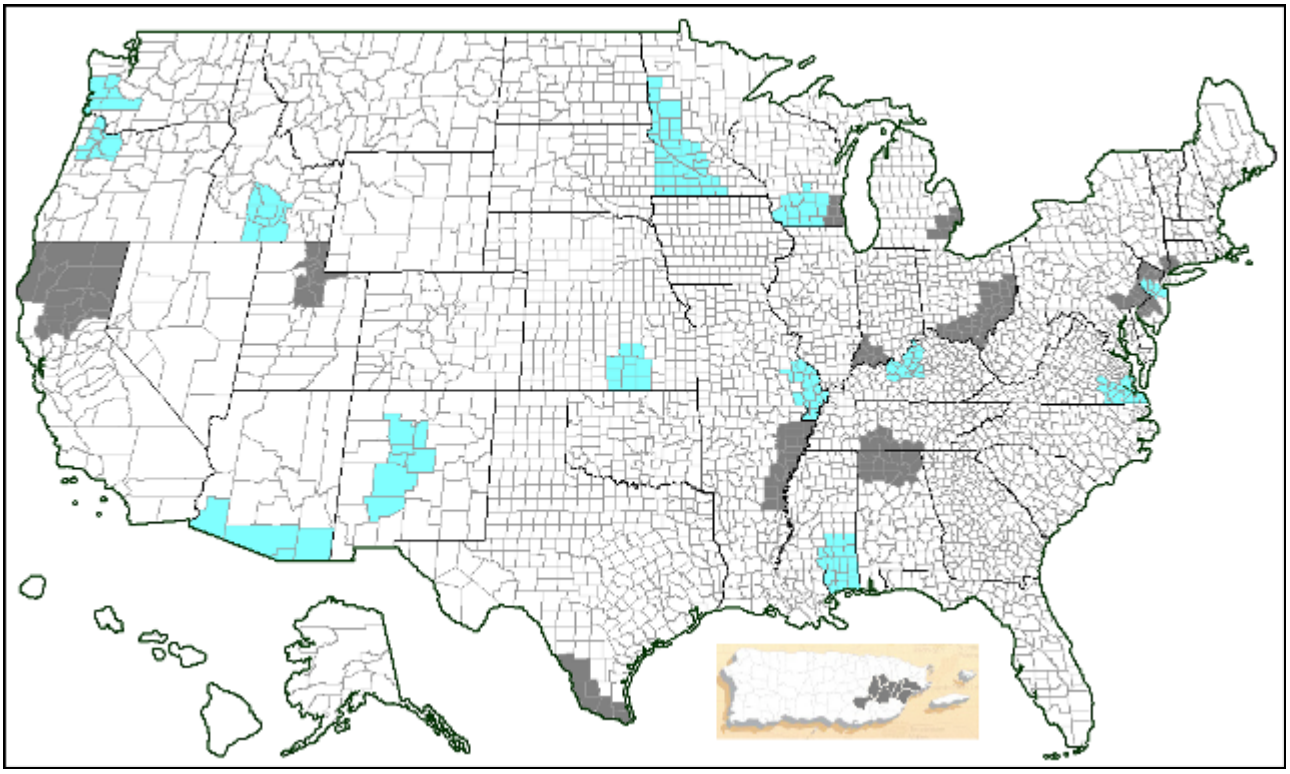
GENERATION II AND III WIRED REGIONS



Generation II Regions	Generation III Regions
■ Appalachian Ohio	■ Central Kentucky
■ Arkansas Delta	■ Central New Jersey
■ Central-Eastern Puerto Rico	■ Greater Albuquerque (NM)
■ Delaware Valley	■ North Oregon
■ Northern California	■ Pacific Mountain Washington
■ Northern New Jersey	■ South Central & South West Wisconsin
■ Rio South Texas Region	■ South-Central Idaho
■ Southeast Michigan	■ South-Central Kansas
■ Southeastern Wisconsin	■ Southeast Missouri
■ Southwest Indiana	■ Southeastern Mississippi
■ Southwestern Connecticut	■ Southeastern Virginia
■ Tennessee Valley	■ Southern Arizona
■ Wasatch Range	■ Southwest Minnesota

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Executive Summary

In late 2005, the U.S. Department of Labor, Employment and Training Administration (ETA) created the Workforce Innovation in Regional Economic Development (WIRED) Initiative. The Initiative was conceived at a time when business leaders in the United States were becoming increasingly aware of the emerging global economy and the competitive challenges that it presented for United States companies. Historically, the United States had enjoyed tremendous economic success, advancing rapidly over its brief history to become a major industrial producer, dominating many markets, and commanding international attention. As the 21st Century began, this economic dominance was being challenged, as contemporary publications used terms such as "gathering storm," "looming crisis," and a "world of challenge and change" to convey the seriousness of the situation.[1]

The WIRED Initiative took form within this context, although the challenge was framed regionally, as representatives from the public, private, and philanthropic sectors came together to create their region's competitive advantage. The regional focus stemmed from the understanding that labor sheds and industry-sector concentrations often crossed local and state boundaries, as well as the jurisdictional boundaries of workforce agencies, institutions of higher education, economic development entities, and other organizations with defined service areas. The future of area companies, and the regions in which they are located, depended upon the ability of these partners to innovate— to combine new ideas and new knowledge in ways.

ETA viewed WIRED as a catalyst that would help the regions build a new, innovation-based economy that would be driven by and dependent upon a comprehensive, integrated "talent development system."[2] The Initiative called upon each region's workforce, education, and economic development systems to collaborate. It was believed that working together would improve the quality and availability of services provided to existing companies, increase the entrepreneurial knowledge and skills of the workforce, support business start-ups, and address the continuing workforce development needs of industry sectors that had growth potential.

The Initiative had five overarching goals:

[1] National Academies, National Academies' Committee on Science, Engineering, and Public Policy, Committee on Prospering in the Global Economy of the 21st Century, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* (Washington, D.C.: National Academy Press, 2005); Council on Competitiveness, *Innovate America: National Innovation Summit and Report: Thriving in a World of Challenge and Change* (Washington, D.C., 2004); National Association of Manufacturers, "Looming Workforce Crisis: Preparing American Workers for 21st Century Competition," (Washington, D.C.: 2005), http://www.nam.org/s_nam/index.asp.

[2] U.S. Department of Labor, "WIRED Talent Driving Prosperity," http://www.doleta.gov/wired/.

1. *Regional Economic Development:* Fueling regional economic competitiveness.[3]
2. *Regional Partnerships and Collaboration:* Creating highly networked communities to support innovation and the economic growth process.[4]
3. *Workforce System Transformation:* Developing an integrated approach linking workforce, economic development, and education systems.[5]
4. *High-Skill, High-Wage Jobs:* Expanding employment and advancement opportunities for workers and catalyzing the creation of high-skill and high-wage opportunities.[6]
5. *Disadvantaged Populations:* Expanding opportunities to increase the work skills and work readiness of low-wage workers.[7]

Grant Awards

There were three rounds or "generations" of grants awarded under the WIRED Initiative and, in total, ETA funded 39 projects for over $325 million. This report focuses on the 26 grants that were awarded in Generations II and III. Each of these grants was for $5 million to be expended over a three-year period.[8] ETA also provided technical assistance to the regions through national "Learning Academies," a variety of written materials, and an assigned ETA contact person. In addition, each project received supplemental funding (up to $60,000) for customized technical assistance.

Evaluation of Generation II and III Grants

Public Policy Associates, Incorporated (PPA) and the W.E. Upjohn Institute for Employment Research (Upjohn) conducted an evaluation of WIRED Generations II and III, beginning shortly after the grants were awarded and continuing through the grants' period of performance and the transition period that followed. This document is the final report of the evaluation of Generations II and III, though a joint report on findings across all three generations was developed in conjunction with the research team that studied the Generation I grants.

The primary areas of research interest in the evaluation of Generations II and III were:

- Strategic approach, implementation, and institutionalization/sustainability;
- Innovation and capacity changes;
- Economic and labor market effects; and
- Cross-generational comparisons

[3] U.S. Department of Labor, Solicitation for WIRED Generation I, SGA/DFA PY-05-04, (Washington, D.C.:, 2005), p. 11, line 6. U.S. Department of Labor, Solicitation for WIRED Generation III, SGA/DFA PY-06-09), (Washington, D.C.: 2007), p.1, line 26.

[4] SGA/DFA PY-05-04, p. 4, line 5. and SGA/DFA PY-06-09, p. 5, line 11.

[5] SGA/DFA PY-06-09, p. 4, line 13.

[6] SGA/DFA PY-05-04, p. 1-2. and SGA/DFA PY-06-09, p. 1, line 21.

[7] The emphasis on disadvantaged workers was not in the original Initiative design. When ETA leadership changed, the new leader added low-wage workers as a specific target group for training.

[8] Each region in Generation I received $15 million over three years.

Over the course of the evaluation of Generations II and III, data were collected from several different sources, including:

- Site visits.
- Surveys and social network data, and
- Administrative and extant data.

Using extant data, the evaluation team also identified a comparison region for each of the WIRED Generation II and III grants.

Analysis of Regional Goals

Goal #1: Regional Economic Development

WIRED sought to make workforce development a catalyst for regional economic development. Each of the regions identified industries to target. Two of the regions put their entire focus on only one target industry. Thirteen of the regions identified more than six target industries, which spread their resources considerably. All of the regions established training programs for key occupations in their target industries, although the extent of training varied substantially.

Regions had both *systemic* and *structural* goals for economic development. Systemic goals sought to stabilize the region's economy by addressing existing gaps in the workforce development system, such as creating curricula aligned with industry standards. Structural goals aimed at changing the region's economic base by adding new industries, encouraging new product and/or service development and diversification, enabling existing businesses to enter new markets, and/or encouraging entrepreneurship. All but two regions focused primarily on systemic goals coupled with an entrepreneurship component. The others included elements of both goals.

Goal #2: Regional Partnerships and Collaboration

In every region, the overwhelming majority of stakeholders reported that new and/or deeper regional partnerships were among the most valuable benefits of their involvement in the Initiative. They characterized personal relationships and mutual understanding as particularly important. Beyond the individual connections, these partnerships often resulted in new linkages between central cities and rural environs; among multiple workforce boards; and among workforce, economic development, and education interests. The Initiative was given extensive credit for stimulating these changes.

Virtually all regions learned to think more *regionally*, meaning that as relationships were built and strengthened among the stakeholders in workforce, economic development, education, and business, a sense of shared purpose and benefits emerged. The scope and intensity of these relationships varied across the regions and within regional stakeholder groups. All of the regions had partners representing workforce development and education. Economic developers were more difficult to recruit.

Initially, regions that included the service areas of more than one community college or multiple workforce investment boards (WIBs) had difficulty working across jurisdictional boundaries. Community colleges established consortia or other working agreements to resolve these issues.

Across the 26 regions, roughly half of the local WIBs that were eligible to participate in a region actually did so. The reasons for nonparticipation varied considerably. Some of the reasons offered included the perception that the time commitment was not justified given the potential benefit to the local WIB, concerns about funding limitations and competing program priorities, and the belief that WIRED's goals were at odds with the WIB's primary goal of helping low-wage, displaced, and unemployed workers.

Goal #3: Workforce System Transformation

The term "transformation" has different meanings, depending upon the context in which the term is used. It implies a change that is substantial, far-reaching, and lasting. Under this definition, working with partners to create new programs and curricula that are aligned with national standards used to train existing incumbent workers, provide benefits for companies in target sectors, and serve as a catalyst for similar changes in other instructional programs is a transformational change.

ETA offered a different interpretation of the term, viewing it in the context of changes in the workforce system. ETA created and distributed a list of seven elements that described a "transformed" workforce investment system as one that plays a pivotal role in a region's economic development efforts. According to ETA, a transformed local WIB is comprised of key regional stakeholders, is actively engaged in the development of regional economic development priorities, works with strategic partners to align workforce development efforts with those priorities, and collects and uses data to support strategic planning, measure outcomes, and benchmark regional economic competitiveness.[9]

All of the regions chose strategies that addressed one or more elements of ETA's transformational framework, but none of the regions addressed all seven elements. The regions that were furthest along had made considerable headway prior to receiving the WIRED grant.

Goal #4: High-Skill, High-Wage Jobs

The regions focused on the development of curricula and career pathway programs in order to help area workers gain the skills needed to fill the high-skill, high-wage jobs that would be created as companies in target industries grew and diversified. However, the recession hindered company growth and job creation across the country and across all sectors.

When held up to the comparison regions, the data showed that any gains in employment attributable to WIRED were modest at best. It is important to note, however, that the results of

[9] A memorandum summarizing the elements was sent to all of the WIRED regional leads in mid-2007.

new economic strategies and structures can take many years to bear fruit, and by then it will be even more difficult to attribute the results to the WIRED grant.

Goal #5: Disadvantaged Populations

WIRED did not require grantees to address the needs of any specific population of job seekers, workers, or any particular sector, but did ask regions to pursue initiatives that would stimulate opportunities for advancement and the creation of high-wage, high-skill jobs. While not a strategic focus, the regions anticipated that lower-wage jobs would become available as incumbent workers who received training were promoted into higher-skill, higher-wage jobs.

Disadvantaged populations became a strategic priority of ETA when its leadership changed in mid-2007, although the shift or additional focus was optional. Regions that were particularly hard hit by the recession shifted grant funds to local WIBs to help cover training costs for displaced workers, but reduced or delayed implementation of the activities associated with regional goals as a result. Furthermore, these efforts involved mostly traditional short-term training within the existing workforce system, and not the development of new systems, curriculum, or partnerships that could build outside sources of support.

Regional Strategies and Actions

Regional Economic Development

Most regional WIRED strategies were in a supportive role as opposed to directly engaging in traditional economic development activities such as recruiting employers by offering various incentive packages. The most common approaches included:

- Building upon existing regional assets.
- Supporting regionally important existing sectors.
- Promoting regional economic transformation through innovation and new sector development.
- Fostering small business development and entrepreneurism.
- Identifying and addressing economic barriers not related to workforce.

The most common actions carried out by regions to address their economic development goals included:

- Developing entrepreneurial training and linking to resources.
- Fostering business expansion and creation plans.
- Assembling regional information on economic conditions.

Although as an initiative, WIRED focused heavily on working through the workforce system, it was apparent that all 26 regions were highly concerned with what could be described as economic development issues, such as establishing growth industries, raising incomes and job opportunities, and helping businesses thrive. The primary tools of the workforce and educational

systems—training and educational programs—are limited on their own; regions that had success in implementing strategic economic development goals typically did so through collaboration and alignment of interests across partners. Regions benefitted from the shared identification of pressing regional economic needs and from sharing possible solutions.

With the Initiative as a whole oriented toward workforce development, the inclusion of explicit economic development strategic goals and the initial and growing involvement of economic developers in individual regional activities are early signs of success. The flexibility of the original granting approach and the guidelines fostering an inclusive and collaborative environment functioned as enabling conditions.

Regional Partnerships and Collaboration

Throughout the Initiative, regions recognized the importance of utilizing and building upon relationships with stakeholders in like organizations as well as across organizational types. These strategies were essentially a means to an end. The partnerships were critical to support the implementation and long-term sustainability of the regional initiatives.

The following list categorizes some of the most common strategies and actions that were used by the regions in Generations II and III to foster regional collaboration:

- Tapping existing core leaders to recruit others with shared needs and interests
- Creating working collaborations among multiple types of stakeholders, that is, workforce development, economic development, private sector, education, and government
- Collaborating with rural areas to establish a cohesive regional view
- Developing a system for maintaining communications through both technological and traditional means

The social networking strategies used by regions were closely aligned with the overarching WIRED goal for regional partnerships, a necessary condition for the knowledge sharing and innovation that are the basis for changing the ways in which organizations work together to more closely link their work to the future of their regions. These undertakings are necessary to build, open, and expand the lines of communication among participating organizations. The communication channels are vital in order to share knowledge and discover opportunities for leveraging resources to address common interests and needs, and, by extension, make it possible to achieve the larger goals of workforce system transformation and economic benefit to the region through employment and wage growth.

The social networking efforts undertaken by Generation II and III regions illustrate the diversity of strategies and approaches to implementation that can be successful for regional development. The experiences of the WIRED regions suggest that social networking is an important prerequisite to success.

Workforce System Transformation

The Initiative challenged partner organizations to act strategically and offered them an opportunity to recalibrate, realign, and redefine their partnerships and roles as critical partners in

economic development. The following strategies are examples of approaches that were used in conjunction with the goal of transforming the workforce system and integrating it with the efforts of other regional partners.

- The intensive and prolonged planning period that the regions participated in yielded implementation plans that were aligned, to varying degrees, with the overarching goal of transforming the workforce system.
- Using data from a variety of sources, including labor market information, economic development and industry sector reports and trends, demographic data, and other data sources informed the discussions of regional partners that led to the identification of regional priorities.
- Asset-mapping activities sought to identify and array the various existing programs, faculty, instructional equipment, curricula, other grant programs, and matching funds that together painted a comprehensive picture of current resources, gaps, needs, and opportunities.

Regions with a limited track record of successful collaboration took a developmental approach, establishing relationships and building trust by using workgroups that involved representatives from organizations across the region. All of the regions used data from a variety of sources to inform their decisions and set strategic priorities, although asset-mapping was not generally used as a tool for building strategic partnerships. Many of the regional activities focused on improving existing programs and/or improving the linkages between programs and institutions, particularly in the development of pipeline strategies for students, but with limited involvement of WIBs. Differences in policy and practice among and between community colleges, universities, WIBs, and American Job Centers (AJCs, formerly known as One-Stop Career Centers) created barriers to successful implementation that were difficult to resolve.

While ETA's vision for a transformed workforce system may be captivating, it was beyond the ability of the regions to achieve in the relatively short time period of the grant.

High-Skill, High-Wage Jobs

Goals for increasing employment and wages in regions were explicit in the Initiative and were a common component of regional strategies. The regional emphasis in this goal area focused on mid- and upper-tier jobs that required specific technical skills or formal training. The following list summarizes the key findings related to this goal area:

- All regions engaged in activities intended to either directly or indirectly boost employment and/or wages.
- Measurement of outcomes for this strategy was more difficult than for other strategies because of the amount of time required to net results.
- Sustainability of such strategies was moderate across regions, due, in part, to the costs of training programs.

Most regions employed multiple individual strategies in pursuit of the larger goal of boosting employment and wages. Some of the most common regional strategies included:

- Identification of key industries and growth industries on which to focus efforts.

- Development of long-term pipeline systems to train emerging and incumbent workers for entry and advancement in a field.
- Development and implementation of short-term courses to provide quick entry to jobs.
- Development of custom training for advancement, certification, and other employer-specific needs.

The experiences observed during the Initiative suggest that it is far easier for regions to pursue a high-skill, high-wage strategy if they focus on a sector that has a foothold in the region and have the correct blend of assets and economic conditions to support industry growth.

Disadvantaged Populations

Several factors contributed to the changing focus of WIRED to disadvantaged populations. One of the most obvious factors was the recession, which began as a sector-centered phenomenon (auto industry/manufacturing) and grew to become a national, multi-sector, economic crisis. As the recession spread across the United States some regions took explicit action to address the needs of disadvantaged populations.

The primary findings regarding disadvantaged worker strategies include:

- This was the least prevalent regional strategy employed by the regions, but it grew in popularity with the recession.
- Many program activities addressed the needs of low-wage, low-skill jobs, but this was not always the primary intention.
- This strategy was consistent with the responsibilities of the workforce development system, but was not an explicit focus of the regions
- Sustainability of these strategies requires interest from students and training providers as well as public funds.
- Workforce system stakeholders are more accustomed to this approach than are university and economic development stakeholders.

The most common regional strategies reflected the traditional format of AJC service delivery, including:

- Development of basic skills trainings in non-industry-specific skills.
- Development of short-term, job specific training courses.
- Development of training options or tuition support for unemployed and displaced workers.
- Development of new career awareness and guidance approaches.

Disadvantaged worker strategies appeared to have had a better chance of long-term success when the activities either were tied in with a larger regional theme of pipeline development or represented a step in a longer-term, high-skill and high-wage development strategy.

Quantifying Accomplishments

The initiative was highly successful in having regions implement innovative activities targeted to address a region's specific needs and concerns. Yet, the autonomous nature of the grants made it very difficult to establish and measure outcomes in a consistent and complete manner. The evaluation did, however, elicit some quantification of accomplishments across the regions, although since the data were reported by the regions, their accuracy cannot be confirmed. The inconsistency of reporting, coupled with the knowledge gained through examination of other administrative sources, suggests that the following data **under**-report actual activities:

- WIRED funded training for at least 37,500 individuals distributed across several broad sectors. Approximately 80 percent of the individuals who were trained completed their training, and approximately 10 percent entered employment after their training. Over 14,000 individuals received degrees or certificates as a result of their training, and over 18,500 individuals participated in career development or guidance activities.

- Almost 12,000 educators received some sort of professional development. In the specific curriculum area of STEM (science, technology, engineering, and mathematics), the data submitted by the regions indicated that over 21,000 students were enrolled in STEM programs, of whom about 90 percent completed.

- Considerable business incubation and entrepreneurship training was conducted by regions. Almost 300 business startups were documented that employed over 820 individuals.

Despite these accomplishments in the 26 WIRED Generation II and III regions, a multivariate difference-in-difference analysis of the job creation and job flow data found no impact of WIRED on these dynamics. Also, while many of the funded regions had a focus on expanding or supporting workforce training in community colleges, technical schools, and universities in STEM fields, U.S. Department of Education postsecondary data showed little impact in such regions on faculty hiring or STEM completions.

Sustainability

The idea that the activities, organizations, and processes that were undertaken during the Initiative would be sustained beyond the end of the funding period has been evident throughout much of this project and for most of the WIRED regions, especially during the last two years of the evaluation. Recognition of the importance of sustainability to the Initiative has been manifested in a variety of ways.

- Many of the regions mentioned explicit plans for sustaining their efforts after the conclusion of the funding period.
- Regions addressed sustainability with the establishment of a sustainability committee within the grant's governance structure, or via ad hoc efforts that began once the Initiative was underway.

The diverse approaches used to support sustainability included:

- Pursuing opportunities to leverage WIRED funding by finding additional funding streams to support ongoing activities following the end of WIRED funding.
- Asking local partners and stakeholders to match funds they received from the WIRED grant to establish, enhance, or otherwise strengthen their programs.
- Designing programs and activities that would generate revenue and become self-supporting over time.
- Reorganizing the WIRED regional partnership (or a portion of the WIRED collaborative) as a nonprofit 501(c)3 organization.

The evaluation team identified more than 100 instances of sustained programs, projects, organizations, and collaborations. Examples include:

- Ongoing, region-wide governance structures
- Establishment and/or maintenance of WIB/WDB consortia
- Establishment and/or maintenance of organizations providing region-wide leadership
- Career awareness products, programs, and activities
- Community college educational programs, including:
  - For-credit classes
  - Non-credit training courses
- Four-year college classes and programs
- Collaboration agreements between educational organizations, including:
  - Articulation agreements
  - Curriculum sharing
- Ongoing collaboration between educational institutions and the business community
- Establishment of educational pipelines for specific, targeted occupations
- Programs, activities, and organizations promoting entrepreneurship
- Establishment and/or maintenance of organizations devoted to regional economic development

Conclusions

One of the most important observations regarding Generation II and III WIRED regions is that innovative economic transformation does not occur quickly. While the WIRED regions developed innovative ideas and started to realign the relationships between workforce and economic development, in almost all cases it would likely be several years before these changes reach fruition.

Where there were some successes, movement towards economic transformation appears to be a longer-term, organic process of development. The implication here is that training workers for new, high-skill jobs may be useful for attracting a new industry to a region or meeting the needs of emerging companies, but this may not be sufficient to produce the critical mass of high-technology industry or highly skilled workers that will ultimately transform the regional

economy. Instead, evaluation data imply that regional economic transformation is more likely to emerge through a longer-term process in which regional employers expand and improve in order to better compete and, in so doing, expand their employees' knowledge and skills and, in time, become centers of excellence that attract more development.

The fact that multiple stakeholders were attracted to participate in the regional efforts and continued to participate in various ways after the end of the grant period suggests that these stakeholders saw value in collaborating to address common, region-wide goals. These were small but important preliminary steps in achieving regional economic growth. These efforts were likely to expand local understanding of and support for even greater regional collaborative efforts that, in the long term, will encourage region-wide economic transformation.

While local WIBs in many areas of the country may continue to eagerly participate in sector-focused, collaborative efforts, many other WIBs may decide to remain detached and protective of formula funds until there is greater clarity and support from ETA in respect to the future of the workforce system transformation goals that were issued in conjunction with WIRED.

Chapter I: Introduction

This chapter provides an overview of the Workforce Innovation in Regional Economic Development (WIRED) Initiative, an investment strategy that was conceived by the U.S. Department of Labor's Employment and Training Administration (ETA) to encourage greater collaboration among education, workforce, and economic development. The Initiative was conceived amidst growing concerns about the ability of the United States to compete in the emerging global economy, but was launched prior to the national recession. The chapter begins by providing a brief overview of the national dialogue about the ability of the United States to compete. This is followed by an overview of the Initiative, with special attention to the regions that were awarded grants in Generations II and III. A map and a list of the regions that received WIRED grants are provided at the conclusion of this chapter.

The Origins of WIRED

In 2005, concern for the United States' competitiveness in a global marketplace fueled the creation of the U.S. Department of Labor/Employment and Training Administration's (ETA) Workforce Innovation in Regional Economic Development (WIRED) Initiative. Historically, the United States had enjoyed tremendous economic success, advancing rapidly over its brief history to become a major industrial producer, dominating many markets and commanding international attention. However, at the turn of the 21st Century, contemporary publications on the nation's economic situation used titles with phrases like "gathering storm," "looming crisis," and a "world of challenge and change," to highlight the importance of taking action to maintain the country's coveted position on the global stage.[10]

One solution, offered by several highly regarded business management experts, was to embrace the idea of innovation.[11] In an increasingly competitive marketplace, business leaders could not afford to be complacent. To survive and thrive in this new economy, they needed to reexamine and challenge existing operating assumptions. Rather than allowing themselves to be defined by their products, these companies needed to place a far greater emphasis on understanding and meeting the needs of customers. Furthermore, this new way of thinking and acting would not be

[10] National Academies, National Academies' Committee on Science, Engineering, and Public Policy, Committee on Prospering in the Global Economy of the 21st Century, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* (Washington, D.C.: National Academy Press, 2005); Council on Competitiveness, *Innovate America: National Innovation Summit and Report: Thriving in a World of Challenge and Change* (Washington, D.C., 2004);). National Association of Manufacturers, "Looming Workforce Crisis: Preparing American Workers for 21st Century Competition," (2005), http://www.nam.org/s_nam/index.asp.

[11] Harvard Business Review, "What Business Are You In? Classic Advice from Theodore Levitt," The Magazine (Blog), (October 2006), http://hbr.org/2006/10/what-business-are-you-in-classic-advice-from-theodore-levitt/ar/4.

effective unless it was infused throughout the organization; essentially revitalizing the entire organization and giving its employees a new, shared sense of purpose.[12]

It is within this context that the WIRED Initiative took form, although the challenge was framed in a regional context that included companies, workers, researchers, entrepreneurs, and governments that would come together to create their competitive advantage.[13] The future of area companies, and the regions, depended upon the ability of partners to innovate. In both contexts, the strategic advantage was dependent upon their ability to transform new ideas and new knowledge in a manner that was responsive to the needs of their customers.

The regional focus stemmed from the understanding that labor sheds and industry-sector concentrations often crossed local and state boundaries, as well as the jurisdictional boundaries of partner agencies, institutions of higher education, and other organizations with defined service areas. Using funds that had been collected from employers who were required to pay government fees when hiring foreign workers for certain technical and specialized occupations,[14] ETA launched this ambitious national initiative.[15]

Essentially, ETA viewed WIRED as a catalyst that would help the regions build a new, innovation economy that would be driven by and dependent upon a comprehensive, talent development system. The system would support the development of a workforce capable of meeting the needs of high-growth and emerging industries; thereby driving economic competitiveness and advancement of American Workers.[16] The overarching goals of WIRED are summarized below and discussed in greater detail in subsequent sections of this report.

- *Regional Economic Development:* Play a positive role in the transformation of a regional economy and enhanced economic development.[17]
- *Regional Partnerships and Collaboration:* Develop and nurture strong regional partnerships that will facilitate regional economic growth.[18]
- *Workforce System Transformation:* Facilitate a transformed workforce development system that is integrated with education and economic development.[19]

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[12] Ibid.

[13] ETA, "Workforce Innovation in Regional Economic Development: Selected Regions," http://www.doleta.gov/pdf/WIRED%20Fact%20Sheet.pdf.

[14] "H-1B Program Overview,,," U.S. Department of Labor, Wage and Hour Division (WHD), http://www.dol.gov/whd/immigration/h1b.htm.

[15] ETA, "About WIRED," U.S. Department of Labor, http://www.doleta.gov/wired/about/.

[16] ETA, "Technical Assistance on WIRED Performance Accountability System," PowerPoint presentation delivered at Workforce Innovations Conference, Kansas City, July 18, 2007. These topics were introduced in a memorandum from Assistant Secretary DeRocco to the WIRED regions on April 27, 2007.

[17] U.S. Department of Labor, *Solicitation for WIRED Generation I, SGA/DFA PY-05-04,* (Washington, D.C., 2005), 11. U.S. Department of Labor, *Solicitation for WIRED Generation III, SGA/DFA PY-06-09,* (Washington, D.C., 2007), 1.

[18] *SGA/DFA PY-05-04*, 4. *SGA/DFA PY-06-09*, 5.

[19] *SGA/DFA PY-06-09*, 4.

- *High-Wage Jobs:* Expand employment and advancement opportunities and catalyze creation of high-skill and high-wage jobs.[20]
- *Disadvantaged Populations:* Expand work skill and work readiness of low-wage workers (incumbent, displaced, unemployed).[21]

The Investment Strategy

In several important respects, the Initiative differed from other grant programs that ETA sponsored during the previous decade. Prior to the Initiative, most of ETA's competitive grant programs supported the work of different types of organizations[22] (e.g., small grassroots, intermediaries), addressed the needs of specific industry sectors[23] (e.g., healthcare, biotechnology, advanced manufacturing), or emphasized the needs of specially targeted populations (e.g., individuals with disabilities, youthful offenders, veterans, farmworkers, etc.).[24] In contrast, the WIRED Initiative called upon regions' workforce, education, and economic development systems to embrace the spirit of innovation by becoming more knowledge driven and responsive to the needs of their customers. By working together, they could increase the quality and availability of services provided to existing companies, increase the entrepreneurial knowledge and skills of the workforce, support business start-ups, and address the continuing workforce development needs of industry sectors that had growth potential.

Multiple Generations of Grants

The Initiative was divided into three rounds or "generations" of three-year grants, made between 2005 and 2007 through a national, competitive process. The proposals had to be developed with the knowledge and support of the respective state governors, although much of the development intentionally resided at the regional level. Of the 93 proposals that were received for Generation I grants, 13 were selected to receive the three-year, $15 million awards.[25] Two months after the Generation I grants were announced, a second group of 13 was selected from the remaining applicant pool. Initially, these were designated "virtual" regions and each received a grant of $100,000. Leaders of the virtual regions were invited to participate in an online learning community and could use their grant awards to further develop their regional plans.[26] They were also invited to attend the National Learning Academies that ETA used to encourage interaction and knowledge sharing among all grantees.

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[20] *SGA/DFA PY-05-04*, 1-2. *SGA/DFA PY-06-09*, 1.

[21] The emphasis on disadvantaged workers was not emphasized in the original Initiative design. When ETA leadership changed, the new leader added low-wage workers as a specific target group for training.

[22] Grants for Small Grassroots Organizations (SGA 04-104), Grants for Intermediaries (SGA/DFA 03-104).

[23] High Growth Job Training Initiative: Grants for Healthcare and Biotechnology Industries (SGA/DFA 04-01), High Growth Job Training Initiative Grants for the Advanced Manufacturing Industry (SGA/DFA PY 05-07).

[24] Disability Employment Grant Program (SGA/DFA 02-100), Young Offender Initiative (SGA/DFA 01-109), National Farmworker Jobs Program (SGA 03-108).

[25] Employment and Training Administration, *Solicitation for WIRED Generation I, SGA/DFA PY 05-04*., (Washington, D.C.: U.S. Department of Labor, 2005).

[26] Because the Generation II regions had originally applied for the larger amount of funding, some adjustments to the scope of their activities were needed.

There were similarities and differences between the initial generation and the two generations that followed. The Generation I regions were the only ones to receive an award of $15 million. In early 2007, the funding level for the virtual regions was increased from $100,000 to $5 million (over three years) and they were designated as Generation II regions. Unlike the Generation I regions, those in Generation II were *required* to make the local Workforce Investment Boards (WIBs) partners in the regional effort. When the Generation III grants were made in 2007,[27] the dollar amounts were the same as Generation II, but the requirements for WIB participation changed such that one of the WIBs in the region was *required* to be the *lead agency* for the grant.[28] In total, the Initiative funded 39 regions with over $325 million.[29]

In addition to the grant awards and learning academies, regions in all three generations had the option of receiving technical assistance (TA) to support their efforts. The types of TA ranged from help on strategic issues like leadership and overcoming barriers to collaboration, to more technical issues like selecting performance measures. In Generation I, ETA established and coordinated access to a pool of three TA providers. A somewhat different approach was used for Generation II and III grantees. A maximum of $60,000 was available to each region to use to purchase the technical assistance of their choice; that is, it was not limited to the three Generation I TA providers.

One of the first requirements for all three generations was to create an implementation plan. These were developed by the regional stakeholders, in consultation with the ETA staff members who had been assigned to the regions when the grant awards were made. Once the regional plans were reviewed and approved by ETA, the regions were able to access the grant funds. Over the course of the following three years, the regions conducted an array of activities in pursuit of their stated goals.

[27] Employment and Training Administration, *Solicitation for WIRED Generation III, SGA/DFA PY-06-09.*, (Washington, D.C.: U.S. Department of Labor, 2007), accessed August 10, 2011, http://www.doleta.gov/grants/sga/DOL-SGA-DFA-PY-06-09.pdf.

[28] While the role of the local WIB changed, the specific duties of the lead agency were not addressed in the solicitation.

[29] All of the regions were expected to leverage resources to expand upon the investment made by the Federal government. These additional resources could come in the form of dollars, staff time and expertise, or other in-kind donations.

The Regions and their Location

The locations of the regions selected for Generations II and III are shown in the map below. The formal and abbreviated names of the regions, and the counties they included are identified in Table 1, following.

GENERATION II AND III WIRED REGIONS

Generation II Regions	Generation III Regions
■ Appalachian Ohio	■ Central Kentucky
■ Arkansas Delta	■ Central New Jersey
■ Central-Eastern Puerto Rico	■ Greater Albuquerque (NM)
■ Delaware Valley	■ North Oregon
■ Northern California	■ Pacific Mountain Washington
■ Northern New Jersey	■ South Central & South West Wisconsin
■ Rio South Texas Region	■ South-Central Idaho
■ Southeast Michigan	■ South-Central Kansas
■ Southeastern Wisconsin	■ Southeast Missouri
■ Southwest Indiana	■ Southeastern Mississippi
■ Southwestern Connecticut	■ Southeastern Virginia
■ Tennessee Valley	■ Southern Arizona
■ Wasatch Range	■ Southwest Minnesota

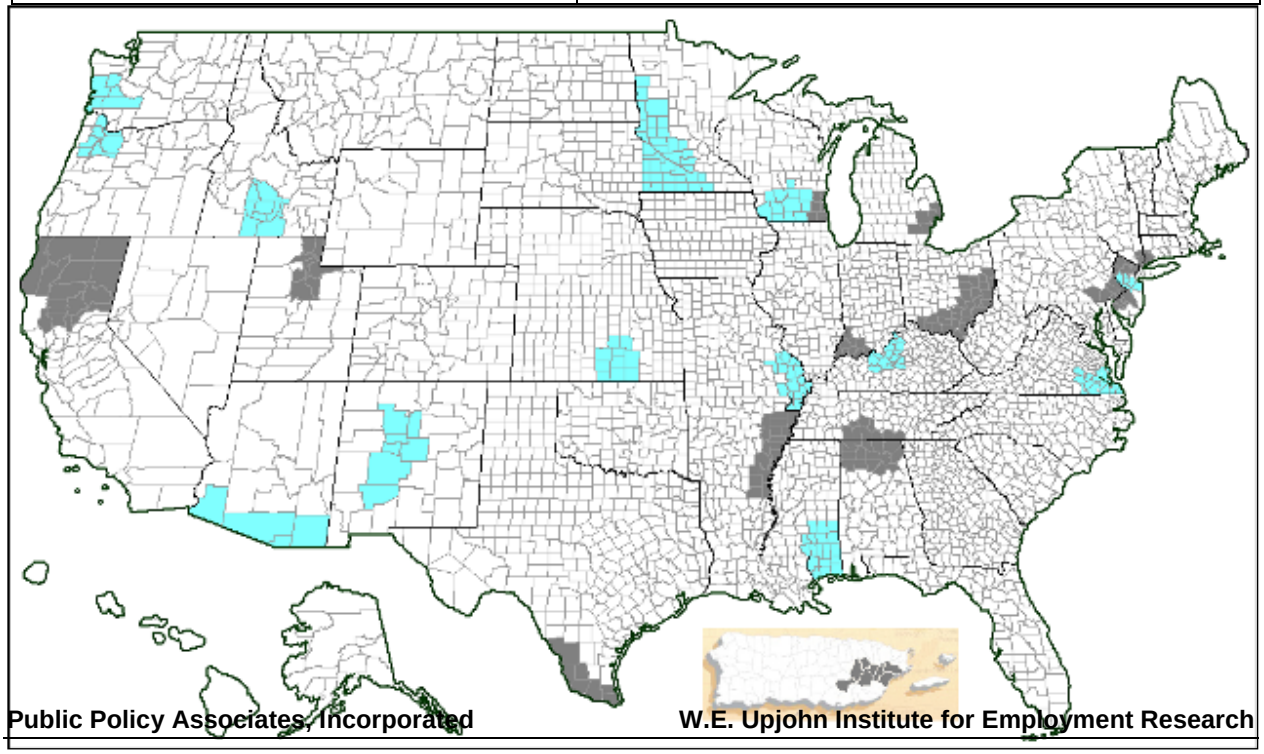

Table 1: Regions in Generations II and III

Official Name[30]	Shortened Reference Used in This Report	Location	Major Metropolitan Areas
Generation II			
Appalachian Ohio	Ohio	29 counties in Southeast Ohio	Athens, Portsmouth
Arkansas Delta	Arkansas	17 counties along the Mississippi River	West Memphis
Central-Eastern Puerto Rico	Puerto Rico	7 rural counties in Eastern Puerto Rico	Caguas, Cayey, Humacao
Delaware Valley	Delaware	7 counties in Pennsylvania; 5 counties in New Jersey; 1 county in Delaware	Philadelphia (PA), Camden (NJ), Wilmington (DE)
Northern California	N. California	21 northernmost counties in California	Redding, Chico, Eureka
Northern New Jersey	N. New Jersey	8 counties between New York City and the Pennsylvania border	Newark, East Orange
Rio South Texas	Texas	4 southernmost counties in Texas	Brownsville, McAllen
Southeast Michigan	SE Michigan	9 counties in Southeast Michigan	Detroit, Ann Arbor
Southeastern Wisconsin	SE Wisconsin	7 counties in Southeast Wisconsin	Milwaukee, Pewaukee
Southwest Indiana	SW Indiana	9 counties in Southwest Indiana	Evansville, Jasper, Vincennes
Southwestern Connecticut	Connecticut	1 county in Southwest Connecticut (Fairfield County)	Bridgeport, Norwalk, Stamford
Tennessee Valley	Tennessee	12 counties in Alabama; 1 county in Tennessee	Huntsville, Decatur
Wasatch Range	Utah	8 counties in North-Central Utah	Salt Lake City, Provo

[30] These official names come from either the WIRED official Web site, or via conversations with ETA.

Table 1 (Continued): Regions in Generations II and III

Generation III			
Central Kentucky	Kentucky	15 counties in North Central Kentucky	Louisville, Lexington
Central New Jersey	C. New Jersey	5 counties in Central New Jersey	Trenton, New Brunswick
Greater Albuquerque (NM)	New Mexico	8 counties in Central New Mexico	Albuquerque, Santa Fe
North Oregon	Oregon	7 counties in Northwestern Oregon	Portland
Pacific Mountain Washington	Washington	5 counties in Western Washington	Tacoma, Olympia
South-Central & South-West Wisconsin	Wisconsin	12 counties in Southern Wisconsin	Madison, Janesville, Beloit
South-Central Idaho	Idaho	8 counties in Southern Idaho	Twin Falls
South-Central Kansas	Kansas	10 counties in South-Central Kansas	Topeka, Wichita
Southeast Missouri	Missouri	14 counties in Southeast Missouri	Cape Giradeau
Southeastern Mississippi	Mississippi	18 counties in Southeast Mississippi	Jackson, Gulfport
Southeastern Virginia	Virginia	24 counties on Virginia's southern coast	Norfolk, Virginia Beach
Southern Arizona	Arizona	4 southernmost Arizona counties	Tucson, Yuma
Southwest Minnesota	Minnesota	36 rural counties in Southwestern Minnesota	Willmar, Mankato, Albert Lea, Marshall, Worthington

Evaluation of Generations II and III

Public Policy Associates, Incorporated (PPA) and the W.E. Upjohn Institute for Employment Research (Upjohn) conducted an evaluation of Generations II and III of the Initiative, beginning shortly after the grants were awarded and continuing throughout the entire grant period and the transition period that followed. This document is the final report of the evaluation.

Research Focus

The primary areas of research interest for the evaluation of WIRED Generations II and III included:[31]

- **Strategic Approach, Implementation, and Institutionalization:** These areas of research were concerned with the regional challenges and responsive strategies; changes in collaboration and leadership successes; influence upon institutions and systems; leveraging of other funding sources; and sustainability plans.

- **Innovation and Capacity Changes:** Research on these issues focused on efforts to identify and address barriers to innovation and industry growth; efforts to create a system for supporting economic and business development through the development of a skilled workforce; the effectiveness of the Initiative in building training capacity in the region for the targeted sectors; and the measureable benefits for the workers and job seekers.

- **Economic and Labor Market Effects:** Research for these topics focused on changes in economic, labor market, and education indicators, and the degree to which the regional initiatives contributed to success or improvements in job growth.

- **Cross-Generational Comparisons:** Through research in this area, the PPA/Upjohn team sought to understand whether there were any key differences in regional goals, strategies, and outcomes based on generation.

Research Activities

This evaluation was a comprehensive effort that covered the activities that were undertaken in all 26 regions within Generations II and III. A full description of the research methods that were used to conduct the evaluation is provided in Appendix D. For the purpose of this discussion, the reader should be aware that over the course of the evaluation of Generations II and III of WIRED, data were collected from several different sources, including:

Site Visits

A primary data source were multiple rounds of site visits to all 26 regions. The site visits involved open-ended interviews of hundreds of stakeholders, roundtable discussions, and observations, and were conducted as follows:

- In summer 2008, the first round of visits occurred. The visits focused on learning about the initial implementation efforts within the regions, their governance structures and operations, and the status of their activities. A broad range of stakeholders from government, education, economic development, business, workforce, labor, and philanthropy were interviewed.

[31] A complete list of research questions and a detailed description of the evaluation methodology can be found in the "Evaluation Design Report for the Evaluation of Generations II and III" prepared by the PPA/Upjohn team.

- The second round of visits was conducted in late 2009 and early 2010. These involved interviews with a similar variety of stakeholders—often the same partners—but centered on the sustainability and effectiveness of the regions' activities. In late 2010, telephone calls were made to a handful of stakeholders in each region to get updated information about the status of the region's sustainability efforts.

- A third group of visits to eight selected sites followed in late 2010. These visits explored in greater depth the path of particularly promising collaborative strategies and activities, the evolution of governance structures and leadership, and changes in resources, including opportunities associated with the American Recovery and Reinvestment Act (ARRA) funds. Interviews conducted at these visits were fewer and involved some different stakeholders.

Surveys and Social Network Data

Surveys were used to obtain information and feedback from regional stakeholders and to gauge the extent of collaboration, leadership, and engagement in the regions. .This research activity involved the following:

- A brief social networking survey, conducted at the first site visits among the interviewed stakeholders, sought to capture the connections among partners in terms of the level of connections (e.g., manager to manager) and type of organizations interacting (e.g., K-12 school to business). These data allowed for a point-in-time view of the degree of networking that took place early in the regions' efforts.

- Another series of network data was collected in 2009 as part of a "partner survey." In addition to gathering input on connections to use in another network analysis, the Partner Survey also inquired about the respondents' views on the context for and level of collaboration in their regions as well as their involvement in such collaboration. Eligibility for the Partner Survey was determined in part by responses to another primary data source, the Screener Survey, which was an effort to reach every possible stakeholder in each region. Relevant information in the Screener Survey was the level of awareness of collaboration efforts and the degree of organizational engagement in those processes.

Administrative and Extant Data

The secondary data sources included administrative data from the regions, including regional proposals, implementation plans, research reports, and quarterly reports, and numerous public sources (extant) for economic, education, innovation, commercialization, and labor market data. The extant data collected for the evaluation sought to illuminate the social and economic conditions of the regions, including the needs and attributes of the regional workforces, the strengths of the local economies, and the potential resources available to regional collaborations as they pursued joint development activities. In this report, extant sources include the following:

- Demographics: U.S. Census and American Community Survey
- Talent development: National Center for Education Statistics: Common Core of Data & Integrated Postsecondary Education Data System; Angel Capital Education Foundation

- Job creation and job net flows for 2007Q1 through 2009Q4: U.S. Bureau of the Census, Quarterly Workforce Indicators (QWI)
- Workforce for 2007Q1 through 2010Q3: BLS Quarterly Census of Employment and Wages
- Target industry employment: 2006 Isserman CBP employment data (proprietary)

Comparison Groups

To estimate the net impacts of the Initiative at the regional level, the evaluation team constructed a matched comparison region for each WIRED Generation II and III region and then examined labor market and regional economic growth variables across each dyad. Analysis procedures included regression models and a multivariate difference-in-difference analysis of employment outcomes (new hires, all job created, separations, and net job flows). The construction of the comparison regions and the analyses are outlined in detail in Appendix C.

All told, the diverse data sources and multiyear approach allowed for a deep understanding of the Initiative's influence on the regions and their collaborative, economic, and workforce trajectory.

Reporting

This document is the final report of the evaluation of Generation II and III WIRED grants , and is Volume III of a three-part, comprehensive final report on the Initiative. Volume I summarizes the findings of the evaluation by looking across all three generations. Volume II presents the findings of the Generation I evaluation. This final report focuses on the degree to which the goals of the Initiative, and those of the regions, were achieved.[32] Other reports prepared by the PPA/Upjohn team include an evaluation design report, two interim reports that examined the strategies and implementation experiences of the regions and presented the results of the baseline analysis of extant data, the findings of stakeholder surveys, and social network analyses.

Content of this Report

Following this introduction, the report addresses the following topics:

- *Overarching Goals of WIRED:* This section presents the overarching goals of the Initiative and examines the extent to which these goals were achieved.
- *Regional Goals and Activities:* This section examines the alignment between regional goals and those of the Initiative as a whole and assesses the extent to which the regions were successful in achieving their goals.

[32] The final report on the evaluation of WIRED includes three volumes. Volume I, a report that synthesizes the findings across Generations I, II, and III was co-authored by PPA/Upjohn and BPA/UCSD, the evaluators for Generation I.

- *Regional Outcomes:* Building on the discussion in the previous section, this portion of the report summarizes the achievements of the regions and draws attention to some of the promising practices that were identified during the site visits.
- *Sustainability:* This section examines how regions approached the concept of sustainability and discusses the different ways in which the activities and relationships continued following the end of the grant period.
- *Conclusions:* In this last section, the key findings of the evaluation are presented and discussed.

- *Bibliography*

- Appendices:
  - Appendix A includes summaries of some of the promising practices that were encountered during the research.
  - Appendix B includes brief summaries of each of the Generation II and III regions. The profiles highlight the goals, strategies, activities, outcomes, and accomplishments of each region.
  - Appendix C describes the approach that was used to construct and analyze comparison-group data.
  - Appendix D describes the methods that were used to collect and analyze the data presented in this report.
  - Appendix E provides the instruments that were used for data collection.

Chapter II: The Overarching Goals of WIRED

For policymakers and practitioners alike, the overriding question about WIRED is, "Did it work?" This chapter attempts to answer that question in the form of a broad overview of the major goals of the Initiative and an examination of the degree to which those goals were achieved across Generation II and III regions. The section begins with a review of five principal goals of WIRED and explains the approach that was used to assess the extent to which those goals were attained. For each goal, the reader is presented with the major findings, followed by a preliminary discussion of the evidence that was considered in formulating the rating. The section that follows examines the regional strategies and activities in greater detail.

The goals of the Initiative were identified through a review of several ETA documents, including the original Solicitations for Grant Applications (SGAs), ETA PowerPoint presentations, and other documentation from the Employment and Training Administration (ETA).[33] The goals included:

1. *Regional Economic Development***:** Facilitate the role of the workforce development system in the transformation of regional economies with the goal of enhanced regional economic development.
2. *Regional Partnerships and Collaboration***:** Develop and nurture strong regional partnerships that will facilitate regional economic growth.
3. *Workforce System Transformation***:** Transform the workforce development system so that it becomes integrated with education and the economic development system.
4. *High-Skill, High-Wage Jobs***:** Expand employment and advancement opportunities for workers and catalyze the creation of high-skill and high-wage opportunities in regional economies.[34]
5. *Disadvantaged Populations***:** Expand employment and advancement opportunities for disadvantaged populations.

[33] PPA/Upjohn, "WIRED's Overarching Goals," submitted via e-mail to ETA for review on [DATE].

[34] ETA, "WIRED to the Innovation Economy," PowerPoint Presentation U.S. Department of Labor, (November 10, 2007).

Data Sources

The evidence derives from all data streams of the study, including site visits, surveys, and analysis of administrative and extant data as described on pages 10 through 13.[35]

Ratings Matrix

The site visit team members examined all data and provided estimated scores for each project on each of the five goals in its plans, activities, outcomes, the contribution of WIRED to those outcomes, and the sustainability of the efforts. Thus, each region was rated on five characteristics for each of the five goals, the result being a 25-cell matrix. A rating scale of 1 to 5 was used, in which 1 meant "no evidence" and 5 meant "overwhelming evidence" for each cell. The results for each region within Generations II and III were combined to derive mean scores by generation and across the two generations. This method washes out the wide variation among regions, but presents an overall picture of the success of WIRED.

Overall Ratings Summary

Across all 25 cells in the scoring matrix, only one goal reached a score of 4 or more on the five-point scale, as indicated in Table 2 below. This was for Regional Economic Development (Goal 1), which scored 4.2.

Table 2: Mean Scores Across Generation II and III Regions[36]

Goals	Planning	Activities	Outcomes	WIRED Contribution	Sustainability
Goal 1: Regional Economic Development	4.2	3.2	2.8	3.2	2.9
Goal 2: Regional Partnerships & Collaboration	3.7	3.3	3.0	3.4	2.8
Goal 3: Workforce System Transformation	3.6	3.1	2.9	3.0	2.7
Goal 4: Employment and Wages:	3.8	3.2	2.6	3.0	2.7
Goal 5: Disadvantaged Populations	2.4	2.4	2.3	2.5	2.2

[35] For detailed information on the study methodology, please see Appendix B.

[36] Similar tables for each of the 26 Generation II and III regions are included in the Appendix.

- For all other goals and characteristics, the evidence was less than "overwhelming" (5). In fact, it was only in planning that the average score for any of the five goals reached 3.5.
- For outcomes, only Goal 2: Regional Partnerships reached a score of 3.0. WIRED was seen as making a substantial contribution, as reflected in the 3+ scores for all goals except Goal 5.
- Planning received the highest scores for each goal, almost without exception. This is not surprising since ETA placed considerable emphasis on the development of a comprehensive implementation plan and performance measures prior to allowing the grantees to access the grant dollars.
- Across the goals, the sustainability and outcomes columns yielded the lowest scores. It is not surprising that outcomes scored as they did, since the true outcomes of an initiative that aims at transformation of a regional economy may emerge over many years, perhaps even a generation.
- The results for sustainability were more of a surprise to the evaluation team. Given that ETA placed a very strong emphasis on sustainability from the outset of WIRED, it was imagined that this characteristic would have been stronger, although the ratings may reflect variations in how WIRED efforts were incorporated into the fabric of regional activity.

Goals Analysis

In the pages that follow, the goals are examined in greater detail, along with some of the evidence that contributed to the matrix in Table 2 above. This section presents WIRED results relative to these goals at the broadest level. Much more detailed analyses of results at the generational and regional levels are presented in the Regional Goals and Activities and Regional Outcomes sections of this report.

Goal #1: Regional Economic Development

Play a positive role in the transformation of a regional economy and enhanced economic development.

Major Findings

Initiative regions can be classified as one of two general types of transformational regional economic development efforts: systemic and structural.

Efforts aimed at systemically transforming the regions' workforce development programs were designed to better serve the workforce needs of existing regional industries. These systemic initiatives were not meant to significantly change the region's economic structure; instead, they were meant to help stabilize regional economies by addressing existing gaps in the workforce development system. Structural transformation efforts, on the other hand, were aimed at the more challenging task of changing the region's economic base by adding new industries, encouraging new product and/or service development, enabling existing businesses to enter new markets, or encouraging entrepreneurship.

Each of the WIRED regions established a list of target industries. Two of the WIRED regions put their entire focus on only one target industry. Thirteen of the regions identified more than six target industries. All of the regions established training programs for key occupations in the targeted industries.

The key challenge facing many of the regions that reinforced systemic rather than structural changes was that traditional business practices and cultures generate "path dependency" for future activity. In addition, the weakened economy forced several of the regions to stray from their original goals and focus instead on providing services to displaced workers. While all WIRED regions undertook at least some degree of effort toward systemic or structural change, it is too early to tell to what extent those changes will endure.

Discussion

This broad goal of WIRED sought to enhance regional economic development by helping workforce development partners take on an enhanced role in the transformation of regional economies. According to scoring of regions by the evaluation team, progress toward this goal was second strongest behind regional partnerships (Goal 2) across the five characteristics. As noted above, this goal scored the highest of any on the planning characteristic. It scored second highest on three other characteristics and third on the remaining characteristic. Overall, the results indicated modest evidence of progress toward this goal.

Systemic Versus Structural Transformation

Most WIRED economic development-related initiatives can be classified as one of two general types of transformational regional economic development efforts: systemic and structural.

All WIRED regions funded efforts that were aimed at transforming their workforce development programs to better serve the needs of regional industries. While these efforts improved the efficiency of regions' workforce development systems and enhanced their economic development initiatives, the efforts were not meant to significantly change the region's economic structure.

Systemic Transformation. Systemic transformation activities helped stabilize regional economies by addressing existing gaps in the workforce development system. Without these efforts, the regions would have faced greater risks of losing their existing economic bases. Examples included the development of better labor market information systems, retaining existing companies by improving the skills of their workforce, and the formation of education-business partnerships. These efforts were important because they enabled the regions' industries to be more productive and hence more competitive; however, the nature of their products or services and their markets essentially remained unchanged. In some instances, the funded efforts simply allowed local industries to "stay in the game."

Structural Transformation. Structural transformation efforts aimed at changing the region's economic base by adding new industries, encouraging new product and/or service development,

enabling existing businesses to enter new markets, or encouraging entrepreneurship. Structural transformation of the region's economy pushed beyond simply filling the gaps in the current workforce delivery system. Structural transformation initiatives aimed to:

- Develop new base industries such as alternative energy, information technologies, nanotechnology, and new crop production.
- Explore new markets and products for its existing industries by establishing research development centers.
- Cultivate an entrepreneurial environment allowing for production of new products or generation of new services.

Risks. Clearly, the risks associated with strategies to systemically transform the region's workforce development system are lower than those associated with efforts to structurally transform a regional economy. For example, efforts to target new industries for a region could encounter two pitfalls:

- Selecting industries that are not well suited to the region can inhibit the region's success. A new industry may successfully wed new technology to expanding global markets; however, if the region does not have the resources or a competitive advantage, its probability of success can be small.
- Selecting industries that are going through dynamic change can generate winners as well as losers. Alternative energy, for example, is a highly dynamic sector where a region can invest major resources into one technology only to find that it is eclipsed by more successful, competing technologies.

Target Industries

The Initiative required regions to enumerate specifically the sectors that were going to be focused upon in each region. Table 3, below, shows the distribution of sectors as presented by the regions in their implementation plans, although the method for selecting the sectors was rarely clear. Typically, the target was either a major industry that already had a presence in the region, based on a target list already established by a state or local economic development organization, or was selected by the leaders of the regional effort using other information sources.[37]

Two of the regions put their entire focus on only one target industry: life sciences in one region and composites and advanced materials in the other. In each instance, the region already held a strong position in the industry; in other words, they were building on their strengths. In contrast, 13 of the regions identified more than 6 target industries. While such an approach nurtured diversity, it begs the question of whether such a large number diluted the impact of the region's efforts.

[37] This topic is addressed in greater detail in "Nurturing America's Growth in the Global Marketplace Through Talent Development: *An Interim Report on the Evaluation of Generations II and III of Wired."*

Source: ETA site profiles.

Table 3: Initial Industry Focus of WIRED Regions Generations II and III

Target Industry	Number of Regions
Advanced manufacturing	18
Life sciences	14
Energy	9
Transportation, distribution, and logistics	8
Entrepreneurship	6
Biotechnology/bioscience	5
Information technology	5
Agriculture	4
Construction trades	4
Aerospace	3
Homeland security	3
Retail/hospitality	3
Electronics	2
Financial services	2
Automotive	1
Biofuels, especially biodiesel	1
Chemicals and plastics	1
Communications	1
Composite materials	1
Culinary	1
Diesel mechanics	1
Green industries	1
Human resources (Ft. Knox BRAC)	1
Medical devices	1
Modeling and simulation	1
Nanotechnology	1
Optics	1
STEM (science, technology, engineering, and math)	1
Water resources	1

Eighteen of the WIRED regions identified manufacturing (advanced or otherwise) as a target industry. While the term "advanced" was not universally defined across the regions, it still conveyed the intent of the regions to encourage innovation and the use of better technology in production facilities. Fourteen regions selected life science and/or health care. Nearly all of the WIRED regions developed training programs for key occupations in their targeted industries in

association with their regional community or technical colleges and, in some instances, with a regional four-year institution.

The number and nature of these sectors varied substantially across the regions. In addition, changes in the economy led some regions to shift their industry focus. For example, one region selected construction as an initial target, but later decided not to pursue it because of a steep decline in commercial and residential construction activities.

Even though only six of the regions identified entrepreneurship as an industry target, 19 of the regions decided to allocate some of their resources for cultivating entrepreneurship. Only a few created an entrepreneurship development system that had the potential to trigger regional transformation, however. For example, some WIRED regions partnered with Small Business Development Centers (SBDCs) and community colleges to help individuals start a business by assisting in the development of business plans, financial reporting, and management issues. Others worked in conjunction with existing business incubators to provide entrepreneurial skills training and other support services to emerging companies. Some of the entrepreneurs that participated in these programs were interested in opening businesses that served only the local market,(e.g., lawn service companies, restaurants), while others were launching businesses in the information technology sector, including Web-based businesses and service companies designed to help existing firms reach new markets via the Internet. While the probability of success for small business owners was enhanced by the training, it is unlikely that they altered the economic base of the region, particularly in the short term.

For a WIRED region's entrepreneurship program to have the potential to transform the region's economy, it would need to:

- Identify informational resources for potential entrepreneurs that would enable them to explore the development of new products and services that are currently not being produced in the region.
- Develop financial avenues such as venture capital or angel capital funding opportunities.
- Focus only on those entrepreneurs who had a product or service that (1) was directed toward a statewide or national market and (2) was scalable.

SE Michigan pursued this approach. Information technology entrepreneurs with an existing product or service strategy participated in a comprehensive training program that provided business development training that included meetings with insurance companies, patent lawyers, marketing companies, banks, angel investors, and other professionals who provided the guidance needed to scale-up the business ideas.[38]

[38] Additional information about this entrepreneurship program can be found in Appendix D.

Challenges

A common barrier faced by several of the regions that may have reinforced systemic rather than structural changes was that traditional business practices and cultures generate "path dependency" for future activity. Path dependency makes it very difficult for regions to follow a different path than that which is mapped out by their existing industries. Often the region's principal economic stakeholders, as well as its financial institutions and workforce development agencies, are wedded to the region's existing industrial clusters, regardless of how healthy they are. This is unfortunate, because for a regional economic development program to be successful, it is crucial for the region to constantly advance beyond what it is producing today and aim at what the changing global economy needs tomorrow. For example, in one region, there were conflicting views on the viability of the identified target industry, although the strategy had the backing of the region's university-based entrepreneurs. The region's workforce agencies partially blocked the new initiative and channeled WIRED resources to support the region's more traditional industries.

Another challenge that forced several regions to stray from their original goals was the weakened economy starting in the last quarter of 2007. Many regions redirected at least a portion of their grant funds to address the needs of displaced workers. For example, some regions offered GED classes or English as a second language (ESL) programs to improve the employability of low-skilled and Hispanic residents. In other regions, the workforce development agencies were focused on traditional industries that had suffered severe employment declines during the recession, while economic development organizations were exploring new industries based on the regions' unique economic development assets.

Finally, several regions reported delays in obtaining approval for their implementation plans, which increased the difficulty of achieving transformative change within the grant period.

Goal #2: Regional Partnerships and Collaboration

Develop and nurture strong regional partnerships that will facilitate regional economic growth.

Major Finding

This goal was reached more consistently than any of the other broad goals of WIRED, at least in terms of developing and nurturing strong regional partnerships. The evidence is less clear as to whether those partnerships resulted in stronger economic growth than would have occurred otherwise.

In every WIRED region, the overwhelming majority of stakeholders reported that new and/or deeper regional partnerships were among the most valuable benefits of the Initiative. They characterized the personal relationships and mutual understanding as particularly important. Beyond the individual connections, these partnerships often resulted in new linkages between central cities and rural environs; among multiple workforce boards; and among workforce,

economic development, and education interests. WIRED was given extensive credit for stimulating these changes.

Some structural connections were more difficult to build and maintain than others. In particular, strong links with K-12 education and local economic developers were rare among the 26 regions of Generations II and III.

In order to nurture regional partnerships, several regions provided skilled project staff to manage the regional collaborative. Despite being very committed to the success of the regional effort, most staff that played such roles were laid off or reassigned following the end of the grant period, and, as a result, few of the partnerships were maintained at the levels of the grant period. Exceptions were those regions in which WIBs or other convening organizations simply took on the role of managing the regional collaboration as an ongoing part of their business and used the WIRED funds for non-personnel expenses. Also, some regions narrowed their geographic reach after the Initiative ended.

Discussion

Across all 26 Generation II and III regions, the site visit teams gave the highest outcome ratings for the goal of building networks and partnerships (3.0 on the 5-point scale described previously), although the outcome ratings for two other goals were only slightly lower. The contribution of WIRED to this outcome was also rated higher than any of the other four goals. Interviews showed a pattern of positive comments from WIRED stakeholders regarding the value of the relationships that had been formed and/or grown during the grant period. In general, those who played a central WIRED leadership role were more consistently positive in their assessment than were those who were more peripherally involved.

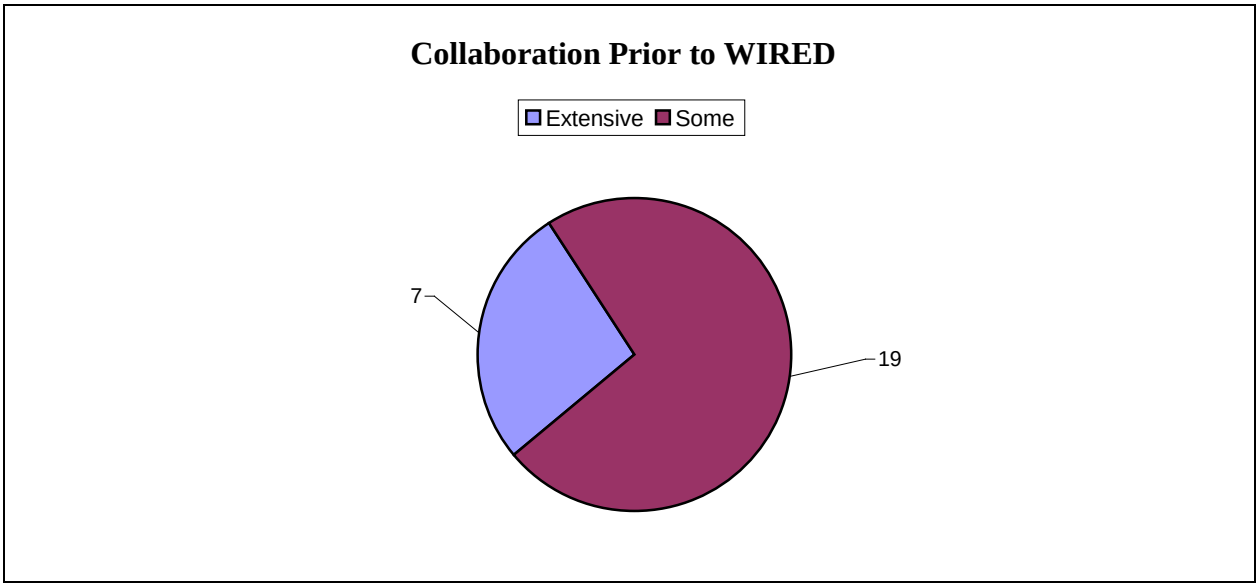

Figure 1 *Data for this figure came from available implementation plans submitted by the regions.

Seven of the regions included multiple examples of collaboration that involved different partners. Nineteen regions had at least one instance of collaboration, but these usually involved a small group of partners; most commonly, these partners were among organizations of a similar kind, such as multiple economic development organizations or multiple WIBs working together to develop regional reports, provide workforce training, develop and implement layoff aversion strategies, attract businesses, build regional consensus, and other joint initiatives.

Although the regions reported that they were collaborating effectively, it was also evident that some types of stakeholder organizations were not adequately represented. These are shown in Table 4, below.

Table 4: Stakeholder Response to Question:
"Are there organizations that are *not* included in your region's activities?"

Underrepresented Stakeholders	Total # of Mentions*	# of Regions with Responses**
Business/employer	48	18
K-12	29	13
Local/state government	11	7
Other	10	9
WIBs/workforce system	10	6
Four-year universities	6	6
Economic developers	6	5
Postsecondary/higher education***	6	4
Technical/community colleges	5	4
Foundations/philanthropy	5	3
Angel investors/venture capitalists	4	3

* Table entries come from post-interview analyses of site visitor notes following the first site visit.
** Responses were obtained from 25 of the 26 Generation II and III regions.
*** In some cases, the respondents mentioned "higher education" without distinguishing between community colleges and universities. As a result, it was not possible to report the number of mentions in each category.

The responses revealed that many respondents thought the business community was underrepresented in the regional effort. Stakeholders from 18 regions, a total of 48 individuals, stated that there was a need for greater participation of employers.

Common Challenges

All regions had a history of at least some collaboration prior to becoming a WIRED region, although as discussed in subsequent sections of this report, the scope and intensity of those relationships varied considerably and evolved over time. For example, over the course of the Initiative, maintaining participation from employers was reported to be an ongoing challenge by many regions.

Despite efforts to actively engage large companies, most of the regions had difficulty doing so. Notable exceptions were Southeastern Virginia where an executive of a large corporation co-chaired the initiative; Southeast Michigan, where the Detroit Regional Chamber was the convener; and Southwestern Connecticut, a region with a history of active collaboration among the WIB, education, and economic development entities. In this region, a separate regional executive council was formed explicitly to provide a forum for corporate leaders to discuss common workforce and economic development issues.

The group that received the second highest number of references to a need for greater organizational involvement or representation was the K-12 community. In total, 29 individuals, covering 13 different regions, characterized this group as underrepresented. This group was closely followed by local/state government (11 references, 7 regions) and local WIBs (10 references, 6 regions). During site visits, the absence of local government representation was particularly striking, a gap that was not filled over the course of the Initiative.

Overall, gaps that existed at the beginning of a region's WIRED initiative tended to remain throughout, despite the desire to bring underrepresented partners into the process. However, this observation should be set against the large number of individuals who stated that representation from the groups that should be at the table was sufficient.

Goal #3: Workforce System Transformation

Facilitate a transformed workforce development system that is integrated with education and economic development.

Major Finding

The term "transformation" has different meanings, depending upon the context in which the term is used. Most regions explored ways to transform the learning culture of their regions at all levels. Starting with K-12 schools and continuing through technical and community colleges and four-year colleges and universities, the regions invested grant resources in efforts to establish meaningful career pathways that could lead to employment in the region's more promising industries.

WIRED activities also focused on a system-transformation effort of improving the responsiveness of the training-delivery system in meeting the needs of\employers in targeted sectors. In some of the nation's emerging industries, the training needs of businesses were evolving quickly, which made frequent communication between employers and education and training providers essential. The regions worked to effectively link the resources available in their communities and technical colleges with the training needs of regional industries through the development of practical business-developed curricula. In some regions, the American Job Centers (AJCs, formerly One-Stop Career Centers) played an active role in acquiring information about the training needs of area companies and passing that information along to training providers.

Despite the efforts to build a skilled workforce to support industry growth and attract new companies to the region, some regions found it necessary to shift their strategy. Due to the recession, regions recognized that the level of demand for workers in targeted industries and occupations had drastically changed or declined, forcing the regions to reconsider their industry focuses. Unfortunately, regions found that many of the workers who lost their jobs during the national recession lacked the basic academic skills they needed to enroll in training classes for new occupations. As a result, the regions decided to redirect a portion of their grant funds to support additional GED training and other remedial classes.

Discussion

This goal was rated in the middle, relative to the other four major WIRED goals. On two of the characteristics, outcomes and sustainability, it scored below 3.0 on the 5-point scale. For activities and the WIRED contribution, it scored 3.1 and 3.0, respectively. Overall, most of the WIRED regions faced three substantial challenges:

1. *Changing the Learning Culture*. The first was the difficult task of changing the learning culture of the region. Components of these initiatives often included programs aimed at introducing students in all grades to the concept of a career pathway. Efforts were made to keep the curricula relevant to students' interests and to connect the students to the region's major or emerging industries. In addition to career exploration and training, many regions sought to improve the transition from high school to postsecondary education by developing a culture of lifelong learning.

2. *Systems Integration.* The second challenge facing the regions was the integration of their workforce systems, their education systems (from K-12 schools through their technical and community colleges to their four-year colleges and universities), and their economic development efforts. This requires the breaking down of existing funding silos between the three systems.

3. *Improved Responsiveness.* Many of the WIRED efforts focused on improving the responsiveness of existing training-delivery providers, and the adoption of a more systems-oriented approach. Training providers that understand industry trends and the needs of local companies are better able to design and deliver employer-responsive training programs in a quick and efficient manner. The ability to respond rapidly to employer needs requires strong industry connections and a significant industry presence on WIRED sector work teams, since the regions' base industries have the clearest understanding of the key elements of an effective training program.

As shown in Table 5 below, the development of a workforce pipeline and the funding of training programs geared for the region's targeted industries topped the list of major workforce development activities among the WIRED regions in Generations II and III.

Table 5: Major Workforce Development Activities in Generations II and III

Major Activities	Number of Regions
Fund training programs for the region's targeted industries	21
Develop a workforce pipeline from entry level through advanced degrees	17
Improve STEM training	11
Develop industry-focused curricula	10
Expand entrepreneurship training	10
Expand distance learning	3
Develop better labor market information systems	2

Source: Generation II and III Implementation Plans.

Common Program Characteristics

The common characteristics of the more successful programs across the regions included:

- Effective collaboration among K-12 education, community colleges, and the region's major universities in the development of a seamless education/career pathway for students. The first step is often getting students excited about the career. For regions that were focused on one or two target industries, business involvement was also a must.
- The development and sharing of curriculum. As one region representative said, "Curriculum development is one of the lasting developments of this grant." Sharing is enhanced if there is an integrated state system of technical or community colleges as was the case in some states. In this environment, curricula that are developed in one part of the state can be more easily shared with other campuses.
- The establishment of advisory councils for targeted industries, which pulled together representatives from the respective industries, community colleges, WIBs and AJCs, higher education, and others to identify, train, and place individuals in these industries.[39]
- Expansion of the role of the region's AJCs in providing workforce development services to the region's employers. In several of the regions that actively engaged local WIBs, AJCs pursued business retention as a means of job provision instead of solely focusing on the placement of workers. For example, at NorTEC (Northern California), the 16 AJCs found that their role in meeting the needs of businesses was even more important as the State of California cut local economic development funding.

Common Challenges

The regions also faced common challenges, including:

[39] One WIRED region said a key component of these councils was the industry site coordinators—one or two for each target industry—who linked employers, workforce development agencies, training organizations, and individual workers.

- *Limited Education Attainment.* Several regions had to address the poor overall educational attainment of their recession-impacted displaced workers. This forced them to redirect funding to the provision of remedial classes instead of specific skills training.
- *Delays in Implementation***.** Delays in getting implementation plans approved caused some of the regions to be unable to complete their strategy plans since they were based on a tight three-year plan. Moreover, some of the regions were challenged at the outset by confusion around the degree of economic development investment that was allowable under the grant and the resulting delay in approval of their implementation plans.
- *Building Trust.* As the regions started to form collaborations, some were hindered by a lack of trust. A repeatedly cited problem was that leadership roles were occupied by individuals who had worked together frequently in the past and would not include newer voices into the process.
- *Resistance to Change.* Some regions found that their education community was resistant to change. One region discovered that its universities and colleges did not share an interest or ability to pursue innovation through university research and development that was originally part of the region's innovation and entrepreneurship goal. Another region found that its public school districts were fairly unresponsive because they thought that meeting the performance standards required under the No Child Left Behind Act was a higher priority than incorporating STEM throughout the K-12 curriculum.

Several of the regions staked their futures on a single industry such as bioscience or green energy and worked to develop in-depth career pathways for these industries. The danger, of course, is that the fortunes of these industries, especially emerging industries such as green energy, may evolve rapidly and, in some cases, shift dramatically due to factors beyond the control of regional partners. If the training does not develop transferable skills, its participants may find their hard work was for naught.

Goal #4: High-Skill, High-Wage Jobs

Expand employment and advancement opportunities and catalyze the creation of high-skill and high-wage jobs.

Major Finding

Most WIRED regions focused their activities on the development of curricula and career pathway programs designed to enable area workers to fill high-skill, high-wage jobs that would be created as companies in target industries grew and diversified. (For example, 19 of the 26 regions targeted advanced manufacturing and 13 regions targeted biotechnology/life sciences.) While not all jobs in those industries require advanced skill or pay high wages, overall they were considered more likely to do so than those in, for example, retail or tourism.

Discussion

This goal scored toward the middle relative to the other four major WIRED goals. As was the case for all the goals, outcomes and sustainability scored lowest (2.3 and 2.2, respectively, on the

5-point scale). For those who expected the regions to focus principally on job creation, these scores are disappointing; however, the goal statement suggests both job creation and worker training. As a result, determining success requires looking at the number of workers trained, the number who entered employment, and the wages they received upon entering employment. It also requires looking at the number of high-skill, high-wage jobs being created in the region. Ideally, it would also look at the rate of expansion of such jobs within the WIRED region as compared with similar non-WIRED regions.

Common Measures

Data on the actual numbers of trainees and number of trainees who entered employment were not sufficiently consistent across regions to allow reporting of meaningful results. According to the evaluation team's review of the final reports submitted by all of the regions in Generations II and III, only 10 of the 26 regions reported both projected and actual entered-employment data and another six reported actual data but not projections. There are several possible reasons for this. It is possible that the dearth of data resulted from ETA's decision in late 2007, partway through the Initiative, to use the Common Measures to assess training outcomes.[40] Regions may not have adjusted their measurement and reporting systems to accommodate this change or may have focused primarily on capacity-building (e.g., curriculum, articulation agreements, career pathway design) and added a training component to support dislocated workers during the recession.

Comparison Group Measures

The comparison of economic performance of WIRED regions with a set of comparison regions gives the best, albeit imperfect, picture of whether participation in WIRED made a difference to the regional economies in terms of job creation. As discussed in greater detail in a subsequent section of this final report,[41] the Generation II regions lagged behind their comparison regions in job creation between early 2007 and late 2009, while Generation III's regional average job creation exceeded the comparison group average half the time and lagged behind it half the time. One possible explanation for this pattern is that the Generation II regions were more heavily concentrated in the manufacturing sector than the comparison regions, and manufacturing lost more employment over the duration of the Initiative.

These data show that any gains in employment attributable to WIRED were modest at best. It is important to note, however, that the results of new economic strategies and structures can take many years to bear fruit. Thus, tracking the WIRED regions and the comparison regions for the next decade may be the only way to determine whether significant economic benefits issued from the Initiative.

[40] Emily S. DeRocco, "WIRED Performance Reporting: Implementing Your Regional Accountability Framework (Generations II and III), Memorandum, (Washington, DC: 2007). See also ETA's, "Technical Assistance on the WIRED Performance Accountability Framework."

[41] See Section IV of this final report, Quantifying Outcomes Across the Regions.

Goal #5: Disadvantaged Populations

Expand work skill and work readiness of low-wage workers (incumbent, displaced, unemployed).

Major Finding

Overall, progress toward this goal was weaker than for any of the other four major WIRED goals. Regional goals promoted collaboration and the integration of education, workforce, and economic development systems, but did not explicitly address the need for employment and advancement opportunities for any particular population, including those who were disadvantaged. Nevertheless, several regional strategies were intended to generate employment and career opportunities for a cross section of workers, including economically disadvantaged individuals. The recession increased the number of dislocated workers, making it even more difficult for low-wage workers with little experience to find work. With the encouragement of ETA, several regions that were particularly hard hit by the recession took additional steps to address the situation, although the results of these efforts were uneven.

Discussion

In assessing the overall performance of the 26 regions in Generations II and III, the site visit teams reported weaker outcomes on this goal than on any other. On a scale of 1 to 5, with 5 being the strongest outcomes, this goal was rated in aggregate as 2.3; other goals were rated at least 2.6. When looking at the contribution of WIRED to the outcomes, the rating was a bit higher, but the gap was even greater between this goal and the others (2.5 versus 3.0 or more). Sustainability was also rated lower for this goal than for the others, and by an equally wide margin (2.2 versus 2.7 or more).

Nearly all of the regions developed specialized training programs for target industries. Most of these positions required not more than a two-year associate's or technical degree from a community or technical college. In many cases, the only prerequisite for the courses was a high school diploma or a GED, which put them within reach of many individuals, including those who were economically disadvantaged. For example, one WIRED region addressed the needs of local hospitals and nursing homes by expanding training for certified nursing assistants (CNAs) and creating an "integrated" patient care technician (PCT) program.

Minority and Underserved Rural Populations. In addition, several WIRED regions worked with industry partners to create articulation agreements that enabled students, including those with limited financial means or interest in going to a four-year university, to apply credits earned during high school towards an associate's degree. Associated with the development of career pathways, WIRED supported training for teachers to enable them to be more effective in incorporating science, technology, engineering, and mathematics into a curriculum in districts that included large numbers of students from economically disadvantaged backgrounds. Another region decided to provide funds to give minority and underserved rural populations broader exposure to science and technology occupations. The aim of these and other similar efforts undertaken by the regions was to build student knowledge and confidence and to provide

gateways for low-income workers who might never have considered the possibility of entry-level opportunities in a laboratory environment.[42]

Displaced Workers. As mentioned above, the recession also caused the regions to redirect some of their efforts to meeting the needs of displaced workers who had not completed high school and were in jeopardy of becoming members of the long-term unemployed or facing only low-wage employment options. For instance, after finding that a significant number of dislocated workers were without a high school diploma or GED and were not prepared to receive training that could provide them with new work opportunities, SE Missouri funded an expansion of GED offerings.

Underemployed Workers. Several regions focused their efforts on providing career advancement opportunities for low-wage job holders. In the health care field, for example, Kentucky designed a program to enable low-wage hospital workers to pursue careers in nursing, allied health, clerical, and support services. Idaho directed their focus on revamping adult basic education programs to prepare its adult participants for college. The eight-week program curriculum focused on language skills for ESL (English as a second language) learners, GED completion, technical reading and writing, math for the trades, and basic computer skills. The goal of this program was to expedite the education and training of students with language barriers or those who are educationally underprepared so that they can move from training to employment in high-demand occupations in the region.

Common Challenges

One of the major challenges facing all of the regions was that their attention was focused on meeting the specific training needs of target industries. Most of these industries required highly skilled workers. Given the additional academic preparation and support needed by economically disadvantaged individuals, these training programs and employment opportunities were simply out of reach.

Second, in many cases, the funds necessary to provide remedial education to adults or specialized programs for at-risk students were not available. Missouri had to drop its plans to fund Jobs for America's Graduates (JAG) programs at area high schools—an opportunity to address at-risk students' needs, prevent dropouts, and help them transition into career paths—because the local schools could not afford to fund the instructors.[43]

Conclusions

In answering the question "Did WIRED work?," this section showed mixed results. Of the five major goals of WIRED, only one was achieved to a great extent: *Goal #2—Develop and nurture strong regional partnerships that will facilitate regional economic growth.* Virtually all regions

[42] Utah, for example.
[43] Southeast Missouri.

learned to think more *regionally*, and relationships were built across the targeted constituencies of workforce and economic development, education, and business. While the scope and intensity of those relationships varied across regions, stakeholders almost uniformly reported that they mattered and that WIRED had stimulated their development or enhancement. As noted throughout this section, the other four goals were achieved to varying degrees from one region to another. The specifics of the regional activities and accomplishments are discussed in the sections that follow.

The evidence available *at this time* does not support a conclusion that WIRED was transformational in the sense that ETA had hoped for at the outset. Because systems transformation tends to be an incremental process, the results of these regional efforts will continue to unfold for several years to come and the economic results of new strategies and structures will take even longer to become evident.

It is often the case that important insights can be lost in the reduction of results to averages. Averages blend the strongest performance with the weakest, which risks masking lessons about how to do business more effectively. In the following sections of this report some of the most promising practices are highlighted. The results shown in this section should be assessed in the context of the lessons that they teach.

Chapter III: Regional Strategies and Actions

In this chapter, regional strategies and activities are examined in relation to the five Overarching Goals of WIRED that ETA established. The discussion in this section of the report centers on the degree of alignment between Federal goals, regional strategies, and activities. Promising practices and other examples are used to illustrate key points. The chapter is organized according to the five overarching goals using an approach quite similar to the one used in the previous chapter. The reader is first presented with findings, followed by a discussion of relevant regional strategies and activities. Each goal section concludes with a summary of challenges, observations, and practices that may be adapted for use in other settings and includes topics that have implications for policy and practice.

Table 6, below, shows each Federal goal area along with common regional strategies and strategic actions. These were identified through an analysis of the implementation plans and quarterly reports that were submitted by the regions, as well as administrative documents and presentations made by ETA staff. This table is considered demonstrative rather than definitive; regional strategies were sometimes responsive to more than one Federal goal area. It also does not capture the program innovations that numerous regions utilized, with varying levels of success, to improve existing programs and practices.

Overarching Goal #1: Regional Economic Development

Launching a regional initiative required attention to several important and challenging strategic decisions, some of which occurred prior to receiving the WIRED grant award. Some of the most critical decisions, including the specific industries to target and the geographical boundaries of the region, set the course for the regional efforts that followed. Once the general parameters of the regional effort were established, the regional partners could begin the complex and challenging process of building a knowledge-based workforce system that would enable companies in the target industries to establish and maintain their competitive position in an innovation-based economy.

In their proposals, stakeholders provided a rationale for the configuration of their region and the target industry sectors that it contained. The configuration was not prescribed by ETA[44] and it was recognized that the regional boundaries would not necessarily conform with those of existing political jurisdictions or municipalities. There was an expectation that each region would focus its efforts on a limited number of industry sectors that were deemed to be important to the regional economy. It was left to the proposers to create a rationale to support the sectors

[44] SGA/DFA PY-06-09, "Q&A," http://tinyurl.com/cvdgyh.

Table 6: Overarching Goals , Regional Strategies, and Actions

I. Regional Economic Development	II. Regional Partnerships	III. Workforce System Transformation	IV. Employment and Wages	V. Disadvantaged Populations
Play a positive role in the transformation of a regional economy and enhanced economic development	Develop and nurture strong regional partnerships that will facilitate regional economic growth.	Facilitate a transformed workforce development system that is integrated with education and economic development.	Expand employment and advancement opportunities and catalyze creation of high-skill and high-wage jobs.	Expand work skill and work readiness of low-wage workers (incumbent, displaced, unemployed).
Regional Strategies				
▪ Build upon existing assets. ▪ Focus on regionally important industry sectors. ▪ Foster diversified economy through innovation and technology transfer. ▪ Support small business development and entrepreneurship. ▪ Identify and address non-training related barriers to economic growth.	▪ Expand and diversify regional leadership. ▪ Support collaboration among cross section of stakeholders. ▪ Reach out to rural areas to establish a cohesive regional view. ▪ Create formal governance structure and workgroups. ▪ Network group members through shared tasks and common interests. ▪ Develop a communications system.	▪ Gain commitment of organizational leaders across all three systems. ▪ Marshall the resources of partners to create a regionally based workforce development system to support employer needs and economic growth. ▪ Coordinate and align programs and services within and across partner organizations and institutions. ▪ Support program innovations that support the strategic framework for the region.	▪ Invest in home-grown talent pipeline for targeted sectors. ▪ Create industry-specific training programs at multiple levels. ▪ Leverage resources to support training. ▪ Customize training for advancement, certification, and other needs. ▪ Follow career pathways to highly paid jobs.	▪ Invest in programs that identify and address basic and technical skill needs and gaps of workers. ▪ Leverage resources to support training. ▪ Provide tuition support for technical courses. ▪ Provide short-term, targeted training.
Strategic Actions				
▪ Assemble available information and reports about regional economic trends and activities. ▪ Foster business expansion and create a retention plan. ▪ Engage university partners in business development programs. ▪ Link entrepreneurs to regional resources and assist in the development of business and marketing plans.	▪ Create governing board with diverse representation. ▪ Establish topical/issue workgroups with designated representatives from a cross section of partner organizations. ▪ Use technology to facilitate virtual meetings. ▪ Sponsor regional events to encourage face-to-face interaction and celebrate milestones.	▪ Recruit executive-level leaders from education, workforce, and economic development. ▪ Analyze, review, and discuss regional industry needs, trends, and opportunities. ▪ Document career pathways and education requirements for targeted occupations. ▪ Prepare high school students for successful transition to college. ▪ Upgrade knowledge and skills of instructional staff. ▪ Conduct ongoing partner meetings.	▪ Enhance existing education and training programs and develop new ones for occupations in targeted sectors. ▪ Establish articulation agreements. ▪ Develop and share curricula across region. ▪ Customize training for firms to advance workers. ▪ Use training/advancement opportunities to attract new workers, retain existing workers, and attract new companies.	▪ Conduct individual skill gap analyses. ▪ Co-locate workforce services and community college training. ▪ Provide basic skills training. ▪ Provide short-term technical skills training (credit or non-credit). ▪ Leverage WIA funds and state benefit programs.

that were named as targets in each proposal. Each region had to decide where and how potential investments could have the greatest potential impact for achieving its goals.

The challenges facing the regions were formidable, for even though by some standards the ETA grants were substantial, a multi-year grant of $5 million was actually quite small when compared to the size of a regional economy.

Findings

A variety of strategies were used by the regions to revitalize the area economy, several of which were common across the regions. The following points summarize the main findings regarding the economic development strategies that were conducted by regions that participated in Generations II and III:

- Regions varied greatly in the method and motivation for selecting target industries.
- Existing economic development knowledge and data usually influenced WIRED strategy development.

Motivation

Most regions selected target industries that were already successful in the region. From an economic development perspective, this strategy has several advantages. The strategy allowed the regions' partners to work with existing companies to tailor the workforce system responsiveness. The presence of the target industries in the regions suggests that the regions may have already held a comparative advantage over other regions. Moreover, it is generally easier to assist existing industries to grow than trying to attract new industries into the region. The one possible disadvantage of this strategy is that the regions' current major industries may be facing severe national or international conditions that limit their growth potential.

Knowledge-Based Decision Making

Only three regions selected target industries that had little or no presence in their regions prior to the Initiative. Their plans called for either the development of training programs or entrepreneurial development programs specifically focused on these industries. The advantage of this approach was that it allowed the region to select industries, such as computer technology, nanotechnology, and/or biotechnology, all of which are facing promising futures. However, without any unique resources, these regions face a difficult challenge in attracting industry activity into the region.

Most regions picked their target industries based on the regions' economic stakeholders' knowledge of the regions' past and current economic structure and perceived assets. However, 11 of the 26 regions indicated that they consulted previous economic development assessment studies for their regions in the selection of their targeted industries. Three adopted target industries identified by their state's economic development organization or governor's office. For example, Utah involved a staff person from its governor's economic development agency who is responsible for promoting workforce development initiatives that will strengthen the many biological science-related industries in the region.

A few regions conducted their own economic analyses to identify their target industries. Three performed some type of cluster analysis to identify industries that had a strong supplier base in the regions or more than one competing company in the regions, and/or examined whether those companies shared a common workforce. Two used location quotients to identify which industries were the most concentrated in the regions.[45] One region used employment multipliers to estimate the industry's impact on the region. This approach was focused primarily on existing business instead of the potential growth of the industry.

Only a few regions used detailed economic analyses in selecting their targeted industries. Instead, many regions identified broad targets such as "advanced manufacturing" and "entrepreneurship," rather than venturing to name specific sectors, such as fabricated metals or plastics.

Regional Strategies

A variety of regional strategies were employed by the regions to address economic development directly, as opposed to having workforce development be the primary driver as was envisioned in WIRED. The most common approaches included the following:

- Building upon existing regional assets
- Supporting regionally important existing sectors
- Promoting regional economic transformation through innovation and new sector development
- Fostering small business development and entrepreneurism.
- Identifying and addressing economic barriers not related to workforce

Building upon Existing Regional Assets

Nearly all regions developed strategies that included the first two major strategic approaches. A requirement of WIRED was the creation of an asset map, which laid a foundation for the development of an overall strategy and the creation of each region's implementation plan.

Supporting Existing Sectors

Strategies to support important existing regional sectors were also dominant, though not universal. For example, Ohio's original focus on Interactive Digital Technology (IDT) focused on unique regional assets and growth potential, although IDT was not a dominant sector in the region. However, the Ohio example aside, most regions took the approach of designing through WIRED a regional workforce strategy that could support economic development within an existing structure. This strategic approach is reflected in the popularity of advanced manufacturing as a sectoral focus; manufacturing activities are widespread nationally and are still an important part of the economic base in most areas. As such, efforts to train workers for advanced manufacturing positions, for example, easily aligned with economic development efforts in most regions.

[45] An industry's location quotient (LQ) is derived by dividing its percentage share of the region's workforce by its percentage of the nation's employment. Industries with a LQ above 1.0 are more concentrated than the nation, while those with an LQ below 1.0 are less concentrated. An LQ of greater than 1.5 suggests that the region is highly concentrated in that industry.

Supporting Regional Economic Transformation through Innovation and New Sector Development

Economic transformation through innovation and new sector development was another strategic approach used by WIRED regions. These sorts of strategies aimed to support economic development by shaping workforce and educational systems that were more innovative and aligned with the needs of new and emerging businesses. Examples of approaches include promotion of university technology transfer and workforce realignment. New Mexico exhibited such a strategic approach with its strong embrace of green technology, which was hoped to either attract new businesses to the area or spur green business innovation within the region.

Fostering Small Business Development and Entrepreneurship

Strategic efforts to encourage entrepreneurship and small business development bear some similarity to innovation and new sector development strategies, but were less likely to focus on sector-based targets. For example, one goal of Arizona was to foster an entrepreneurial environment, in addition to supporting targeted technology and aerospace sectors. Accordingly, the region supported generalized entrepreneurial training and support, with the hope that start-ups and entrepreneurs could help create a more diverse business environment. A workforce strategy to create entrepreneurs and small businesses then ultimately aligns with economic development strategies of diversification and new industry creation, as opposed to attraction or existing industry growth.

Identifying and Addressing Economic Barriers Not Related to Workforce

Finally, some regions opted to identify barriers to economic development and develop a stronger regional collaborative structure to address issues of both workforce and economic development. For example, in Delaware one major strategy was to develop a deeper knowledge of the life sciences industry within the region. Similarly, in SE Michigan, a core strategic goal was to create a widespread understanding of the region's educational shortcomings and opportunities for remediation that could be acted on by regional partners from across the economic and workforce development system. In these cases, the strategic approach recognized that a certain degree of system transformation and collaborative development would be necessary before more specific economic strategies could be realized.

Alignment

The regional strategies developed and implemented around economic development were closely aligned with the overarching WIRED goal of promoting regional economic development. Most regional WIRED strategies were in a supportive role of economic development, as opposed to directly engaging in traditional economic development activities. The major players of workforce development—community colleges, universities, and WIBs—are mostly oriented toward training new and incumbent workers and are not well equipped to directly engage in traditional economic development. Deep cross-sector collaboration between businesses, educational entities, and workforce system agencies was necessary, but not sufficient in itself, to implement these strategies.

Strategic Actions

The most common actions carried out by regions to address strategic goals related to economic development were the following:

- Developing entrepreneurial training and resource linking
- Fostering business expansion and creation plans
- Assembling of regional information on economic conditions

Developing Entrepreneurial Training and Resources Linking

Entrepreneurial strategies represented a moderately common approach to economic development across the 26 Generation II and III regions. Budgets for 10 of the 26 regions contained some funding for the support of specific entrepreneurial activity. Not surprisingly, entrepreneurial activities and attendant funding levels varied widely; approaches included, for example, incubator support, coordination of entrepreneurial resources, small business development support, and direct development and financing of entrepreneurial training programs. For example, in Arizona an entrepreneurial training curriculum was developed with the University of Arizona; Tennessee Valley invested in the Huntsville Angle Network, which assists start-up companies; in Puerto Rico, training programs were developed and offered to entrepreneurs who had rented office space from a local business incubator, and Utah supported a unique incubator for life science start-ups that was co-located with a biomanufacturing training facility.

Fostering Business Expansion and Creation Plans

Activities in regions were also sometimes designed to support ongoing business and employment expansions. The regions collaborated directly with businesses, as well as with economic development organizations, to generate new industry-specific programs and customized training for individual firms. In Virginia the region was able to capitalize on an expansion at Fort Lee by supporting a Logistics Research Center adjacent to the site, which further enhanced capacity in the logistics sector.

The Initiative served as a conduit for bringing together economic development and business interests with universities and community colleges under a common goal of regional growth. In total, Generation II and III regions involved collaborations with 43 economic development organizations, 56 four-year colleges or universities, 100 community colleges, and nearly 2,300 employers, with the level of interaction between private interests and the workforce training providers described as positive. One strong example of an activity bridging colleges and the economic development community was the Rio South Texas Manufacturing College Alliance, which brought together local colleges and manufacturers to develop skill credentialing standards and training curriculum for use throughout the region.

Assembling Regional Information on Economic Conditions

Economic development efforts were supported through the informational aspects of the Initiative. Each region was required to engage in asset mapping and assessment as part of their activities; however, many regions developed significant additional data on aspects of the region important to economic development, such as identification of growth industries and direct discussions with businesses about needs for training. For example, in Arizona an interactive

Web-based survey of businesses was developed with help from the major economic development organizations, which specifically gauged business needs. The database of responses was made widely available to regional partners as a way of using data to align the efforts of economic developers, workforce developers, training organizations, the workforce system, and other regional partners. In SW Indiana, four major research studies were completed during the grant period, which provided information that was beneficial to both workforce and economic developers regarding regional assets and the potential of major industries for success in the area.

Challenges

The challenges with implementing a regional economic development strategy often involved collaboration and strategic conflict. In the past, workforce and economic developers have been at odds in some areas of the country. The successful regions overcame these issues to address broader regional strategic goals. Challenges included the following.

- The need to build relationships
- Economic developer participation
- Conflict between strategies

The Need to Build Relationships

A key challenge in developing any regional collaboration is establishing relationships among stakeholders where none previously existed. In some cases, particularly in geographically large regions, relationships between organizations were not strong merely because there had not previously been an opportunity. As discussed earlier, the large 36-county Southwest Minnesota region struggled even during the grant period to bring partners together because of travel time and weather, which ultimately led to a restructuring of the regional leadership committee. The fact that bringing partners together was a challenge even during the implementation of a major grant reflects one reason why in some regions stakeholders had not previously developed relationships.

Economic Developer Participation

In some regions, however, the difficulty in bringing together partners reflected an environment where stakeholders may have previously been competitors. Economic developers typically serve a specific geographic area, such as a city, county, or the entire state, which does not necessarily align with the areas assembled for the initiative. Additionally, both private and public economic development organizations exist, and they often serve slightly different interests. As such, the economic development community is more likely to have competed with other entities in the regions for resources. Regions that overcame these challenges tended to be those that had a strong state component in the initiative, such as Utah, where state-level economic development and workforce development services were dominant. When the Utah state government pushed these two agencies to collaborate, strong alignment was quickly formed. However, in other regions there were a greater number of economic development interests with which to contend.

Unfortunately, there were fewer economic development partners compared to workforce development and education partners in the initiatives. In fact, seven Generation II regions and seven Generation III regions did not appear to have involvement from any economic

development agencies. Although these regions still pursued economic development strategies, development and implementation were spearheaded either directly by stakeholders from industry or by workforce or education leaders. Whether economic development representatives were not available, not interested, or not invited, this clearly illustrates the challenge of bringing representatives from economic development to the table.

Conflict Between Strategies

Finally, it was occasionally observed that economic development goals conflicted with the broader strategic goals of WIRED and led to difficulties in decision making and implementation. In Ohio, the regional strategy was originally highly targeted. However, recession pressure mounted to move resources away from Interactive Digital Technology projects and toward efforts with more immediate benefits for existing businesses and displaced workers. As a consequence, the region found it difficult to make timely decisions or to gain consensus around strategic investments. Another example of goal conflict was observed in Wisconsin, where the goals and needs of the Janesville area, the Madison area, and the rural areas to the south and west were not seen as different and conflicting by some stakeholders. In both regions, these situations were indicative of issues that were encountered during the initial planning period and were unable to be resolved in a manner that could balance the broader goals of building the regional economy with the goals of individual factions within the region.

Promising Practices and Illustrations

Perhaps the strongest example of a regional economic development strategy was observed in Texas. According to the partnership survey,[46] approximately 30 percent of this region's partners were from the broader economic development community and at least five independent economic development agencies in the region were involved in the regional initiative. The result was a region that was heavily focused on economic development strategy and that implemented activities designed to bridge gaps between industry and education for the purpose of economic growth.

In addition to getting the economic development community to work with workforce development and education, Texas succeeded in pulling together the area's economic developers into a region-wide collaborative. During WIRED, a new formal structure called the Rio South Texas Economic Council was formed to unite the region's economic development organizations. Although individual economic development organizations remained independent, the new council served as a common entity for collaboration on projects, and a common point of contact from which to disseminate information on the region. In developing the council, the economic development community participated in the creation of a shared economic vision for the community and formalized a willingness to work together. Both the vision and the formal structure represented firsts for the region and were being sustained following the end of the grant period.

[46] An in-depth discussion of the findings of this survey can be found in "Partners, Networks, and the Economic Context for Generation II and III WIRED Regions: *The Second Interim Report of the Evaluation of Generations II and III of WIRED."*

Implications

The success of economic development strategies and the success of workforce development strategies have a strong relationship. Although as an initiative, WIRED focused heavily on working through the workforce system, it was apparent that all 26 regions were highly concerned with what could be described as economic development issues, such as establishing growth industries, raising incomes and job opportunities, and helping businesses thrive. The primary tools of the workforce and educational systems—training and educational programs—are limited on their own; regions that had success in implementing strategic economic development goals typically did so through collaboration and alignment of interests across partners. Regions benefitted from the shared identification of pressing regional economic needs and from sharing possible solutions. For example, regional leadership groups conducted research and agreed upon target sectors, which then led businesses and trainers to partner in producing tailored responses that met the needs as closely as possible.

Of course, economic development strategies are subject to challenges such as a lack of involvement by economic development representatives, and in particular, private economic development offices. Public-sector economic developers appeared to be more willing to join the regional effort than those from private organizations. In some cases, particularly in rural regions, this may only indicate a lack of private economic developers; still, a complete collaborative effort should seek a full range of relevant stakeholders. The lack of participation may reflect an ongoing need for regional, cross-agency partnerships to expand their reach.

Finally, with the Initiative as a whole oriented toward workforce development, the inclusion of explicit economic development strategic goals and the involvement of economic developers in individual regional activities are signs of success. The flexibility of the original granting approach and the guidelines fostering an inclusive collaborative environment may have enabled concerted action on the part of workforce and economic development interests.

Overarching Goal #2: Regional Partnerships and Collaboration

A key facet of regional collaboration is the importance of relationships that allow regions to envision their future prosperity; identify available resources; and build support among key stakeholders to implement, monitor, and refine action plans. Throughout the Initiative, regions have recognized the importance of utilizing and building upon relationships with stakeholders in like organizations as well as across organizational types. Virtually all regional partners recognized that partnership building and social networking were key elements of the overall strategy of regional transformation and development. These strategies are essentially means to an end, yet the process of establishing relationships is a prerequisite to regionalism; these partnerships are critical to support the implementation and long-term sustainability of the regional initiatives that more directly impact income and employment outcomes, as well as workforce system transformation.

Findings

The following points summarize the main findings regarding regional partnerships and social networking strategy and activities across Generations II and III:

- Establishing and building upon existing social networks was an explicit strategy for some regions, and an implicit one for the others. It was recognized universally as a key element in working towards regional economic and workforce development goals.
  - Regions typically integrated social networking as part of the efforts to build partnerships and formalize working relationships that were necessary to work toward concrete goals, such as developing curriculum, sharing resources, or founding new training programs.
  - In regions where partnership building and social networking were included in the region's plans as an explicit goal, they were often included in the context of establishing partnerships, developing leadership, or changing the structure of relationships. For example, N. New Jersey sought changes in the region's "atmosphere and networks" with a primary goal of bringing together education, workforce, industry, and economic development interests.

- All regions put a strong emphasis on developing and strengthening existing relationships, and establishing and formalizing new ones, including those between similar organizations (e.g., community colleges) and those that reached across different kinds of organizations (a community college and a university). Relationships that cut across different kinds of organizations were easier to establish and maintain than were relationships among similar organizations.

- The social-networking strategy strengthened the strategic position of the region and the sustainability of its efforts.
  - The strategy allowed partners to leverage their combined resources (funds, staff, and knowledge) to achieve common goals.
  - Regions that were successful in sustaining programs developed during the Initiative often expected to rely on new alliances to provide the infrastructure and financial support after the end of the grant period.
  - The strategy gave the region greater influence on policy issues with the potential to affect industry health and growth.

Regional Strategies and Actions

There are many ways to engage in partnership building and social networking, depending on the party convening stakeholders and the formality or informality of the approach, as well as the inherent characteristics of the region. The following list categorizes some of the most common strategies and actions that were used by the regions in Generations II and II:

- Tapping existing core leadership to recruit others with shared needs and interests.
- Creating working collaborations between multiple types of stakeholders (e.g., workforce development, economic development, private sector, education, and government).

- Collaborating with rural areas to establish a cohesive regional view.
- Developing a system for maintaining communications through both technological and traditional means.

Tapping Existing Leadership

In regions with a more established regional structure, social networks could be led by existing leaders who then reached out to recruit new parties into a regional coalition. For example, Kansas created formal workgroups that allowed regional stakeholders to build upon and strengthen preexisting connections as well as form new partnerships with representatives of other organizations in the region. Several of the region's partners also worked through pre-existing networks to identify and recruit new partners for the WIRED effort. Utah had a similar situation where many stakeholders knew each other due to the tight-knit nature of the community and the geographic concentration of activity centered around Salt Lake City. Relationships in Utah were expanded through both the drive of a strong and outgoing leader based in state government and the connections in the region's private and educational sectors.

Cross-Agency Collaboration

All regions at some point formed a board with some degree of advisory or leadership responsibilities; the purpose of these boards, either directly or indirectly, was to provide direction but also to provide a venue to specifically bring together the representatives from major stakeholder groups in the region. Regions frequently chose to develop numerous advisory committees focused on specific sectors or issues, which served to bring together similar stakeholders in a working relationship. For example, Virginia's leadership structure was designed to include eight "topical" panels to address both target sectors and stakeholder types, including three levels of the educational system, the workforce system, and a task force panel addressing minority issues. The creation of boards and working groups stemmed from the regions' strategic use of existing leadership networks. This approach gave stakeholders opportunities to assess their existing assets and the assets of other partners, identify and address gaps, and leverage each other's resources.

Facilitating Collaboration in Rural Settings

Another key strategy tied to networking involved the broad theme of creating a cohesive regional viewpoint, particularly across regions that included large areas of rural countryside and/or mountainous terrain that made frequent face-to-face interaction difficult. For example, the geography (i.e., long driving distances, poor road conditions and harsh winters) of the area that was included in Minnesota made it difficult to find and use venues that were convenient for stakeholders from outlying areas of the region. Nevertheless, the stakeholders shared common concerns about the future of their communities and common interests in diversifying the regional economy to include both agriculture and alternative energy.

In some regions, thematic working groups were created, which served as a natural venue for forming and expanding networks among members that already had common interests. Wisconsin and Oregon are but two examples of regions that created several thematic working groups. Under this approach, the networking strategy was not necessarily explicit. Still,

thematic groupings both took advantage of existing networks and encouraged natural networking over shared interests and goals.

Facilitating Communication Using Technology

Finally, in some regions the development of a formal, technological solution to boosting communications among stakeholders was occasionally employed, typically in regions with large geographic divides. An obvious example of technology as a social networking strategy was illustrated by Ohio, which invested heavily in the software and hardware capacity necessary to hold virtual meetings among regional partners (and create virtual learning communities for students).[47] However, many other regions also made use of technologies such as teleconferencing, Web portals, and regular e-mail updates to keep two-way information flows established between regional stakeholders.

Another common activity was the development of technological solutions to social networking over distances. Holding meetings via conference call would represent the simplest approach; however, some regions innovated with more advanced approaches. In Arizona, where a trip between Yuma and Tucson could take nearly four hours each way; the region conducted many meetings via videoconferencing, in addition to moving meeting sites around within the region.

The most innovative activity to encourage virtual social networking, however, occurred in Ohio, which conducted many meetings using "Second Life," an online virtual world where participants can meet and interact using computer avatars.[48] Use of Second Life not only mitigated some of the problems associated with bringing together participants from across a rural 26-county region, but it also fit with the region's sectoral focus on Interactive Digital Technology.

Of course, the most common form of social networking takes place through both formal and informal face-to-face events sponsored by the regions. All Generation II and III regions engaged in this form of social networking to some degree, whether or not it was part of an explicit strategy. Examples of these types of events included kick-off meetings, quarterly group meetings, and final meetings to celebrate the accomplishments of the Initiative.

Alignment

The social networking strategies employed by regions were closely aligned with the overarching WIRED goal for regional partnerships, a necessary condition for the knowledge sharing and innovation that are the basis for transforming the ways in which organizations work together to revitalize and more closely link their work to the future of the region. These undertakings are necessary to build, open, and expand the lines of communication among participating organizations. The communication channels are vital in order to share knowledge and discover opportunities for leveraging resources to address common interests and needs, and, by extension,

[47] "Appalachian Ohio WIRED (video presentation)," samsw12, last accessed November 4, 2011, http://www.youtube.com/watch?v=DqMS_myY2ps.

[48] In a virtual world, an avatar is a digital persona that the user can create and customize. The avatar can be based on a picture of a user or the avatar may be an entirely different (alternate) identity. See also: "Ohio University Second Life Campus," crkeesey, last accessed November 4, 2011, http://www.youtube.com/watch?v=aFuNFRie8wA

make it possible to achieve the larger goals of workforce system transformation and economic benefit to the region through employment and wage growth.

A challenge faced by some regions, however, was the dilemma of how to engage in social networking within the context of a workforce development grant program. The steps taken to create a regional structure, such as establishing a leadership board and identifying assets, lend themselves well to a social-networking strategy, since stakeholders can naturally be drawn together around a common purpose. Still, it was observed that some regions initially struggled to engage in more overt communications and networking activities, such as creating a Web site to communicate regional goals, given uncertainties about allowable fund uses and appropriate activities within the Initiative. Ultimately, however, most regions overcame these hurdles, and the participating regions were left with stronger social networks because of the work conducted during the grant period. In theory, this should yield future benefits in the form of better regional collaborations.

Other Challenges

The following summarizes the main challenges regions encountered as they implemented a partnership-building and social-networking strategy.

- Historical conflicts between organizations
- Intra-regional competition

Historical Conflicts

The most common social-networking challenges faced by regions involved overcoming divisions among organizations. Bringing together parties within the region involved developing tools and/or creating an environment that could facilitate communication, networking, and collaboration where previously it either had not developed on its own or had not achieved the intended result.

Getting organizations that did not previously associate to form partnerships requires that regions find ways to overcome historical divisions and build an environment of trust. For example, in one region, the two WIBs had a history of conflicting interests that hinged on an urban-rural divide, as well as differing industries and economic environments. Although the Initiative provided a financial incentive for the two WIBs to work together as part of a shared region, it was not sufficient to overcome the lack of trust that had been built over an extended period of time. As a result, the situation seriously delayed program implementation. Only through improvements in the region's approach to developing its social network did progress occur; regional meetings were expanded out of the main city to increase participation in the rural areas and a facilitator was brought in to help aid communication among the board and regional stakeholders.

Intra-Regional Competition

In some instances, organizations within a region may have even been encouraged to compete because of the mission or funding structure of the agency. For example, community colleges may compete with one another for students if state funding is tied exclusively to enrollment

levels, which can discourage sharing of curriculum, equipment, or instructors that could be seen as being part of a competitive advantage. The service areas' boundaries defined the market and limited competition among community college programs aimed at providing incumbent worker training for area companies. In some ways, the service areas were symbolic of established practices that served the needs of the colleges but left the college's customers, in this case employers, with limited options and a limited voice to effect change. The opportunities for feedback afforded through the region's efforts challenged the providers to be more responsive to their customers' needs.

Promising Practices and Illustrations

Social-networking and partnership-building efforts occurred to some extent in every region. Although there is no one right or wrong way to build social networks in a region, the experiences observed over the course of the Initiative suggest that some practices may be more prominent, and more successful than others. For example, one way of bringing stakeholders together was through a strong, centralized leader. The Director of Texas was widely considered to be the catalyst for social networking by recruiting partners and acting as a "shepherd" who oversaw the participation of everyone involved in the region. This director succeeded at this task because of her extensive knowledge of the region and strong relationships with many of the stakeholders.

Contrasting the single strong-leader approach to network development, a dispersed approach was employed in Oregon that assigned coordination, communication, and decision-making responsibilities across three working groups—for community colleges, K-12 schools, and the regional WIBS—in addition to the regional workforce council, which consisted primarily of representatives from private industry. The approach recognized that partnership development could be strongest among common groups, which could quickly form network bonds while participating in working groups comprised of individuals who know one another and who share common backgrounds. To encourage communication across the groups, a coordinating committee was then developed to handle day-to-day governance tasks, as well as to promote communication and networking among the individual working groups within the initiative.

Both the leader-centered and the dispersed approach to social networking and partnership development have strengths and weaknesses that must be considered in selecting a strategy for any given region. Initiative leaders in regions such as Texas, Arizona, and Utah were described by stakeholders as being "high energy" and lauded for their ability to reach out to new organizations and to negotiate new partnerships. However, at the same time there were often concerns about how dependent the success of the region became on a single person; without a central leader to develop the network, fears were expressed that some relationships might dissolve and that the level of interaction and communication among organizations would quickly decrease. Additionally, both the situation and the individual who takes on a central leadership role, can be difficult to replicate; in other regions where social networks are weak, the task of finding an individual with the connections and charisma to bring stakeholders together may simply not be possible.

The use of a disbursed structure approach can be appealing since it starts by identifying stakeholders that are likely to already be familiar and somewhat trusting of each other, then

providing a venue through which networking can be increased. The system devised in Oregon did not rely on any single individual, but instead created an environment where a certain amount of social networking needed to occur for decision making to proceed. Initially, the region struggled with communications and some stakeholders felt that the composition of the groups was not representative enough because of the number of educators and public sector stakeholders present relative to employers; still, the effort was generally considered successful by the stakeholders that participated in the project.

In terms of sustainability, networks of any kind can be difficult to maintain if either the funding to support social-networking activities disappears or there is no longer a concrete issue or activity for partners to coalesce around. A central leader that maintains a position in the community may be able to continue contacts with regional stakeholders and can still potentially be called upon to help connect partnerships in the future, as long as the individual's presence and leadership role in the community continues. The disbursed, group-based approach stands less of a chance of continuing without a central point of contact to demand accountability. At the conclusion of the initiative in Oregon, most stakeholders expected the committees to stop meeting once the grant funds expired. Although the WIBs planned to continue meeting and many of the training programs and curricula developed through WIRED were also expected to be sustained through other financing sources, the working groups and the workforce council dissolved, which effectively ended much of the networking activity between those organizations.

Implications

The social networking efforts undertaken by Generation II and III regions illustrate the diversity of strategies and approaches to implementation that can be successful for regional development. As discussed earlier, regions with a strong existing leadership structure or an already established network of relationships may be able to rely on a central party to gather stakeholders into partnerships. If a strong central leader is not available to pull networks together, natural networks may be tapped by gathering like organizations around shared tasks or through joint participation in decision making and program activities. In rural areas or regions where regionalism is new, more formal efforts may be required, such as specific outreach efforts by a trusted party, as well as the establishment of more formal networks; however, success can still be attained as long as a strong common bond or issue is established to unite a diverse array of stakeholders.

The experience of the WIRED regions suggests that social networking is an important prerequisite to success. Among the regions that reported the greatest challenges at the start of the initiative were those that lacked a shared understanding and communication across stakeholders. For example, one region suffered from infighting because of the perception that there had not been enough discussion and shared input on the needs and direction of the region, particularly from the more rural stakeholders. Although this region had some history of working together and possessed research on the needs of the region, communication and trust were lacking. In the case of another region that struggled, key decisions were made by a few dominant parties and a social-network structure was never established; as a result, many in the region were never fully on board with the sector focus and many of the earliest partners dropped

out after feeling excluded from the process. Some felt that if stronger ties had been established earlier and if decision-making had been shared, then the region might have been more successful.

Overarching Goal #3: Workforce System Transformation

The list of potential partners in the education and workforce development systems is broad, including K-12 education, community colleges and universities, WIBs and career centers, work-based learning programs, and potentially a wide range of community-based organizations that help individuals overcome personal challenges that can make job placement and retention difficult. Together, these partners possess a broad array of resources and funding streams that can support ongoing activities. Historically, these partners have shared responsibility for preparing individuals to enter occupations, pursue careers, and contribute to the growth and profitability of American companies. However, as discussed in the introductory section of this report, the existing products and services that the education and workforce systems were providing were not necessarily the ones needed by knowledge-driven, innovation-focused companies. The WIRED Initiative challenged these organizations to act and offered them an opportunity to recalibrate, realign, and redefine their partnership and roles as critical partners in economic development.

Findings

The following points summarize the main findings regarding the strategies that were developed to transform the workforce system across Generations II and III:

- The intensive and prolonged planning period that the regions participated in yielded implementation plans that were aligned, to varying degrees, with the overarching goal of transforming the workforce system.
- The regions varied in their interpretations of what it meant to transform the workforce development system and in terms of what was deemed possible to achieve in their regions within the grant period.
- Transforming the regional workforce development system was a complex, challenging, and comprehensive process. The incremental changes that were made in the regional workforce systems helped to create a foundation for ongoing change efforts.

Planning Period

ETA provided the regions with a general framework to guide their efforts. Some activities were required by ETA as a condition of the grant investment. While generally broad, they included important core processes that define the regional transformation model. The six steps of the conceptual framework for regional transformation included:[49]

[49] U.S. Department of Labor, Employment and Training Administration, *Six Steps of Economic and Workforce Transformation through WIRED*, (Washington, DC, June 1, 2007), last modified January 13, 2009, http://www.doleta.gov/wired/tools/6steps.cfm.

- Identifying the regional economy
- Forming a core leadership group
- Conducting a SWOT analysis
- Creating a shared identity and economic vision
- Devising strategies
- Leveraging resources and implementing

ETA's technical assistance strategy was designed to insure that all of the regions constructed implementation plans that included regional goals, strategies, timelines, and associated performance measures.[50] The regions were given a written framework, instructions, and direct guidance from a designated "ETA Lead" (i.e., primary contact person for the grant), and access to national technical assistance providers. Once prepared, the implementation plans then had to pass through multiple levels of review and approval within ETA prior to allowing the regions access to any of the grant dollars. It should come as no surprise, then, that the regional strategies were responsive to, and aligned with, those of WIRED.

Meanings of Transformational Change

Working with partners to align programs and curricula for the immediate and ongoing benefit of companies in target sectors is a transformational change because of its lasting impact on instruction, the potential for the development and articulation processes to be used to address future needs, and the longer-term benefits of having opened lines of communication among stakeholders in different organizations. By ETA's definition, the regional strategies could also be viewed as incremental changes that addressed some, but not all, of the elements of system transformation, as published by ETA in mid-2007; roughly the same time that Generations II and III were developing their implementation plans.[51] These elements included:

1. Operating as a talent development system, no longer defined as a job-training system. The goal is to educate and prepare a workforce on a national or global standard.

2. Transforming workforce investment system formula funds, providing significantly increased opportunity for post-secondary education for lifelong learning opportunities aligned with the region's talent development strategy.

3. Breaking down the array of siloed programs and services within the workforce investment system.

[50] Additional information about the technical assistance strategy can be found in *Workforce Innovation in Regional Economic Development National Evaluation, Volume I: Cross-Generational Findings*, "Chapter III, Section E," 42.

[51] ETA, "Elements of Workforce System Transformation, (2007). See also, Workforce3One, "Tools for Transforming the System: Guidance to Get Us Where We Want to Go," (Webinar) (2007), https://www.workforce3one.org/view/3367/info. An additional discussion of these issues can be found in "Innovation Strategies for a New System of Workforce Development and Lifelong Learning," The Council for Adult and Experiential Learning for Innovation Network for Communities, (November 2008).

4. Establishing WIBs that 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. Aligning economic and workforce development areas, with the regions adopting common and innovative policies across the workforce, education, and economic development systems and structures that support talent development and the regional economy.

6. Establishing an agile workforce investment system able to serve the innovation economy, recognizing the reality that two-thirds of all new jobs are created by small businesses.

7. Creating a workforce investment system that 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 and support strategic planning, routinely track economic conditions, measure outcomes, and benchmark economic competitiveness in the global marketplace. [52]

In this vision of a transformed workforce system, ETA envisioned WIBs as key and active partners, contributing funders, and supporters of regional economic development—working with regional partners including employers, education, and economic development agencies in a comprehensive, flexible, and responsive workforce system and using the combined resources of partner organizations to pursue shared goals. The document is particularly relevant because the role of local WIBs was emphasized in Generations II and III. The publication of the Elements coincided with the implementation of these regional initiatives.

Incremental Change

All of the regions chose strategies that addressed one or more elements of ETA's transformational framework, with some being more common than others. Some of the more common regional strategies included:

- Providing labor market information, obtaining survey findings, and assembling other data to support regional decision-making processes (Element 7).
- Facilitating interaction among educational institutions to develop education and training programs aligned with industry standards (Element 1).
- Establishing common and innovative policies between educational institutions, leading to the development of new programs and alignment of programs across institutions (e.g., community colleges and universities) (Element 5).
- Creating workgroups and other forums intended to engage the WIBs within the region, (Element 4).
- Providing WIA funds to help pay tuition costs (Element 4).
- Offering education and training support for entrepreneurs (Element 6).

[52] "ETA, Elements of Workforce System Transformation." See also, "Tools for Transforming the System: Guidance to Get Us Where We Want to Go (Webinar)," Workforce3One, www.workforce3one.org/view/3367/info.

- Developing and tracking performance measures within the context of creating and monitoring the regional implementation plan (Element 7).

Less common elements of regional strategy included:

- Allocating formula funds to support ongoing regional efforts (Element 2).
- Breaking down funding silos (Element 3).
- Aligning the boundaries of WIBs and economic development boundaries to support coordinated regional efforts (Element 5).

In many respects, the differences between the regional strategies and the elements of transformation are ones of degree rather than kind. For example, providing training programs to support entrepreneurs is part of a larger strategy to support small business development and job creation. Encouraging WIBs to work collaboratively to discuss how they might support the workforce needs of a specific sector led to the establishment of WIB consortia with longer-term roles in the regions. Being an active contributor of labor market data and monitoring workforce outcomes helps change the public's perception of the workforce investment agencies from being responsible for job training and placement to playing a crucial role in promoting economic development and job creation.

Regional Strategies and Activities

In the first interim evaluation report, initial efforts to establish structures and processes to open the lines of communication among the partners in education and workforce systems were undertaken.[53] All of the regions were successful in engaging a broad array of organizations, although some regions found it more difficult than others to attract as many employers and education partners as they had hoped.[54] Furthermore, some regions were more advanced than others in the extent to which the culture and history of the region supported collaboration.[55]

Findings

- Most of the regional partners took a developmental approach, establishing relationships and building trust by working in workgroups that involved representatives from organizations across the region.

- Many of the regional activities focused on improving existing programs and making improvements in existing programs and/or improving the linkages between programs and institutions, particularly in the development of pipeline strategies for students.

- By leveraging the resources of partner organizations, regions were able to launch programs on a larger scale than would have been possible had they worked alone.

[53] "Community Context for Collaboration," *Nurturing America's Growth in the Global Marketplace Through Talent Development: An Interim Report on the Evaluation of Generations II and III of WIRED.*

[54] "Organizations Not Included," *Nurturing America's Growth in the Global Marketplace Through Talent Development: An Interim Report on the Evaluation of Generations II and III of WIRED*, 27.

[55] "Community Context for Collaboration."

- Most WIBs tended towards the traditional, providing labor market data and WIA and other grant funds to support training for dislocated workers and low-income job seekers.

- Despite gaining considerable information and insights about the workforce skill needs of employers and companies in target sectors, the local WIBs did not take full advantage of that information to help AJCs work more effectively with customers.

- Differences in policy and practice among and between community colleges, universities, WIBs, and AJCs created barriers to successful implementation that were difficult to resolve.

The regional activities took several forms, each of which was dependent upon collaboration among regional partners and was aligned with the region's strategic goals.

Work Groups

Each of the regions established governance structures, formed workgroups that had diverse membership, and engaged partners and industry representatives in target sectors in discussions designed to identify and seek possible solutions to regional workforce development needs.[56] Among executive-level participants, mutual involvement in other community development projects, and/or prior successful participation in other collaborative groups, made it easier to open a dialogue, identify shared needs, and explore possible solutions.[57] Their early involvement paved the way for managerial staff to take action. For example, in Arizona, the community college took a leadership role in convening representatives from a nearby university and staff from college campuses in other areas of the region to develop articulation agreements that would hasten the completion of college degrees by adult students. In Puerto Rico, presidents of nearby universities, executives of an area hospital, and executives of other participating organizations were involved in initial, high-level discussions with INTECO, the economic development entity that was leading the WIRED effort. Ultimately, this set the stage for human resource staff from participating organizations to participate in workgroups designed to identify skill needs and gaps in targeted occupations. This information was vitally important to the training providers that developed customized trainings for employees.

Knowledge Gaps and Pipelines

These activities focused on making improvements in existing programs and/or improving the linkages between programs. In Tennessee, Texas, Kansas, and other regions this included incorporating STEM fields into high school instruction, providing training to teachers to help them incorporate STEM instruction into classroom activities, and upgrading technical training for students in machine trades. Other program improvements included the introduction of contextualized ESL training in Idaho; creation of innovative, instructional-simulation methods in Ohio; Wisconsin; and SW Minnesota; and campaigns in Kentucky to encourage high school students to continue their education to pursue careers in high-growth, high-demand industries.

[56] "Governance Structures," *Nurturing America's Growth in the Global Marketplace Through Talent Development: An Interim Report on the Evaluation of Generations II and III of WIRED*."

[57] "Interlocking Leadership," *Nurturing America's Growth in the Global Marketplace Through Talent Development: An Interim Report on the Evaluation of Generations II and III of WIRED*."

High School Postsecondary and Career Pathways Initiative—Kentucky). A primary strategic goal of Kentucky was to address the pipeline of workers for the region, which local stakeholders were not sufficient to support the needs of existing companies or support economic growth. The region had some success implementing a program in conjunction with Junior Achievement that promotes careers to high school students. The region also invested in the Campaign for College program, which trains guidance counselors on how to promote college attendance and careers to high school students. Both programs have been publicly recognized and well received regionally. The Junior Achievement career program has been so successful that Kentucky is supporting a statewide rollout. Despite the strong success of programs at the high school level, however, there was no evidence of a strong impact on all levels of the system that comprise a workforce pipeline, as more specific interventions are needed at the tech college, community college, and four-year university level to tie the education system together.

Once introduced and incorporated into the middle- and high-school curricula, STEM instruction can continue without being dependent upon ongoing grant funds. However, many regions decided that it was important to build the knowledge and capacity of teachers to integrate STEM concepts into instruction and invested in special programs to help teachers do that. These efforts imply lasting benefits for the school system and its students, but did not appear to require changes in school district policies unless an emphasis on STEM was incorporated into district- and building-level school improvement plans.

Pipeline strategies were used in several regions, with the intent of aligning career preparation activities and the curriculum from upper middle school and high school through graduate school with the goal of preparing students for occupations and careers in target industries, or the workforce as a whole. Building a comprehensive and coordinated educational system around a target sector has the potential to have a lasting impact on the industry, establishing an ongoing pipeline of students prepared to enter occupations and pursue careers requiring varying levels of education. The following examples illustrate the benefits and challenges associated with implementing a workforce pipeline strategy:

- *Biosciences.* Utah is home to many major bioscience companies, smaller specialized research and development firms, and supplier companies. Rapid industry growth and diversification, coupled with a limited supply of skilled workers, made it necessary for companies to recruit employees from outside the region and outside the state. Regional leaders adopted a pipeline strategy to help existing residents follow career pathways into occupations and careers across the biosciences sector. Utah's biosciences pipeline emanated from the Governor's Office of Economic Development and the State's Education Agency with a combination of activities ranging from STEM instruction in middle and high school education, applied research experiences for high school students, high school career center programs for biological science technicians, and college programs to fuel greater interest in careers that required higher-level education and training in the biological sciences.

- *Biotechnology and Life Sciences.* New Jersey worked to bolster the pipeline of workers trained for biotechnology and life science occupations by investing in initiatives at all levels

of the educational and training system. Strategic efforts included the NJ Bio-Educators Consortium, which brought together educators at all levels of the system; the development of an interdisciplinary college degree program; new articulation agreements between two-year and four-year colleges in the region; and a career awareness program to create YouTube videos and other materials targeted toward a young audience. The pipeline efforts were well received locally and got strong ratings from stakeholders for the relevance to employers, which was an outcome of strong industry participation in the initiative. Another strength was that the region was engaged at all levels of the educational system to promote the development of a truly comprehensive pipeline that workers can enter, exit, and reenter at many different stages.

- *Water Technology.* Wisconsin's investments and activities were aligned with the economic development strategy of the Milwaukee 7, a regional economic development consortium. The core of those efforts focused on building the water sector. A sort of asset map was developed, which provided an overview of the density of water-related companies in the region and helped identify the skill sets that are required by industries in that sector. The region invested in projects that established career pathways in the region that included career exploration activities for high school students as well as college preparatory classes aligned with the sector, created articulation agreements between secondary and postsecondary education institutions, promoted sector-based entrepreneurship, and provided opportunities for lifelong learning. The University of Wisconsin demonstrated its commitment to the effort by established academic programs that focused on multiple aspects of water technology.

- *Renewable Energy Manufacturing.* New Mexico had mixed success with its pipeline strategy, which was originally intended to create a workforce pipeline for green manufacturing jobs. Although the region has successfully initiated new programs at several levels, such as the collaboration between Santa Fe Community College and Santa Fe High School to develop a comprehensive engineering curriculum or the University of New Mexico green technology program, the efforts have not been fully coordinated into a comprehensive effort focused on green manufacturing. Instead, the region has developed multiple successful programs that offer workforce training in a variety of occupational skills that only loosely fit under an umbrella of "green" jobs: green construction, engineering, environmental remediation.

  Building a comprehensive and coordinated educational program around a defined area like the biosciences has the potential to have a lasting impact on the industry, establishing an ongoing pipeline of students prepared to enter occupations and pursue careers requiring varying levels of education. Depending upon the school district that implements this type of approach, the idea of aligning the curriculum with career pathways could also have far reaching implications for how other areas of the instructional curriculum are organized.

Leveraging Existing Infrastructure

The activities in this group focused on leveraging existing programs and funding streams to benefit the region as a whole. In Arkansas, the region built upon the education infrastructure to support new technologies and foster economic development. They did so by establishing two

sector-focused Centers of Excellence on community college campuses, each providing specialized classes, advanced instructional equipment, and information on career pathways. The region also leveraged the existing infrastructure by co-locating an area AJC on a community college campus.

Depending upon which approach is taken, leveraging elements of the existing workforce development infrastructure can have broad implications for individuals, institutions, and agencies. By working together, community colleges expanded their capacity to provide instruction by sharing their curricula and were able to do so in a much shorter period of time. By opening the lines of communication, these and other institutions also have the potential to use their newly formed partnerships to advance a common agenda.

Systems Integration and Transformation

The emphasis on systems integration suggests the development of a more consolidated and comprehensive partnership in which policies, programs, and funding streams are fully aligned and responsive. As this discussion makes clear, very few regions were explicit about a goal of transforming the workforce system, with some regions more focused than others on the idea that their efforts would contribute to an ultimate goal of systems integration. Two regions, Connecticut and Mississippi, expressly stated their ultimate goals in terms of comprehensive systems transformation, although their approaches to doing so differed considerably. In Connecticut, the emphasis was on "creating a talent-development system,"[58] which the region defined as an effort to link education, workforce, and economic development system partners in ongoing collaboration with employers. In the case of Mississippi, state leaders were deeply involved in preparing both the initial WIRED proposal and the regional implementation plan. They viewed the regional effort as a test site for a model that would ultimately be used to "transform the State's workforce development strategy"[59] using the working title of "Momentum WIRED" to emphasize the link between the region and the state's "Momentum Mississippi" initiative. In practice, the Connecticut initiative focused efforts across the continuum of the education and workforce systems, being sure to gain the involvement and active support of executive-level leadership of all pertinent organizations and institutions. In Mississippi, the initiative closely resembled a sector initiative that engaged three community colleges and small companies in efforts to create better-trained welders for the ship-building industry. Both approaches were unlikely to reach their broader systems-transformation goal until sometime after the grant period ended, yet both were committed to making a long-term commitment to doing so.

WIBs

Other activities undertaken by the regions focused on making structural changes that would affect the relationships and interaction among the workforce investment system partners (local WIBs and AJCs) and regional partners from education and economic development.

Co-location. This structural change, which was undertaken in Arkansas, was designed to integrate workforce and education by establishing AJC service centers on local community

[58] Connecticut Regional Implementation Plan.
[59] Southern Mississippi Implementation Plan.

college campuses. This approach combined the resources of the community college with the information, tools, and support system provided by the AJC. In N. California, the AJCs in the region worked in partnership with local economic development agencies to carry out business retention programs. This work was done explicitly to position the region's AJCs to do more than help its established target population of disadvantaged individuals.

WIB Consortia. The formation of consortia was intended to establish and strengthen the lines of communication among the local WIBs within the region and allowed the WIBs to establish an agenda that included, but was not limited to, the specific programmatic needs of WIRED. Several regions, including SE Wisconsin, approached this task by convening representatives from each WIB to participate in ongoing discussions that continued after the grant period. The ongoing nature of the Oregon consortium was evident as WIB directors continued meeting on a quarterly basis to explore further opportunities to work together. In Delaware, the WIRED funds provided a catalyst for a consortium of the region's 13 WIBs. Under the auspices of WIRED, the local WIBs and AJCs in N. New Jersey established a regional WIB consortium that broke a long history of independent, parochial behavior in its workforce community. In stark contrast, ten AJCs in Ohio worked independently of the region, and each other, to combine WIRED funds to supplement WIA funds for training of dislocated workers. The factors that contributed to this approach are discussed in a subsequent section on barriers.

Responding to Changing Economy

Shortly after Generations II and III began to implement their regional plans, recessionary pressures began to mount and the regions came under increasing pressure to change their strategies and focus their existing assets on a growing population of dislocated workers. These pressures affected the eastern states and Midwest, and gradually extended across the country. Some of the regions responded by gathering and reviewing data and reports about these pressures and by making substantial changes in their strategies and activities, while others decided to stay the course. For example, N. California reassessed the region's economic assets and decided to switch from information technology and agribusiness to higher-demand sectors of renewable energy and health care. N. New Jersey, SE Wisconsin, and Mississippi also changed their targeted sectors.[60] While the change in targeted sectors surely diverted the attention of some staff in partner organizations and agencies, it did not change these regions' fundamental commitment to strategic and regional collaboration. Indeed, the collaborative planning process, coupled with the flow of data from regional partners that included the local WIBs, was instrumental in helping the regions make these strategic choices.

Challenges and Barriers

Despite the strong desire of regional leaders to create a workforce with the skills needed to support economic growth in target sectors, partners encountered an array of challenges.

[60] *Nurturing America's Growth in the Global Marketplace Through Talent Development: An Interim Report on the Evaluation of Generations II and III of WIRED.*

K-16

Educational institutions, particularly community colleges, had grown accustomed to working within geographically determined service-area boundaries and rarely ventured outside them. Due to the size of the regions, it was common to have several community colleges within the region that were very protective of the business relationships that had been established with area companies that sought incumbent worker training. Efforts to overcome this challenge met with varying levels of success. In SE Michigan, the heavily urban region was served by nine community colleges that together formed a consortium (SMC3). Each college had obtained formal approval and support from executive-level leaders of each institution and had established a set of agreements governing how the consortium would serve the region's education and training needs. In Mississippi, three community/junior colleges agreed to serve as "Centers of Excellence." Each campus agreed to adhere to the planning requirements that were established by a single business partner that had been invited by the governor to lead the regional effort. The colleges met the administrative requirements and program standards that the business leader insisted upon, but limited collaboration among the colleges and continuing concerns about competition for available students interfered considerably with the original plan for creating interdependent Centers.

Universities

The accreditation criteria for many baccalaureate and graduate degree-granting colleges and universities placed more emphasis on faculty research and publication than on addressing workforce development issues and needs. As a result, universities had tended to be on the periphery of previous workforce development efforts. Additionally, local AJCs were not usually viewed as an ongoing source of students for university programs.

While universities in several regions remained reluctant to participate in the regional efforts, several factors helped overcome this barrier. One helpful factor was the recently established "Carnegie Foundation Community Engagement Classification," which is an endorsement linked with the Foundation's national accreditation framework for higher education.[61] In Ohio, the opportunity to earn this prestigious classification directly influenced Kent State University/Tuscarawas Campus to participate in the regional effort.

Organizational Culture of WIBs. In some regions, WIBs and AJCs believed that their purpose and activities were dictated by WIA Federal legislation, and that the Act's emphasis on training and placement of low-wage workers ran counter to the idea of fostering strategic partnerships and regional collaboration around economic development goals that focused on the creation of high-skill, high-wage jobs.[62] This was a contributing factor in Puerto Rico, where one of the WIBs was very protective of its WIA funds and was convinced that the purpose of WIRED ran counter to the mission of the local WIB and AJC.

[61] Carnegie Foundation for the Advancement of Teaching, Community Engagement Classification, www.carnegiefoundation.org/descriptions/community_engagement.php.

[62] 105th Congress, *Workforce Investment Act of 1998, (Public Law 105-220)*, (Washington, D.C., 1998). last accessed November 4, 2011, http://www.doleta.gov/regs/statutes/wialaw.txt.

Issues associated with the organizational and institutional culture also created barriers to successful collaboration between local WIBs and projects focused on supporting emerging sectors and entrepreneurial ventures. This was particularly evident in one region in particular, but may have been present in other regions as well. The region that encountered difficulties had proposed an idea for a regional effort that was heavily influenced by the interests of several university-based information technology entrepreneurs. The WIRED proposal sought to build upon related centers of sector expertise on other nearby college campuses. Despite being awarded grant funds from ETA to pursue the project, issues arose with the WIB fiscal agent who had a long career in the workforce system that dated back to the days of CETA.[63] The fiscal agent, who also served as the director of the local AJC/WIB, was reluctant to support the project and either unwilling or unable to approve expenditures. Unlike other regions, the fiscal agent was not willing or able to interpret and apply H-1B regulations and instead required that all expenditures be explicitly mentioned in order to receive approval. Eventually, as the regional budget remained under-expended, funds were allocated to the fiscal agent and distributed to some of the other local WIBs in the region whether or not they were involved in the regional effort.

Observations and Promising Practices

Across Generations II and III there are numerous examples of promising practices, several of which have been mentioned in this section on Workforce System Transformation. Appendix A contains more detailed descriptions of innovative practices undertaken by several regions, including:

- **Central New Jersey**. This region was exemplary in several respects, including the manner in which its partners, including the local WIB, supported and oversaw the regional initiative. From the composition of its board to its front-end research and its numerous projects, the region demonstrated an ability to leverage the resources of numerous partners to respond directly to industry needs.
- **Northern Oregon**: This region placed a heavy emphasis on growing a talent pipeline, using four primary strategies to help students and teachers understand the occupations, careers, and skill requirements for positions in the semiconductor and other "high tech" industries. Activities included a regional workforce readiness assessment and certification; a career-related learning experience process.
- **South-Central Kansas:** This region featured an effective collaboration between two local WIBs that co-chaired the region. Although they had worked together in the past, the Initiative strengthened their collaboration considerably, setting the stage for partnerships and the leveraging of resources to address future regional needs.
- **Connecticut:** As mentioned previously, this region's strategy was decidedly systems-focused. The activities that were undertaken in the region were made possible by the innovative approach that the regional partners used to work around funding silos. Without the commitment of regional leaders this silo-busting effort would not have been possible.

[63] Comprehensive Employment and Training Act.

Implications

ETA's vision for a transformed workforce system was captivating but beyond the ability of the regions to achieve in the relatively short time period of the grant. In several cases, the elements of transformation that ETA offered reached far beyond what local WIBs believed were permissible under the requirements of WIA. In fact, some WIBs that served as fiscal agents were concerned that the expenditures that were made in conjunction with the Initiative may ultimately not be allowed (or reimbursed). This type of thinking, whether justified or not, made it difficult for some regions to be as innovative as they originally intended.

Despite efforts to communicate the purpose of WIRED and the potential of positioning the workforce system as an important partner in economic development, many regions did not seem to fully embrace the idea, preferring instead to continue established practices. Indeed, there were instances where the communications channels within regional WIBs and AJCs were so disconnected from WIRED that information about career opportunities, skill requirements, job openings, and training needs were not shared with case managers in nearby offices.

The emphasis on integration, whether across systems or across organizations, can magnify differences in policy, procedure, and practice among strategic partners. Seemingly minor issues, such as organizational schedules, equipment acquisition requirements, occupational wage categories, and fee structures can become significant barriers to program implementation. An increased awareness of and sensitivity to these issues can make implementation processes far less problematic.

Rigid decision-making was one of the most common barriers to WIB participation. In some regions, local WIBs were so accustomed to following explicit rules that they were unable to make decisions that called for reasoned judgment and innovative problem solving. This issue was particularly problematic in regions where entrepreneurship was a target sector, and in initiatives that chose innovative solutions to problems. If continued pursuit of systems integration and transformational changes are intended, managers may benefit from increasing their knowledge of change management practices, particularly if it includes specific strategies and practices intended for the public sector organizations.

Overarching Goal #4: High-Skill, High-Wage Jobs

An employment and wage strategy was the most prevalent strategic approach used by the Generation II and III regions during the Initiative. The broad strategic category of employment and wages represents activities intended to increase employment levels and boost wages within a region. Regional strategies focused on employment and wages took a high-skill, high-wage approach and focused on mid- and upper-tier jobs, which typically required specific technical skills or formal training.

Findings

The following list summarizes the key findings related to the implementation of employment and wage strategies that were observed across the 26 regions over the course of the initiative.

- Goals for increasing employment and wages in regions were explicit and were part of the plans of more regions than any other strategy.
- All regions engaged in activities intended to either directly or indirectly boost employment and/or wages.
- Measurements of outcomes for this strategy were more difficult than other strategies because of the amount of time required to net results.
- Sustainability of such strategies was moderate across regions, and is influenced by the costs of training programs

The overall strategy of boosting employment and wages was dominant in Generations II and III of the Initiative. In the original implementation plans, fully 22 of the 26 regions explicitly planned to train workers for new jobs in target sectors and 16 regions also planned to boost employment and wages through training for incumbent workers. Most regions also approached the strategy through less direct means, i.e., engaged in approaches that were intended to identify resources, build partnerships, and better meet employer needs.

Despite the prevalence of employment and wage strategies, it is difficult to ascertain measures of success within the short amount of time that has passed since the closure of Generation II and III activities. Initial measures suggest that regions were successful overall at developing training programs and meeting enrollment goals, but measurements of the actual wage or employment outcomes are very limited. It will take time to track whether or not workers who participated in WIRED-funded programs and training can successfully obtain and retain employment in the target sector and higher wages than they would have otherwise received.

Sustainability of activities related to employment and wage strategies was also mixed. Activities such as curriculum development, articulation agreements, and the development of career ladder systems were easier to sustain, with the initiative covering mostly developmental and start-up costs. Many actual training programs are more expensive and will increase in cost substantially once funding from the initiative ends. For example, an innovative program to make a four-year engineering degree program to residents of a more isolated portion of the Southern Arizona region will likely be sustained, since the curriculum and agreements with the University of Arizona are already in place; however, ongoing costs will have to be covered by student tuition payments or another sponsor instead of the Initiative, which had covered most of the individual costs during the grant period. Most other regions faced similar situations with degree and non-degree programs developed during the Initiative.

Regional Strategies

Most regions employed multiple individual strategies in pursuit of a larger goal of boosting employment and wages. Some of the most common regional strategies included:

- Identification of key industries and growth industries to focus efforts on.

- Development of long-term pipeline systems to train emerging and incumbent workers for entry and advancement in a field.
- Development and implementation of short-term courses to provide quick entry to jobs.
- Development of custom training for advancement, certification, and other employer-specific needs.

Most regional strategies addressing employment and wages involved the identification of sectors with potential for employment and wage growth for workers, and one or more training-based approaches to improving worker quality. Sector selection strategies were based on multiple factors, with the most important being the consideration of current dominant industries, the identification of assets to support an emerging industry, and the perceived potential of a sector based on national or global trends. Additionally, regional sector selection was also affected by whether the region faced growth conditions prior to WIRED. For example, the South Central – South West Wisconsin region targeted mostly established sectors, such as health care and construction trades, which offer accessible jobs and decent wages even in a low-growth economic environment. Conversely, the fast-growing Utah region targeted the life sciences industry, which at the time was emerging as a source of both good jobs and strong growth. .

When identifying structural gaps within the selected sectors to address through the initiative, a common focus was on the availability of training and the adequacy of the existing workforce. The most comprehensive strategies aimed to develop a region-wide pipeline, which would have the capability of bringing an emerging worker (or a worker seeking retraining) through all levels of a sector or occupational field. For example, regions like Utah and Central New Jersey worked to offer programs and training geared toward the life sciences within all levels of the educational system: K-12, community colleges, and universities. In theory, a complete pipeline could allow workers to start with basic preparatory courses in high school and work up through a technical certificate, an associate's degree, bachelor's degree, and even a graduate degree as part of a coordinated sector-based system. The approach allows multiple entry and exit points that allow workers to gain employment within a sector at different progressively increasing skill levels, based upon their own needs and abilities, as well as shifts in demand by area employers.

Not every regional strategy was as comprehensive as the pipeline approach; many regions simply invested in the development of a variety of educational or training programs targeting a variety of higher-skill and higher-wage occupations. For example, the Southeast Missouri region, which targeted four major sectors (renewable energy, advanced manufacturing, health care, and entrepreneurship) offered multiple training programs designed to help provide training for workers in the different fields. Major activities in the region included a program to teach entrepreneurism in high schools, the Journey to Excellence health care training and summer camps program, and a renewable energy degree offered by a local community college. The region's approach was not as narrowly focused as a pipeline strategy, but undertook targeted training efforts designed to impact current and future workers in a variety of fields.

Alignment

The creation of high-skill and high-wage jobs and advancement opportunities was an anticipated goal of the WIRED Initiative. Regional strategies tended to be consistent with the premise that

efforts to improve the quality of training, and raise the skill levels of incumbent workers, would contribute to the increased productivity and profitability of area companies. The success of efforts to stimulate and support entrepreneurship and to create a culture of innovation within area companies also carried the potential to fuel job creation. Many regions pursued the former, but few pursued the later, i.e., building a culture of innovation. The regions that did so took a decidedly developmental approach; incorporating entrepreneurial thinking into the mainstream curriculum for students beginning in middle-school and in some regions, encouraging that way of thinking in even lower grades with funding from other sources.

Activities

The most common actions developed by regions to carry out their strategic goals included the following:

- Development of new academic programs at tech schools, community colleges, and universities.
- Development of curriculum for sharing across institutions and for new training programs.
- Customization of training for firms to advance workers.
- Support of training for incumbent worker retraining.
- Support of training for new workers in new or high-demand fields.
- Worker retention and attraction efforts (marketing, internship programs, job posting systems).

Activities implemented as part of a regional-level employment and wage strategy were predominantly designed to upgrade the supply of workers available for higher-wage and higher-skill positions, usually within one or more target sectors. Regions invested in training at multiple levels. One common type of activity was program creation and curriculum development, wherein the region used initiative funds to cover development and start-up costs for education or training programs that would then be operated by the school or training institute and sustained by fees or tuition. Among numerous examples of this type of activity was the Biotechnology Associate Degree that was developed in the Tennessee Valley region through a partnership of the community college, a local university, and private sector employers. As part of a high-skill and high-wage approach, the curriculum development activity focused on creating a program that could gain workers entry into a field with growth potential, while also meeting the needs of area employers. The Tennessee Valley region used the initiative to fund the development of the program, which then became a standard two-year degree program at the community college once the funding period ended.

Regions also went beyond program and curriculum development and used the initiative to directly support the training of workers. In some cases, this entailed offering subsidized or free-of-charge enrollment for students in select college programs, such as the Yuma-area engineering coursework created in the Southern Arizona region. In other cases the initiative supported customized short-term technical training offered to either jobseekers or incumbent workers. In another example from Southern Arizona, the region supported short-term on-site training at a local aerospace firm that utilized faculty from the local community college. The program helped advancement of incumbent workers into higher positions and contributed to the region's goal of

bolstering the aerospace sector, which was identified as a major source of high-wage and high-skill employment in the region.

Some regions went outside the traditional workforce system to find alternate ways of growing jobs and income for area residents. The Central Kentucky region invested substantially in both worker retention efforts and in a web-based job posting system designed to better match the region's skilled workers with employers. Instead of investing solely in training, the Central Kentucky region recognized that the out-migration of workers to other parts of a country was an issue and chose to invest in approaches designed to keep more of the already trained workers.

Challenges

Employment and wage strategies were widespread, as were the accompanying challenges. The following points represent the most prevalent challenges that must be overcome to successfully implement a high-skill, high-wage development strategy.

- Success requires development of other strategic goal areas. Positive employment and wage outcomes require an established, networked workforce development and economic development system.
- Macroeconomic conditions play a role in the implementation of strategies, and a growth environment is easier to manage than a recessionary environment.
- Relevant outcomes are long-term and can be difficult to track.

One challenge to implementing a high-skill, high wage strategy is having the assets in place that are necessary to support success. Simply identifying training assets and having a strong workforce system is not enough to ensure a successful strategy; it needed involvement from private sector businesses and an economic environment appropriate to the selected training activities. As discussed earlier, Appalachian Ohio recognized that it had strong, unique educational assets for Interactive Digital Technology, which could provide a source of training for high-skill, high-wage jobs. However, efforts suffered from a weak economy, few supporting local firms in the sector, and spotty support from the workforce development and economic development systems. The region ultimately struggled to implement its original strategy and was forced to shift gears and alter the strategy during the initiative in order to address other regional needs.

Macroeconomic conditions are also a determinant of the capacity of regions to carry out this strategy. High growth regions can identify demand fields with higher wages and funnel workers through training, while declining regions must choose between attempting a difficult transformation or focusing on retraining existing workers for fields such as health care or advanced manufacturing that can exist in low growth, low skill regions. Where economic growth was slow during the inception of WIRED—prior to the recession—places such as Ohio, Michigan, and Wisconsin addressed basic workforce issues and promoted training for existing industries to a greater extent than regions in faster growing states in the West and on the coasts.

Of course, the recession provided a challenge even in high growth regions such as Arizona and Utah. For example, in 2008 and 2009, Arizona unemployment rates increased to levels not seen

since the 1980s, which caused a rapid reconsideration of the needs of both employers and workers in the Southern Arizona region. The changes in larger economic conditions require a hasty restructuring of activities to shift from simply supplying growth industries with more workers to retraining displaced workers for new occupations. This represented a sea change for the region, which faced the prospect of retraining workers displaced from construction and manufacturing fields that were suddenly in a downturn, instead of being able to focus solely on up-skilling workers for better positions with aerospace and high-tech defense firms. Although the Southern Arizona region handled the recession-driven changes well, the experience illustrates how larger economic conditions can challenge the ability of any region to pursue a high-skill and high-wage strategy.

A challenge associated with employment and wage strategies is that identifying successful outcomes can be difficult because of the long time required before measurable results can occur. For example, the development of a highly targeted workforce pipeline, as seen in New Jersey's Bio-1 region, can be expected to produce a substantial number of trained workers in several years time. In region's such as Utah and New Jersey that strove to begin interventions at the high school or younger level, the greatest dividends could only begin to accrue after five or six years because of the amount of time necessary for individuals to complete the multiple phases of training necessary for the highest-level jobs. Tracking can also prove challenging because of both time and privacy issues. Individual training recipients should be tracked over time to see if they are able to land jobs in the target sector and if the income is higher than they would otherwise be able to obtain. However, this requires potentially tracking individuals through multiple systems over many years. Many regions indicated there were some plans to survey training recipients and employers, or to conduct tracking through state employment data systems, although these efforts may be difficult to maintain after the end of the grant period.

Promising Practices and Illustrations

Utah and Central New Jersey regions focused on pipeline development in the life sciences sector, which offers high-wage and high-skill employment opportunities. The strategy employed by these two regions takes into consideration the assets and economic conditions of the regions, which are unique and not transferrable to every region. For example, both regions already were home to existing clusters of life science activities—chemicals and pharmaceuticals in New Jersey and genetics and laboratory testing in Utah—that were well established and growing. The regions were able to develop training programs based on industry need and existing assets.

Regions that are most successful in implementing in high-wage, high-skill employment strategies have an understanding of regional assets that can support the effort, have a strong network to collaborate on implementation and leverage assets, and can address the needs of a growth environment versus an environment of economic stagnation or decline.

Implications

Although a strategic focus on growing high-skill, high-wage employment opportunities was a primary goal of WIRED, the approach may not necessarily be the best fit for all types of regions. Those regions that can successfully implement such a strategy will benefit from income growth that helps support quality of life, while still providing an indirect boost to lower-skill and new

workers throughout the region. For most regions, it would make more sense to adopt a pipeline strategy that would provide a variety of opportunities for job seekers to enter and ultimately follow a career pathway to advancement.

To be successful, regions face some pre-requisites in selecting a high-skill, high-wage strategy. The experiences observed during the Initiative suggest that it is far easier for regions to pursue such a strategy if they focus on a sector that has a foothold in the region, and have the correct blend of assets and economic conditions to support industry growth.

Overarching Goal #5: Disadvantaged Populations

The WIRED regions in Generations II and III focused first, and foremost, on addressing the workforce needs of companies in promising industry sectors, i.e., sectors that were considered important contributors to the regional economy and had the potential for growth. Unlike numerous other ETA grant programs, WIRED did not stipulate that grantees address the needs of any particular population of job seekers, workers, or sector, but did ask regions to pursue initiatives that would stimulate opportunities for advancement and the creation of high-wage, high-skill jobs as discussed in the previous section of this report. Only when the leadership of ETA changed, and the newly appointed leader expressed a commitment to the needs of low-wage workers, were the needs of disadvantaged populations added to the WIRED framework. The national recession was one of the other contributing factors. However, it was not a critical issue when the WIRED Initiative was conceived, except in terms of the large scale lay-offs and plant closings associated with the auto industry and manufacturing. As the recession spread across the U.S. some, but not all regions, took explicit action to address the needs of these individuals.[64]

Findings

The primary findings regarding a disadvantaged worker strategy include:

- This was the least prevalent regional strategy employed by the regions.
- This was almost never an explicit strategy in original regional implementation plans, but it grew in popularity with the recession.
- Many program activities addressed the needs of low-wage, low-skill jobs, but this was not always the primary intention.
- This strategy was consistent with the responsibilities of the workforce development system, but was not an explicit focus of the regions.
- Sustainability of these strategies requires both interest from students and training providers, and public funds.

[64] A change in the leadership of ETA was a contributing factor, as the interim leader of the agency infused the agenda of the Initiative with concerns that reflected his long-standing interest in programs and services for this population.

- Workforce system stakeholders are more accustomed to this approach than are community college, university, and economic development stakeholders.

Strategic Emphasis

The rarity of regions expressing a strategic focus on disadvantaged workers is not surprising, given the original focus on innovation and transformation present in the overall program strategy at the inception of WIRED. Instead, strategies addressing displaced workers sometimes evolved to fit in with the strategies originally presented by regions in the implementation plan phase. An example of subtle revisions that occurred in a response to economic change can be seen in the Delaware Valley region, which created a WIB collaborative to launch additional training programs. Although the Delaware region was primarily focused on the life sciences through a high-skill, high wage strategy, the WIB collaborative helped the region add training programs in fields such as patient services, that are related to healthcare and life sciences yet more accessible to displaced workers.

Of course, in some cases regional strategies were revised explicitly to include a displaced worker component. Typically, these were added midway through the Initiative in response to changing economic conditions. For example, the Southwestern Connecticut region made extensive changes to its implementation plan midway through the initiative. As the economy shifted, the region made the decision to narrow their focus by dropping several target sectors—retail, advanced manufacturing, and financial services—and adding "green industries" as a new target sector. Moving away from the high-skill and high-wage financial services sector that is concentrated in the region was viewed as a major decision, but according to local stakeholders it made sense to reallocate resources toward sectors with greater accessibility and growth potential. Additionally, the Southwestern Connecticut region also pursued a greater emphasis on training programs for the emerging workforce, while reducing the emphasis on the initial strategic goal of developing a culture of innovation in the region.

In some instances, the inclusion of a disadvantaged worker strategy simply represented a stronger fit with the expertise of the key regional partners. For example, one region dealt with the situation by reallocating over 40 percent of their budget to regional workforce programs midway through the initiative. On the plus side, with the help of the existing WIB structure and the community colleges, the region was able to quickly use the money to handle an increase in demand for retraining that was occurring because of the recession. At the same time the shift in focus diminished the ability of the region to implement its original transformative strategy. Furthermore, the programmatic efforts that were directed at displaced workers were not seen as likely to be sustained after the initiative ended, since the effort involved mostly traditional short-term training within the existing workforce system, and not the development of new systems, curricula, or partnerships that could build outside sources of support.

Regional Strategies

The strategies used to assist displaced workers in the regions took mostly an established, traditional format. Some of the most common regional strategies included:

- Development of basic skills trainings in non-industry-specific skills.

- Development of short-term, job specific training courses.
- Development of training options or tuition support for unemployed and displaced workers
- Development of new career awareness and guidance approaches.

Regions that engaged a basic skills strategy were focused mainly on conducting interventions with the most disadvantaged workers or by addressing workers at the earliest possible stages. In some cases, the strategy involved setting aside a sector focus and instead concentrating on preparing workers with basic skills such as reading and writing ability, basic math, and information about entry-level career options. Basic skills strategies also sought to intervene with young students prior to their entry into the labor force. For example, one program in the Utah region supported a basic science curriculum in the urban high schools, while another brought mobile science education equipment and education sessions to high school students in rural parts of the state.

More common as a disadvantaged worker strategy was a boosting of traditional workforce programs, usually in the form of targeted short-term training courses and tuition support for technical courses in the community college system. This strategic approach was found to some degree in most regions. For example, the Minnesota region developed a four-course training program in "mechantronics" to provide quick training in concepts of mechanical and electrical engineering, computer science, and computer controls and system design for the advanced manufacturing sector. The South Central – South West Wisconsin region took a similar approach with the Advanced Manufacturing Basic Skills program, which was a quick training program specifically designed to help dislocated and low-skill worker populations referred through area AJCs to find employment in the advanced manufacturing sector.

Alignment

A strategy targeting accessible low-skill, low-wage positions was not integral to the original design of the Initiative, which was focused on innovation and economic development approaches that could transform existing regional systems and assist workers in transitioning to fill higher-skill, higher-wage positions. However, with the economic downturn a refocusing of strategic goals took place both within WIRED and at the regional level, which recognized a need to use the initiative to address a growing problem of worker displacement, unemployment, and under employment in many parts of the country.

In cases where a disadvantaged worker strategy was part of a region's original overarching strategic goals, it typically occurred as part of a career ladder approach. The addition of dislocated workers to the mix would be part of ensuring comprehensive training at multiple ability levels within a sector or career area. For example, regions might offer a certification course or quick training program in addition to associate's degree and bachelor degree training options, with each offering different levels of entry into a broad career field, as well as the possibility of articulation to higher level education programs over time. Although the strategy of focusing on disadvantaged workers becomes only a small part of the regional strategy through this approach, it contributes to an overall innovation in terms of adjusting the current workforce system to better meet employer needs.

Activities

The most common actions developed by regions to carry out their strategic goals included the following:

- ESL programs, job search assistance, community-based programs that address work readiness skills to get workers into the labor force.
- Short-term training, such as non-degree courses or certification training.
- Co-location of workforce services and community college training
- Tuition and training programs for unemployed and displaced workers supported by WIA or state benefit programs.

Engagement in activities that can help a disadvantaged worker population was dependent on both the larger goals of the region and the nature of the needs of the disadvantaged worker population. For regions where the main barrier for disadvantaged workers is basic skills, the program interventions observed during the initiative were aimed at improving abilities that could assist worker advancement in any field, as opposed to sector specific technical skills. For example, the Utah region focused on identifying geographic concentrations of need and providing English language programs that could benefit the refugee communities concentrated in Salt Lake City. Because the Utah region had a growing economy and was not facing a large amount of layoff activity when the initiative was conceived, the activities instead encouraged the up-skilling of populations that had been shut out of the job market due to a lack of basic skills.

A more popular activity for addressing the needs of disadvantaged workers is short-term training. Short-term training benefits disadvantaged workers, particularly those who are unemployed, by providing a quick route to employment through targeted skill upgrades. Nearly all regions offered some form of training with a duration of less than a year, although the activity was not always explicitly part of a strategy to assist disadvantaged workers; in some cases, short-term training can also be used to upgrade the skills of incumbent workers, which can be part of a higher-wage, high-skill strategy as well. The Advanced Manufacturing Basic Skills program developed in the South Central – South West Wisconsin region epitomizes an activity intended to help displaced workers, since it was designed to help dislocated and low-skill worker populations by quickly retraining workers for accessible production positions in the manufacturing sector.

Activities to support disadvantaged workers also occasionally occurred through modifications to the existing workforce and training structure aimed at making workforce services and training more accessible, without necessarily creating new programs. Again, the South Central – South West Wisconsin provides an example of this approach in the physical co-locating of One Stop services and tech school training. By locating a representative of the workforce system at the tech school training facility, prospective students were able to quickly determine eligibility and complete paperwork to attend training classes paid for using monies from the initiative or other traditional sources such as WIA funds. Another example of a system-change approach to assist disadvantaged workers was demonstrated by regions that invested in mobile equipment for training and certification testing purposes, since residents in more isolated rural regions were typically the beneficiary.

Challenges

In observing the implementation of a disadvantaged worker strategy during the Initiative, the following issues represented the most frequent and obvious challenges to successful outcomes.

- Enactment of the strategy became a necessity late in the implementation of the region.
- The level of demand for low-wage, low-skill jobs varied by sector.

Delayed Implementation

By far, the most noteworthy challenge regions faced in regards to a disadvantaged worker strategy surrounded the lateness of both recognition and implementation. With the onset of the recession many regions quickly changed plans in order to address slowing hiring and rising unemployment conditions. By the time the national economic downturn became apparent in 2008, many regions were already well into established implementation plans and were forced to scramble to create new programs. For many regions, activities to assist disadvantaged workers did not begin until 2009, which left only limited time in the grant period to train workers and track outcomes.

Demand

Another hurdle typical to a disadvantaged worker strategy is the variability of demand for low-wage, low-skill workers—even those that have received basic skills assistance or technical training. For example, activities aimed at boosting the skills of workers for positions in advanced manufacturing were hampered in more than one instance by a weak economy that generated little demand for production workers. This problem was particularly acute in the Mississippi region, which had devoted considerable effort (and funds) to the development of higher quality welding programs and the provision of training designed for entry-level welders. Shortly after the regional effort was launched the ship-building industry experienced a significant downturn and demand for welders was drastically reduced. As a result, those who participated in the 6 month training program were unable to find jobs and faced the prospect of losing their welding certification because of the delay in being placed.

Promising Practices and Illustrations

The practices utilized in pursuit of a strategy targeting disadvantaged worker populations were most effective if they were innovative and showed alignment with other strategic goals, such as workforce system transformation or high-skill, high-wage strategies. For example, in South Central – South West Wisconsin the workforce system co-located its services at a the technical college, which allowed workers to work with representatives of both organizations to find and enroll in training programs that could be paid for by programs through WIRED and other state and Federal sources, such as WIA. The approach not only streamlined training access for disadvantaged populations, but also improved coordination and communication between the region's two-year college system and the workforce system, which can ultimately benefit other stakeholder parties as well.

Another approach that showed signs of success was to build activities aimed at disadvantaged populations into a larger strategy of developing a sector-driven workforce pipeline. For

example, the Utah region worked to improve the pipeline of worker training for the life sciences sector by improving training and outreach at all levels of the system. Although much of the region's efforts were focused on a high-skill, high-wage approach that involved higher-level community college and university curriculum, the region also supported science and outreach programs aimed at disadvantaged high school students in both the urban Salt Lake City district and in isolated rural regions of the state. Additionally, the region engaged in a program to identify pockets of disadvantaged workers in the area who are in need of basic skills development, such as English literacy training, so that community programs could be better located to serve these individuals.

Approaches to a disadvantaged worker strategy often, however, took a traditional approach in keeping with standard workforce development practice. Workforce boards have always offered training programs to unemployed and displaced workers through workforce investment act funds, and many took a similar approach when using WIRED funds. Disadvantaged workers are often targeted with short-term training programs designed to provide the abilities necessary for specific jobs or the basic skills necessary for a wider range of entry-level positions.

Implications

The adaption and success of a disadvantaged worker strategy was mixed across the 26 Generation II and III regions. Regions typically had little problem setting up courses and attaining expected levels of enrollments and completions; however, these activities were not always in line with the larger goals developed by the regions. In many regions, disadvantaged worker strategies were implemented late and the activities formed only a stop-gap of courses that will not be sustained after the grant money expires.

Disadvantaged worker strategies had a better chance of long-term success if the activities were tied in with either a larger regional theme of pipeline development or system transformation. For example, when the Utah region invested in bringing life science education to less-advantaged high school students, it not only offered some short-term benefit to an emerging disadvantaged workforce group, but supported a step in a longer-term high-skill and high-wage development strategy. Similarly, system changes, such as South Central – South West Wisconsin's co-location of workforce staff on-site at a tech school training site can potentially create a permanent increase in access for disadvantaged workers, which will be a far more sustainable benefit than would be seen by simply funding more short-term training programs.

Chapter IV: Quantifying Accomplishments Across the Regions

The regions formed collaborations and implemented numerous activities intended to achieve the goals that the regions set for themselves. Given that public funds were invested in the initiative, the question may be legitimately raised as to what the regions accomplished. What were their outcomes? This section addresses this question from two perspectives, from the perspectives of the accomplishments reported by the regions and by looking at the results of a comparison group analysis.

Efforts to quantify the accomplishments of the regions may be addressed from two perspectives. The first perspective is a quantification of reported accomplishments or outcomes within the region. In fact, all Generation II and III regions were required to submit evidence of the outcomes of their programs. This perspective on regional accomplishments may be referred to as gross impacts. The second perspective is an estimation of the impacts of the regional initiative as compared to what would have happened in the absence of the Initiative. These estimates are referred to as net impacts.

Net impacts need to be *estimated* because it is not possible for a region to be in two alternative situations--receiving the WIRED funding and not receiving the WIRED funding. In order to produce these estimates, comparison regions have been identified for each of the Gen II and III regions. The comparison regions are intended to be as close replicates of the WIRED regions as possible. Then under the assumption that the economic development trajectory would have, in the absence of WIRED, been similar for the regions as for their comparison counterparts, net impacts can be estimated as the difference between the actual trajectories. The methodology for designating the comparison regions has been documented in the evaluation design report and the second interim report for this evaluation.

This chapter of the final report presents both the gross impacts and the net impact estimates. The following section presents quantitative outcomes across the Initiative based on information provided in the regions' implementation plans and quarterly progress reporting. That section is followed by a section that describes a net impact analysis of outcomes that are routinely tracked by the workforce development system. Every workforce board is required to report on a quarterly basis three outcomes for adults that are served: entered employment, retention, and earnings. These outcomes are referred to as the Common Measures. We have econometrically analyzed the common measures from across the country to determine whether WIRED may have had an impact on the success of the workforce development system as measured by these outcomes.

Finally, this chapter has a section that presents analyses of economic growth and other measures (we refer to these as extant data) for the WIRED and comparison regions. These analyses include a comparison of mean differences in levels and growth rates, as well as estimates generated by a linear regression.

Regional Outcomes

Information provided in the regions' proposals, implementation plans, and quarterly progress reports sheds light on the level of training provided; capacity-building outcomes; the formation of partnerships and collaborations; facilitation of science, technology, engineering, and mathematics (STEM) initiatives; and business incubation and entrepreneurship. Due to significant differences in performance metrics and reporting practices across the regions, this section should not be considered a definitive account of the gross impacts of the Initiative, but it provides a strong indication of the significant impacts it has helped to catalyze. Although ETA provided a metrics template to guide the tracking of outcomes, nearly all of the grantees in Generations II and III deviated from the template in varying degrees to suit their individualized goals and performance criteria.

Education and Training Outcomes

Table 7 presents overall projected and actual training outcomes aggregated across the regions and across industry sectors, based on the information provided by regions in their progress reports to ETA.

Table 7: Projected and Actual Training Outcomes for Generation II and III Regions

Outcomes	Projected*	Actual*
Number began workforce education/training using WIRED funds	10,962	48,673
Number completing workforce education/training using WIRED funds	9,243	39,921
Number of individuals participating and/or completing workforce education/training using WIRED funds placed in target industry employment	4,903	3,542

*The projected training entries and completions are much lower than the actual numbers in these categories; this is because many of the regions (seven in Generation II and three in Generation III) did not provide any quantitative projections of outcomes, and even those regions that did offer projections did not provide them in every category.

As shown in Table 7, grantees reported that nearly 50,000 participants entered training across the regions, and of that number, nearly 40,000 completed the training. Over one-half of the regions (six in Generation II and eight in Generation III) also reported numbers of trainees entering employment in their target industries. According to these regions, over 3,500 employees entered employment during the grant period, about 1,400 fewer than had been projected. Based on feedback gathered from the regions through their reporting and the site visits, this is likely due to the relative brevity of the grant period and/or to the tightened job market brought on by the recession that began in 2008.

Other training data reported by the regions include numbers of trainees retained in their current jobs, and wages before and after placement (not provided in tables). Few regions provided information in these categories: only one Generation II region reported numbers of employees retained in their current jobs (4,903 employees projected and 3,979 actual), and only two regions (one in each generation) reported a change in wages after placement. Of those two regions, one reported a change from $12 per hour to $21.37 per hour, and the other reported an actual wage of $20.53 per hour with no projected wage.

Table 8 presents projected and actual training outcomes aggregated by industry sector.

Table 8: Projected and Actual Training Outcomes, by Sector, For Generation II and III Regions

Sector		Number Entering Training (All)	Number Completing Training (All)	Number Entering Employment (All)
Alternative energy	**Projected***	30	28	16
	Actual*	1,966	1,151	214
Advanced manufacturing	**Projected***	300	285	0
	Actual*	2,093	2,448	29
Health c**are**	**Projected***	675	550	352
	Actual*	1,956	2,076	25
Information technology	**Projected***	550	520	0
	Actual*	2,603	1,802	12
Life s**ciences**	**Projected***	495	485	176
	Actual*	5,141	4,143	144
Manufacturing	**Projected***	300	423	0
	Actual*	598	595	5
Transport, d**ist**ribution, and l**ogistics**	**Projected***	480	388	344
	Actual*	490	307	130
Miscellaneous or unspecified**	**Projected***	8,132	6,564	4,015
	Actual*	33,826	27,399	2,983
Total	**Projected***	10,962	9,243	4,903
	Actual*	48,673	39,921	3,542

*The projected training entries and completions are much lower than the actual numbers in most categories; this is because many of the regions (seven in Generation II and three in Generation III) did not provide any quantitative projections of outcomes, and even those regions that did offer projections did not provide them in every category.
**This category includes outcomes from industry sectors that were only reported by one region and from regions that did not divide outcomes by industry sector.

As shown in Table 8, among the regions that specified outcomes by industry sector, the industry sector with the most trainees entering and completing training was life sciences, with information technology, advanced manufacturing, health care, and alternative energy also reporting large

numbers of trainees. Many regions did not disaggregate their outcomes by industry sector in their reporting, hence the significant numbers of trainees without a classified industry sector.

In addition to the categories above, many regions also reported quantitative information on other training outcomes. Table 9 shows numbers of degrees and professional/occupational certificates awarded, numbers of career development or guidance activities, and numbers of internships.

Table 9: Other Education and Training Outcomes for Generation II and III Regions

	Projected*	Actual*
Number attained degree, certificate, or other industry certified credential as a result of workforce/education training using WIRED funds	10,328	23,087
Career guidance strategies developed/ implemented	730	673***
Numbers of individuals participating in career guidance activities	12,230	215,547*****
Work-based strategies (i.e., internships, clinical experiences)	25,624**	2,383
Students benefiting from work-based strategies****	50	369

*The projected training entries and completions are lower than the actual numbers in most categories; this is because many of the regions (seven in Generation II and three in Generation III) did not provide any quantitative projections of outcomes, and even those regions that did offer projections did not provide them in every category.
**SE Michigan (II), projected 25,000 internships within 5 years (i.e., beyond the end of the grant reporting period) as part of the region's *Intern in Michigan* project; it reported 209 completed internships as of October 2009.
***Idaho (III) reported having implemented 513 career guidance strategies.
****Very few regions in Generations II and III reported numbers of students benefiting from work-based strategies; this is because most regions classified "work-based strategies" as individual participants in clinicals or internships and did not include a separate category for students benefiting from work-based strategies.
*****Utah (II) reported that 182,862 individuals participated in its career development or guidance activities.

As shown in Table 9, Generations II and III reported that over 23,000 trainees received a degree or professional/occupational certification as a result of the training funded by WIRED. Most grantees did not separate degrees from certificates in their reporting; however, based on information provided in grantees' reporting, the majority of this number consisted of certifications rather than degrees. For example, Puerto Rico awarded 2,192 certificates to incumbent workers on completion of employer-responsive training programs in the health care, life sciences, and manufacturing sectors.

Table 9 also shows that over 215,000 individuals participated in career development and guidance activities. For example, Delaware reported that 2,166 individuals participated in a career fair to build awareness among students, dislocated workers, and others regarding careers in the life science industry. In addition, 2,383 individuals participated in work-based strategies such as internships or clinical experiences to gain valuable experience in high-demand

occupations. For example, Kentucky offered 264 internships in the health care and information technology industries.

Capacity-Building Outcomes

Nearly all the regions sought to build capacity for generating future economic growth beyond the life of their grants by developing curricula, courses, or programs; providing professional development to educators; creating incumbent-worker programs; or supporting the purchase of equipment to use for instruction. Table 10, below, shows outcomes reported by the regions in these categories.

Table 10: Capacity-Building Outcomes for Generation II and III Regions

Outcome	Projected*	Actual*
Number of educators prepared for instruction in identified industries	1,375	13,254**
Projected number of additional students who will be trained annually as a result of educator professional development	10,000	120,655
Number of curricula developed	584	837
Projected numbers of additional students who will be trained annually as a result of new curricula	1,200	35,962
Funds used for purchase of equipment	Not projected	$4,924,597
Projected numbers of additional students who will be trained annually as a result of equipment purchases	Not projected	1,934**

*The projected training entries and completions are much lower than the actual numbers in most categories; this is because many of the regions (seven in Generation II and three in Generation III) did not provide any quantitative projections of outcomes, and even those regions that did offer projections did not provide them in every category.
**Very few regions estimated numbers of students who would be trained as a result of the equipment they had purchased, so the true figure is likely to be much higher.

As shown in Table 10, Generations II and III reported that 13,254 teachers received professional development through WIRED; for example, 45 educators in Wisconsin received professional development on STEM-related topics. The regions estimated that approximately 120,655 students would receive training annually as a result of this professional development. The regions also developed over 800 curricula to a projected 35,962 students per year on topics relevant to their key industry sectors. In addition to implementing their curricula in educational institutions in their areas, some regions also made them publicly available. For example, as of April 2011, the Web site for C. New Jersey continued to offer free curricula on life science, entrepreneurship, biotechnology, and more.[65] Finally, several regions used portions of their grant funding to purchase a total of $4,924,597 in instructional equipment; this generally

[65] "Teachers," Bio NJ Life Science Talent Network, accessed November 4, 2011, http://www.bio-1stop.org/tools/resources/teachers/.

consisted of laboratory equipment or other tools for long-term use in education. For example, Kansas purchased $893,083 in laboratory equipment for use in classes related to the manufacture of composite materials.

Partnership and Collaboration Outcomes

Every region in Generations II and III convened diverse bodies of stakeholders to plan and implement its WIRED initiative. The following section estimates the numbers of stakeholders convened—both in leadership positions and in general—across the regions. Because none of the regions provided counts of these organizations in tabular format, they were counted manually using the implementation plans, reports, and other documents provided by the grantees. As a result, the figures in Table 11, below, offer only a rough approximation of the actual numbers of stakeholders involved.

Table 11: Stakeholder Groups Involved in Gen II and III Partnerships

Stakeholder	Total Involved	Involved in Leadership and Governance
Community Colleges or Career and Technical Education Centers	116	19
Four-Year Colleges and Universities	69	21
Economic Development Agencies	57	28
Employers	2,299	36
K-12 Schools	262	10
Industry Associations	35	17
Local Foundations/Philanthropic Organizations	29	8
Local WIBs	87	37

As shown in Table 11, employers, local WIBs, and economic development agencies were most often reported as participating in leadership bodies, including executive committees, governance boards, and the like. The "Total Involved" column includes all stakeholder groups participating in all roles in the regions, such as those serving on subcommittees and advisory groups or hosting training programs. Among these, the number of employers reportedly involved (2,299) was particularly notable. Although Northern Oregon accounted for the bulk of this figure (reporting the involvement of 1,465 employers), the number for employers is still much higher than that provided for any other category even if the figure for Northern Oregon is subtracted from the total.

Education Partnerships

Several Generation II and III regions sought to develop or strengthen career pathways by increasing collaboration among educational institutions. Table 12 presents articulation agreements, dual-enrollment programs, and community college collaboratives formed by the regions.

Table 12: Education Partnerships in Gen II and III Regions

Partnerships	Numbers
Articulation Agreements	7
Dual-Enrollment Programs	18
Community College Collaboratives	9

To make college education more affordable and accessible, seven regions (one in Generation II and six in Generation III) facilitated the formation of articulation agreements that allowed students to take their initial coursework at community colleges before transferring to a four-year institution to complete their degree. For example, Arizona developed an articulation agreement allowing core technology courses at area community colleges to transfer credits to the University of Arizona. The regions also implemented 18 dual-enrollment programs (12 in Generation II and 6 in Generation III) allowing students to take coursework simultaneously at different institutions. For example, Arkansas offered dual enrollment through three institutions in its service area: Three Rivers Community College, Mineral Area College, and Southeast Missouri State University.

Finally, Generations II and III reported that 9 community college collaboratives were formed to help decrease parochialism among community colleges and make their course offerings more complementary. For example, Delaware Valley reported the formation of a collaborative that helped community colleges from all three of its member states coordinate their programming to meet industry demand.

STEM Programs

Many Generation II and III regions supported programs to provide science, technology, engineering, and math (STEM) education for high school students. Table 13 shows the numbers of STEM-related programs that were implemented with the help of WIRED grant funding.

Generations II and III reported that a total of 90 STEM programs (i.e., full programs containing at least 54 individual STEM courses) were supported by WIRED funding. For example, Puerto Rico and Kansas developed summer STEM programs for high school students, each of which exposed students to multiple courses on a wide variety of STEM-related topics.

Over 21,000 high school students participated in STEM coursework under the auspices of the Initiative. Most of these were reported by Minnesota, which enrolled 16,247 students in STEM-related training.

Table 13: STEM Programs in Generation II and III Regions

Information	Numbers
STEM Programs Developed	90
STEM Courses Developed	54
Students Enrolled in STEM Programs	21,080
Students Completing STEM Programs	19,244*

*Minnesota did not report how many of its 16,247 STEM enrollees completed their programs. This figure includes 14,622, or 90 percent of the students enrolled, as a rough estimate of the number of students who may have completed this program.

Business Incubation and Entrepreneurship Outcomes

Numerous regions in Generations II and III also sought to build the resilience and diversity of their regional economies by cultivating entrepreneurship. Table 14, below, shows outcomes reported by the regions in this category.

Table 14: Business Incubation and Entrepreneurship Outcomes Generation II and III Regions

Information	Numbers
Business Training Programs Created	85
Courses/Modules Held	156
Participants Enrolled in Business Training	3,933
Participants Completing Business Training	2,652
Entrepreneur Networking Events Held	154
Business Plan Contests Held	4
Business Incubators Established	1
Business Incubator Clients Served	148
Business Startups and Expansions	298
New Employees Recruited by Startup Businesses	825
Businesses Reporting Increased Productivity, Profitability, or Buying Power	102

As shown in Table 14, many of the regions supported business training programs and networking events. Nearly one-half of the regions, including eight from Generation II and four from Generation III, supported the formation of a total of 85 business training programs incorporating at least 156 individual training courses or modules. Nearly one-half of these programs (39) were conducted by one Generation III region, Kentucky, which supported the implementation of a

business curriculum in 39 high schools. Likewise, six Generation II regions and five Generation III regions reported numbers of participants entering (3,933) and completing (2,652) business training. For example, Arizona reported that 1,475 participants entered and 1,445 completed its entrepreneurship training. Finally, four Generation II regions and four Generation III regions supported a total of 154 networking events for entrepreneurs. Most of these (109) were reported by New Mexico.

Only a handful of regions reported on the final six outcomes shown in Table 14. Two regions, including one from Generation II and two from Generation III, held a total of four business plan contests. Only one Generation II region, Texas, established a business incubator. Two regions, both from Generation II, reported serving a total of 148 clients of existing business incubators. The bulk of these (129) were from Puerto Rico, which offered a three-module training program for entrepreneurs at various stages of development in two business incubators. Three regions, all from Generation II, reported a total of 298 business startups or expansions that had taken place during the grant period. Most of these (276) were reported by N. California. This region was able to shift the focus of the local AJCs to a business services model as opposed to a workforce development model; this change helped identify entrepreneurs who would have normally not had access to start-up services. The shift also helped entrepreneurs who were already in business identify opportunities and resources for expansion. Two Generation II regions also reported how many employees had been recruited by participating businesses during the grant period; these were N. California (648) and Texas (177). N. California also reported that 102 businesses in its area had reported enjoying increased productivity, profitability, or buying power. The region's businesses attributed these overall increases to the 15 improved business training programs and to N. California's improved workforce training, which more closely aligned workforce skills with employer needs.

Econometric Model of Outcomes Derived from Common Measures Data

The Workforce Investment Act Standardized Record Data (WIASRD) contains information about every individual who exits from WIA in a given year for every workforce investment area of the country. The Upjohn Institute assembles and archives these data for the DOL/ETA. Using these data, we have estimated, through regression, a difference-in-difference model to determine the impact of the presence of a WIRED grant on the three OMB Common Measures: entered employment (not employed at time of program registration and employed in the first full quarter after exit), employment retention (employed in the second and third full quarters after program exit), and earnings (total earned income in the second and third full quarters after program exit).[66]

[66] In an April 27, 2007 memo to all of the regions, ETA established a WIRED Performance Reporting system that included using the National Emergency Grant (NEG 3) code for clients that were served by the WIRED regions. Unfortunately, it was not possible to use this variable for the analyses because only about two-thirds of the regions have any records, and in many of those regions, a number of the WIBs are not reporting the data.

The precise model that was estimated is as follows.[67]

$$(1) \quad Measure_{irq} = a_i + b1_i * WIRED_r + b2_i * Post_q + b3_i * WIRED_r * Post_q + e_{irq}$$

where $Measure_{irq}$ = i-th common measure for WIB r in quarter q
$WIRED_r$ = 1 if any portion of WIB r is in a WIRED region; 0 otherwise
$Post_q$ = 1 if quarter q is after the quarter when the WIRED generation began (2006Q3 for Gen I; 2007Q3 for Gen II; and 2008Q1 for Gen III); 0 otherwise
e_{irq} = standard error term
b1, b2, b3 = estimated coefficients

The coefficient b3 is the estimated difference-in-difference estimator of the effect of being in a WIRED region. Note that Table 15 presents the estimates of this coefficient. Note that the estimates were done separately for adults and dislocated workers who exited from the WIA program. Further note that the entered employment and retention measures are dimensioned as percentages, and that the earning measure is estimated in log terms, so that the coefficients represent percentage changes in (six-month) earnings.

The results that are displayed in Table 15 suggest that if a WIB was located in a Gen I region, then the workforce development system had more positive outcomes as measured by Common Measures for both adults and dislocated workers than other WIBs. For adults, the entered employment rate was almost 4 percentage points higher; the retention rate was almost 4 percentage points higher; and 6-month earnings were about 5 percent higher. For dislocated workers, the retention rate impact was significant, whereas the entered employment rate and earnings impacts were positive, but not significant.

The coefficients in the last two columns of Table 15 show virtually no impact on the common measures for WIBs in Gen II or Gen III regions.

[67] Equation 1 was estimated with additional covariates such as the unemployment rate in the state and other labor market characteristics, as well as with regional fixed effects and quarter dummies, but the results were not appreciably different.

Table 15: Difference-in-Difference Estimates of the Impact of Being in a WIRED Region
On Common Measures

Measure	Generation I	Generation II	Generation III
Adults			
Entered employment	3.74*** (1.10)	-0.24 (1.36)	0.09 (1.76)
Retention	4.39*** (0.86)	-2.26 (0.97)	-0.32 (1.28)
(Log) Earnings	4.83** (2.31)	-2.10 (2.57)	1.65 (3.36)
Dislocated Workers			
Entered employment	1.03 (1.01)	0.41 (1.23)	-1.12 (1.65)
Retention	3.65*** (0.82)	-0.27 (0.96)	-0.09 (1.29)
(Log) Earnings	2.17 (2.13)	-2.96 (2.30)	-1.84 (3.17)

Source: Authors' analyses of national WIASRD data.
Note: Standard errors in parentheses. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels (two-tail test).

Using Extant Data to Measure Outcomes for the Initiative Regional Collaboratives

Employment Change

A key economic measure of how well a region is doing is employment change. To get a sense of whether that change—be it positive, zero, or negative—has placed the region on a trajectory that is likely to be transformational, the evaluation team has constructed comparison regions using several socio-demographic, educational, and economic variables prior to the award of funding to the regions.[68] That is, each region has a comparison region that is a grouping of counties in roughly the same geographic region and having similar socio-demographic, educational, and labor force characteristics, but which did not receive funding.

Comparing employment growth between the Initiative's regions and their matched regions provides information about the regions' economic trajectories. If the rate of employment growth in a region that has a funded collaboration exceeds the growth in its comparison region, then it may be the case that the regional collaboration and funded activities of the region had a positive

[68] The method and data used for matching regions to comparison regions is described in an unpublished deliverable to ETA documenting the evaluation design. Details are available from the authors upon request.

payoff. If the rate of growth is about the same or is smaller than the matched comparison region, then we conclude that it less likely that the implementation of WIRED contributed to the region's economic growth.

To examine the relative economic performance of the various regions, employment by place of residence from the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages is used to track trends in employment in the funded regions relative to the comparison regions.[69]

Figure 2 shows the overall employment trends observed across the 26 regions and the corresponding comparison regions. The employment statistics are indexed where 100 equals the regions' employment level during the first quarter of 2007. Indexing the data allows for easy comparison between groups of non-equal size—the comparison regions—and provides for a simple percentage change analysis for succeeding points based on the index value. As shown below, aside from some seasonal fluctuations, overall employment in both the funded regions and the comparison regions remained relatively steady during 2007 and through the first three full (recessionary) quarters in 2008, but then fell considerably through the third quarter of 2010, which is the last quarter of data availability.

The second set of lines in Figure 2 presents the index of manufacturing employment for the 26 regions and their comparison regions. Although manufacturing employment is not a key economic concern for all regions, as a sector it is the focus of many regions and plays a substantial income and employment role even in regions that are not engaged in manufacturing-related workforce transformation efforts. As shown above, manufacturing employment declined in a similar fashion in both the regions involved in the Initiative and the comparison regions. This is not surprising, given the well-documented long-term decline that has been occurring in the U.S. manufacturing sector employment. The severe decline in manufacturing during the recession is obvious in the figure. Whereas overall employment in the regions examined dropped by about five percent, manufacturing employment dropped by almost 20 percent.

In Figures 3 and 4, the employment index is broken down by Generation. Note that the Appendix to this chapter displays the employment indices for all 26 Gen II or Gen III regions. Both Generations have employment paths that follow the pattern in Figure 2; however, it does appear that Generation II regions, on average, have faced slightly more difficult employment conditions than Generation III regions. Generation II had a higher average concentration of employment in the manufacturing sector and, as shown in the figures, the regions in that generation have seen manufacturing sector employment decline by about two to three percentage points more than Generation III. This suggests that Generation II, as a whole, may be comprised of regions where workforce needs are driven by a more traditional, manufacturing-focused economic base as compared to Generation III.

[69] "Quarterly Census of Employment and Wages," Bureau of Labor Statistics, Accessed November 4, 2011, http://www.bls.gov/cew/.

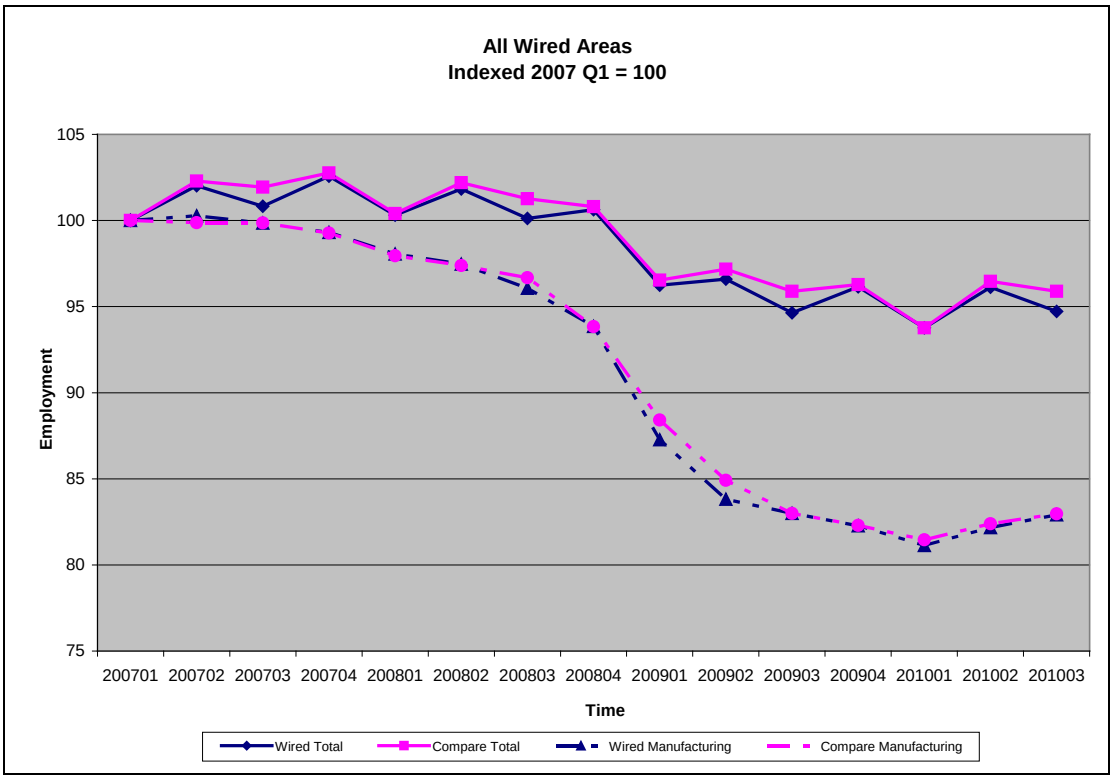

Figure 2
Source: BLS Quarterly Census of Employment and Wages

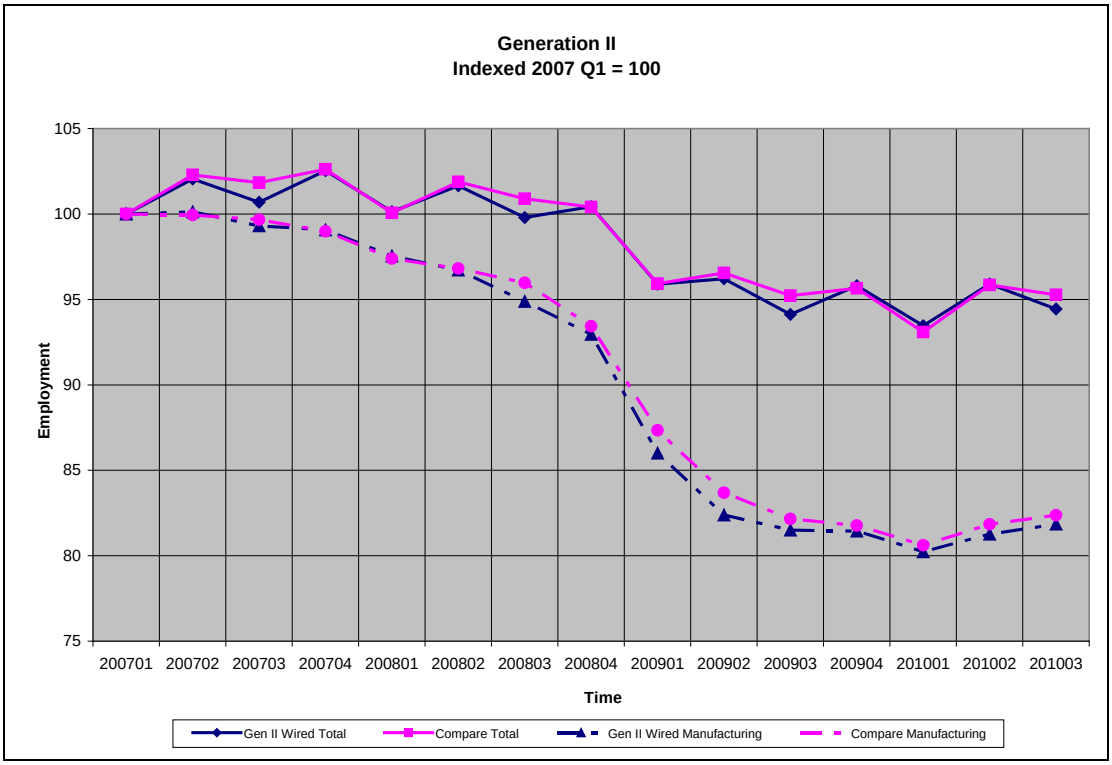

Figure 3
Source: BLS Quarterly Census of Employment and Wages

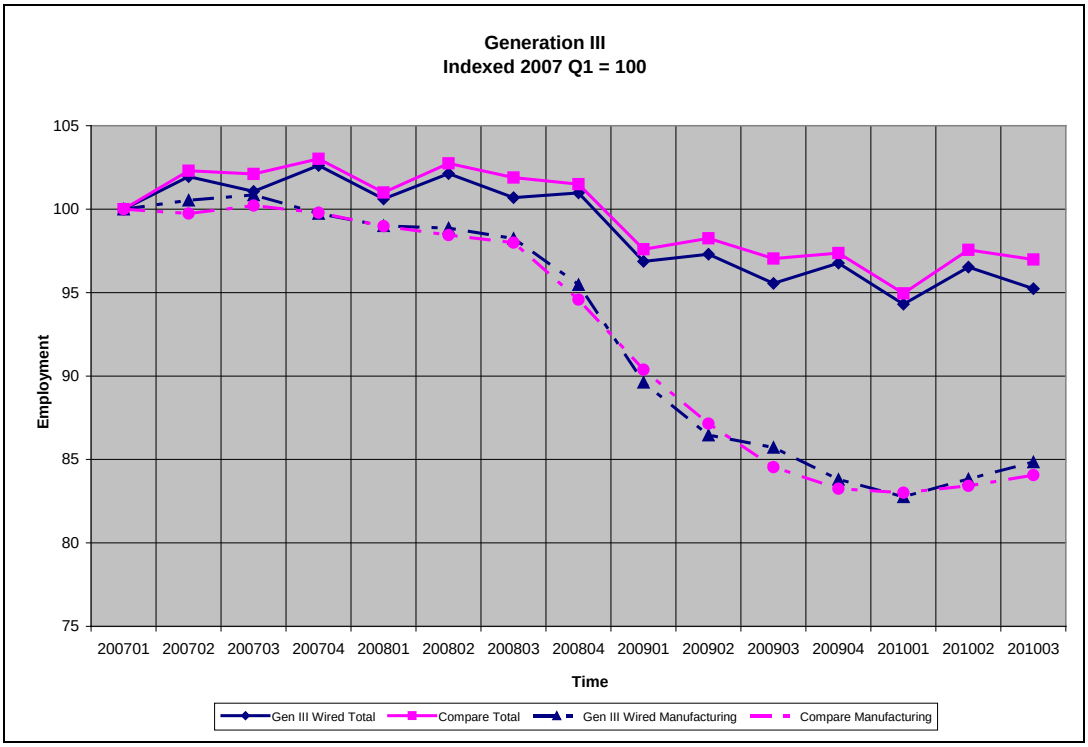

Figure 4
Source: BLS Quarterly Census of Employment and Wages

As shown, employment trends in both Generation II and Generation III are similar to the average of the comparison regions, although slight differences are detectable. During most quarters, the index of employment for the regions in Generation II is nearly identical to the composite of their comparison regions. However, the overall employment index for the regions in Generation III is consistently a percentage point or two below the composite of the comparison regions' index. On the other hand, the manufacturing employment index for the Generation III regions is indistinguishable from the index for the comparison regions, but that index for the Generation II regions lags behind their comparison regions composite index.

Average Job Creation and Net Job Creation

Job creation measures the number of new jobs created at firms that were expanding during the quarter or that started up in the region, which is an important consideration for workforce development, since the presence of companies that are adding jobs creates a demand for newly trained workers, even in places or times of seemingly modest net employment change. Quarter-to-quarter changes in employment occur through the dynamics of some firms starting up, some firms increasing their employment, some firms decreasing employment, and some firms going out of business. These changes are referred to as net job flows.

Figure 5 displays the average level of job creation for the 26 regions and for the 26 comparison regions. Throughout the 12 quarters displayed, the average job creation was around five percent per quarter. The comparison regions seemed to be more vibrant; their average job creation

exceeded the Generation II and Generation III averages in eight of the 12 quarters. Figures 6 and 7 show these data for the two Generations of regions.

The Generation II regions lagged behind their comparison regions in all but one quarter, and it was exactly even for that quarter. The Generation III regional average job creation exceeded the comparison group average half the time and lagged behind it half the time. A likely explanation for this pattern is that the Generation II regions were more heavily concentrated in the manufacturing sector than the comparison regions, and manufacturing lost more employment over the time period. Presumably our matching algorithm more closely matched the percentage distribution by sector in the Generation III regions. The Appendix displays these bar charts for each region in the two generations.

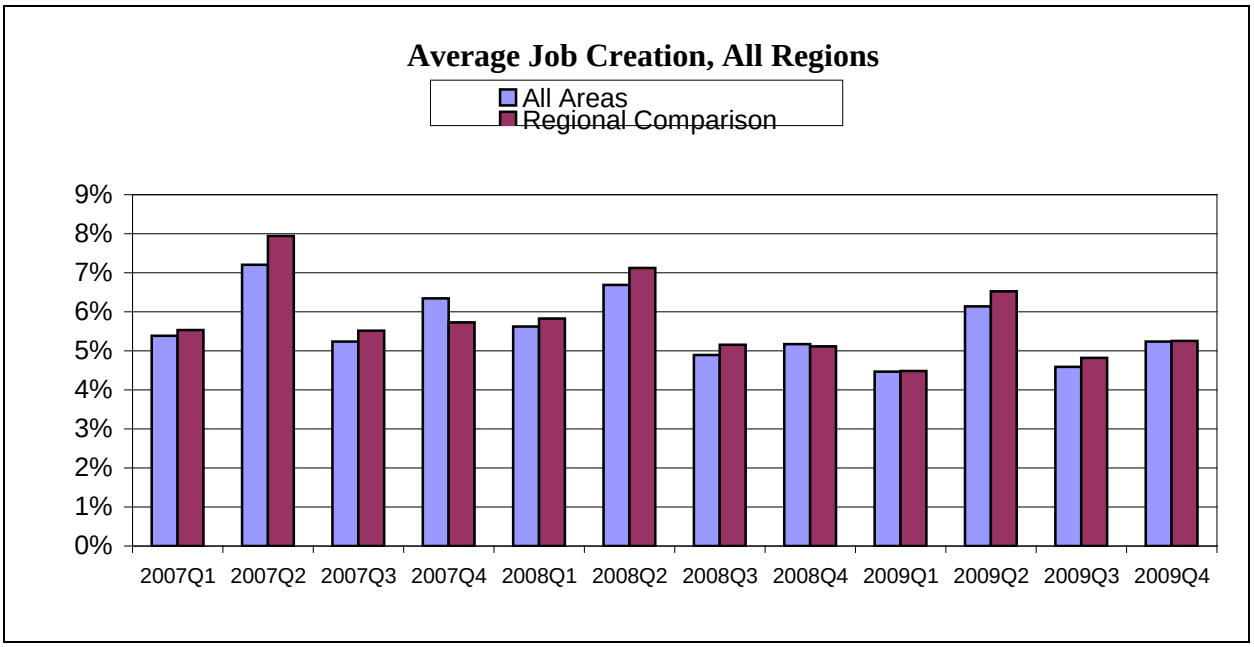

Figure 5
Source: Bureau of the Census Quarterly Workforce Indicators

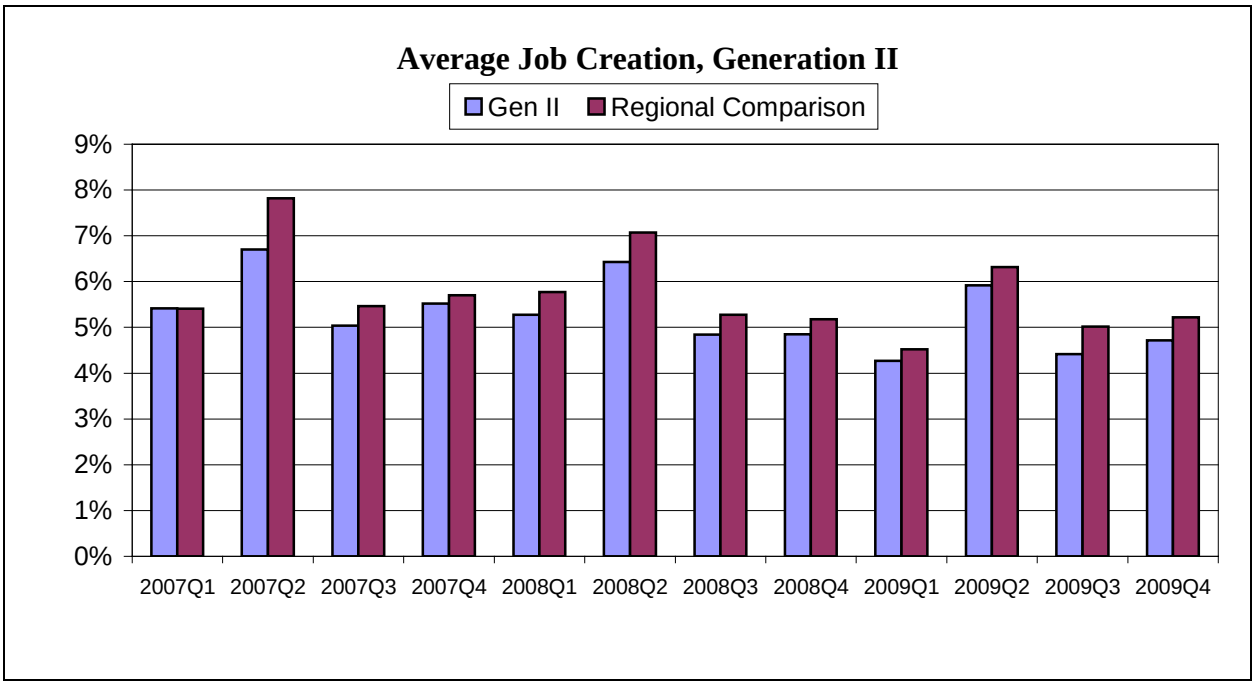

Figure 6
Source: Bureau of the Census Quarterly Workforce Indicators

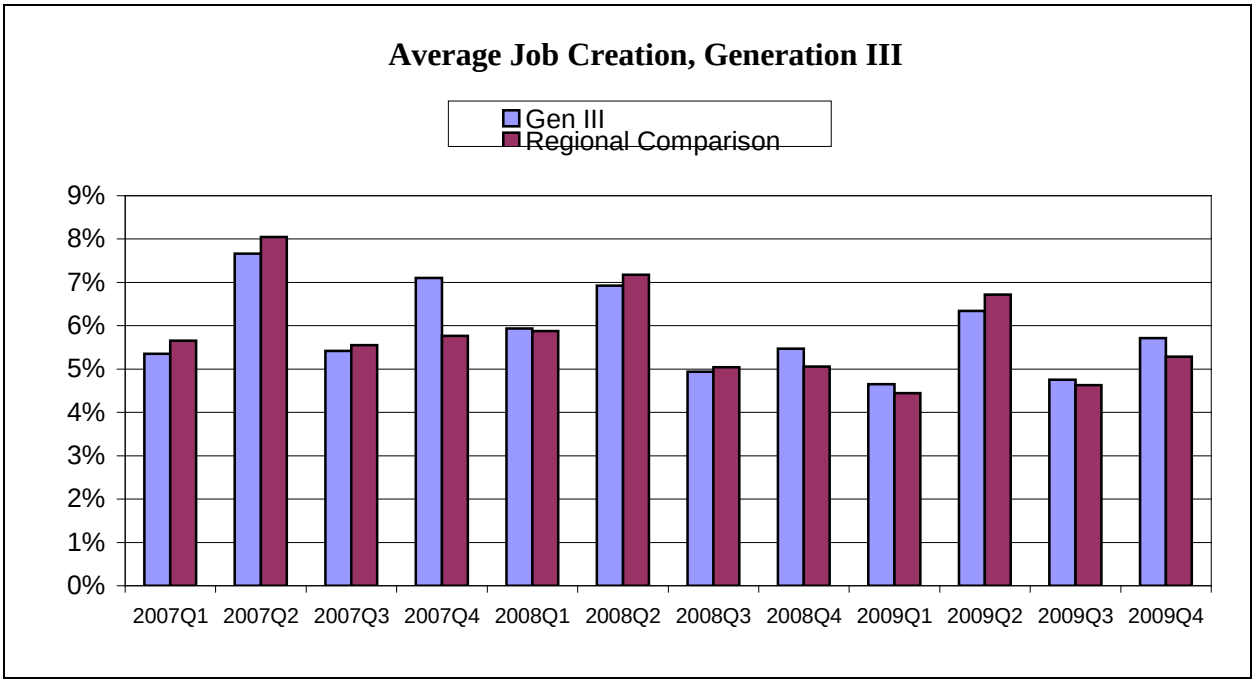

Figure 7
Source: Bureau of the Census Quarterly Workforce Indicators

The average regional net job flows, which essentially net out the job loss in regions from job creations, are shown in Figures 8 through 10 for all of the regions, as well as breakouts for the regions in Generations II and III. The patterns indicate that the average region had employment

growth in the first two quarters of 2007, although not nearly as strong as the comparison regions. Then, in the third quarter of 2007, the average region lost employment. Note that this was prior to the official start of the recession in December 2007. The average region recovered in the next three quarters—the fourth quarter of 2007 and the first two quarter of 2008—and then suffered significant employment losses in five of the last six quarters displayed in the figure. It is likely that the net job growth in the second quarter of 2009 (the one quarterly exception to the bleakness of the last six quarters) is the result of Recovery Act funding and the payroll tax reduction.

With a few minor exceptions, the patterns for each Generation closely mirror the pattern in Figure 8. The average net job flows for the regions in Generation II seem to be less volatile than the average for the comparison regions—for quarters when the comparison regions' average is positive, the WIRED regions' average is typically smaller. When the comparison regions' quarterly average is negative, then the WIRED Gen II regions' average is typically a smaller negative. The average net job flow rates for the Generation III regions exceeds the comparison regions' average for half of the quarters, and vice versa for half of the quarters. The Appendix displays the net job flows for every region and their comparison regions.

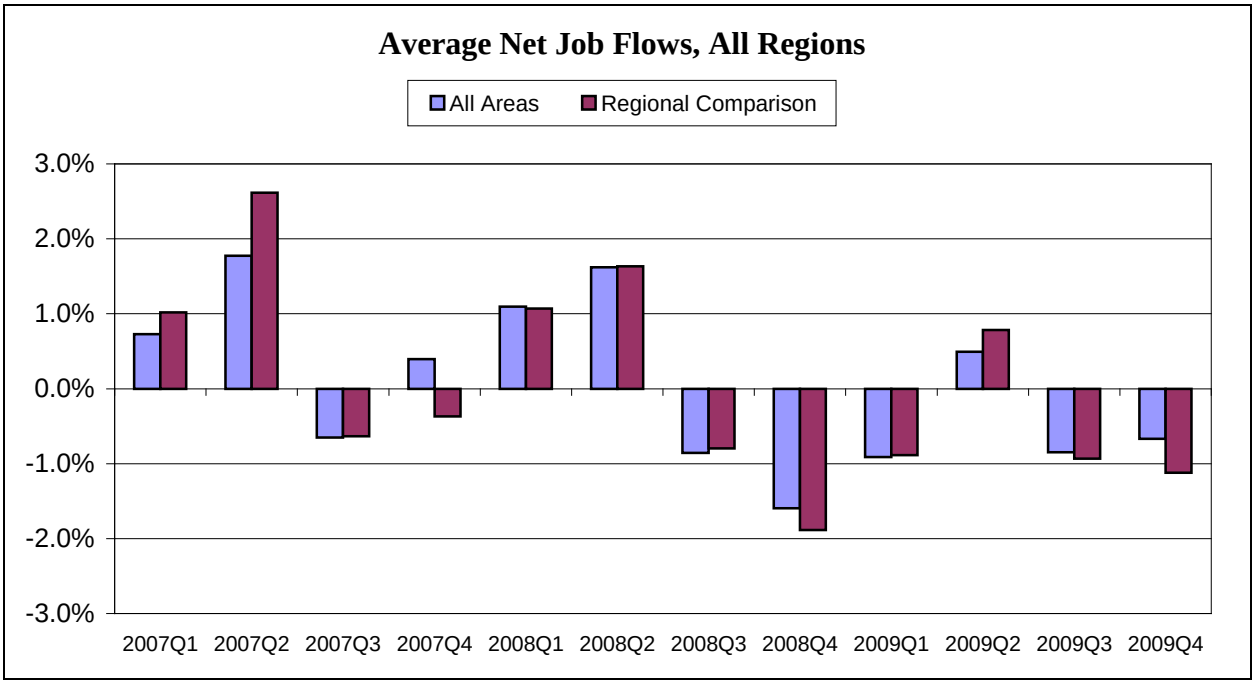

Figure 8
Source: Bureau of the Census Quarterly Workforce Indicators

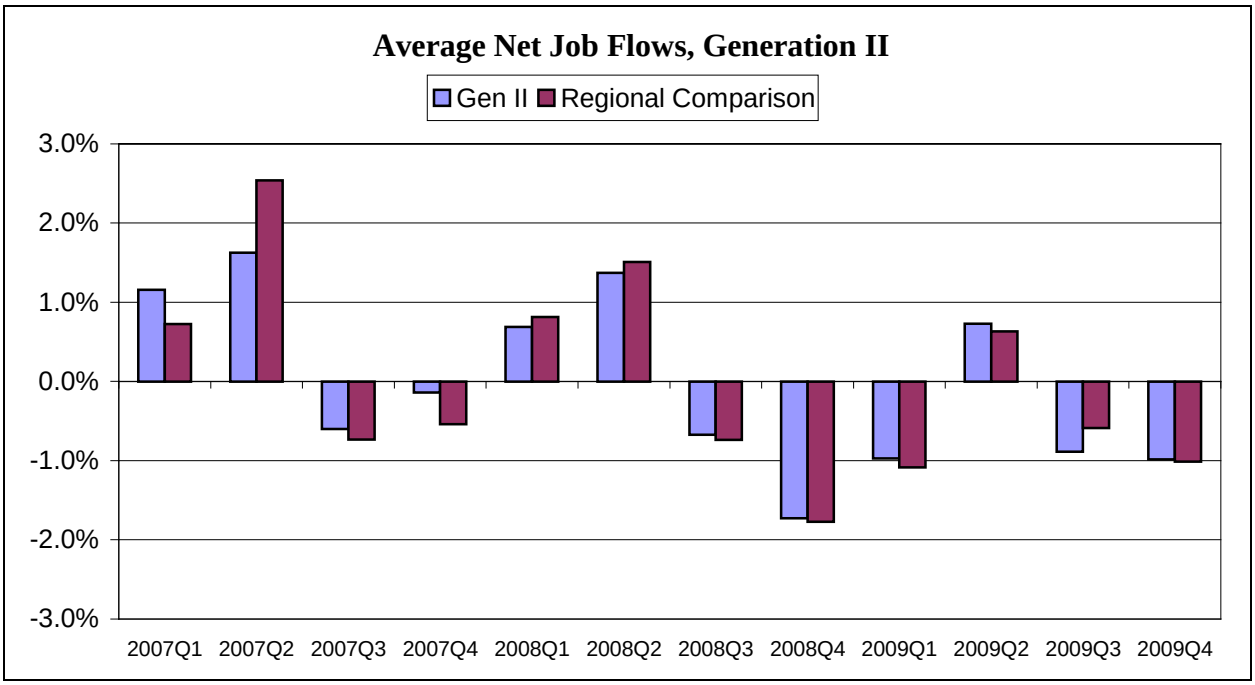

Figure 9
Source: Bureau of the Census Quarterly Workforce Indicators

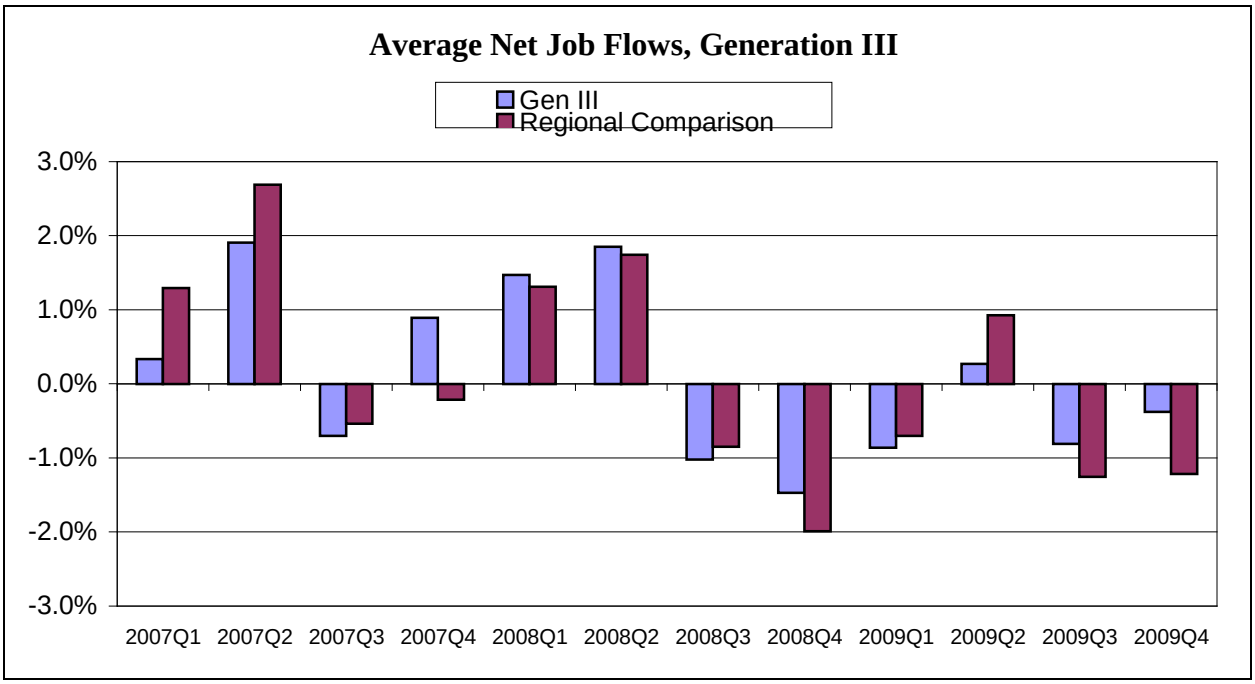

Figure 10
Source: Bureau of the Census Quarterly Workforce Indicators

Multivariate Model of Employment Outcomes

The sections above examine the differences in means between the WIRED regions and their comparison regions. A slightly more rigorous way to analyze these data is to estimate a

difference in differences equation similar to what was presented above for the Common Measures. In this case, we compare the WIRED regions and the comparison regions before and after the former received funding from ETA. The outcomes that we examine include New Hires, All Job Created, Separations, and Net Job Flows.

The precise model that was estimated is as follows.[70]

(2) $Outcome_{irq} = a_i + b1_i * WIRED_r + b2_i * Post_q + b3_i * WIRED_r * Post_q + e_{irq}$

where $Measure_{irq}$ = i-th outcome for region r in quarter q
$WIRED_r$ = 1 if r is a WIRED region; 0 otherwise
$Post_q$ = 1 if quarter q is after the quarter when the WIRED generation began (2007Q3 for Gen II; and 2008Q1 for Gen III); 0 otherwise
e_{irq} = standard error term
b1, b2, b3 = estimated coefficients

The coefficient b3 is the estimated difference-in-difference estimator of the effect of being in a region. Table 16 presents the estimates of this coefficient. Note that the outcomes are dimensioned as percentages, so that the coefficients represent percentage point changes in the outcome measure.

The results that are displayed in Table 16 confirm the difference in means analyses. There is very little difference between being in a region after it has been funded from before it was funded or from comparison regions.

Table 16: Difference-in-Difference Estimates of the Impact of Being in a Region
On Regional Employment Changes

Outcome	Generation II	Generation III
New Hires	0.26* (0.15)	-0.28 (0.18)
Job Creation	-0.00 (0.15)	-0.06 (0.17)
Job Separations	0.24 (0.18)	-0.20 (0.19)
Net Job Flows	-0.02 (0.19)	0.02 (0.22)

Source: Authors analyses of QWI data.
Note: Standard errors in parentheses. * denotes statistical significance at the 0.10 level (two-tail test).

[70] Equation 2 was estimated with regional (county) fixed effects. Estimates without fixed effects were not appreciably different.

New Faculty Hires and STEM Completions

Colleges and universities play an important role in the regional transformation of talent, workforce, and economic development systems. The last set of extant data that is presented here comes from the U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS). Figures 11 and 12 display the percentage of all faculty that are new hires for all of the regions and their comparison regions at all public and private postsecondary institutions (colleges, tech schools, universities, etc.) for the academic year 2009 (most recent year available). Interestingly, a few of the regions have percentages that exceed 15 percent—Northern New Jersey, Rio South Texas, and Southern Arizona. A positive, and most likely, interpretation of these high percentages is that they are experiencing high enrollment increases due to population growth, high unemployment, and emphases of higher education. Unfortunately there is a less positive possibility, which is that institutions in these regions have relatively high faculty turnover. For the most part, the percentages hover around eight to ten percent and it is not possible to detect a difference between the regions and their comparison areas. Ten of the regions have higher percentages than their comparison regions and 15 have lower percentages.

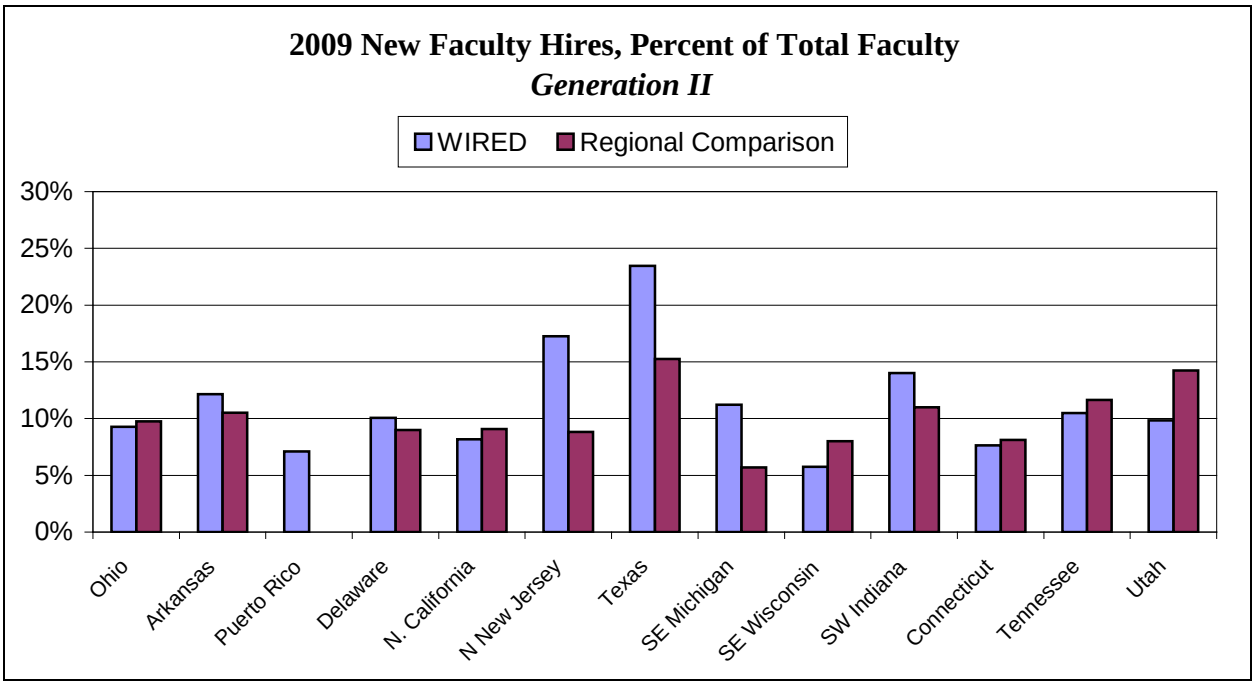

Figure 11
Source: NCES IPEDS

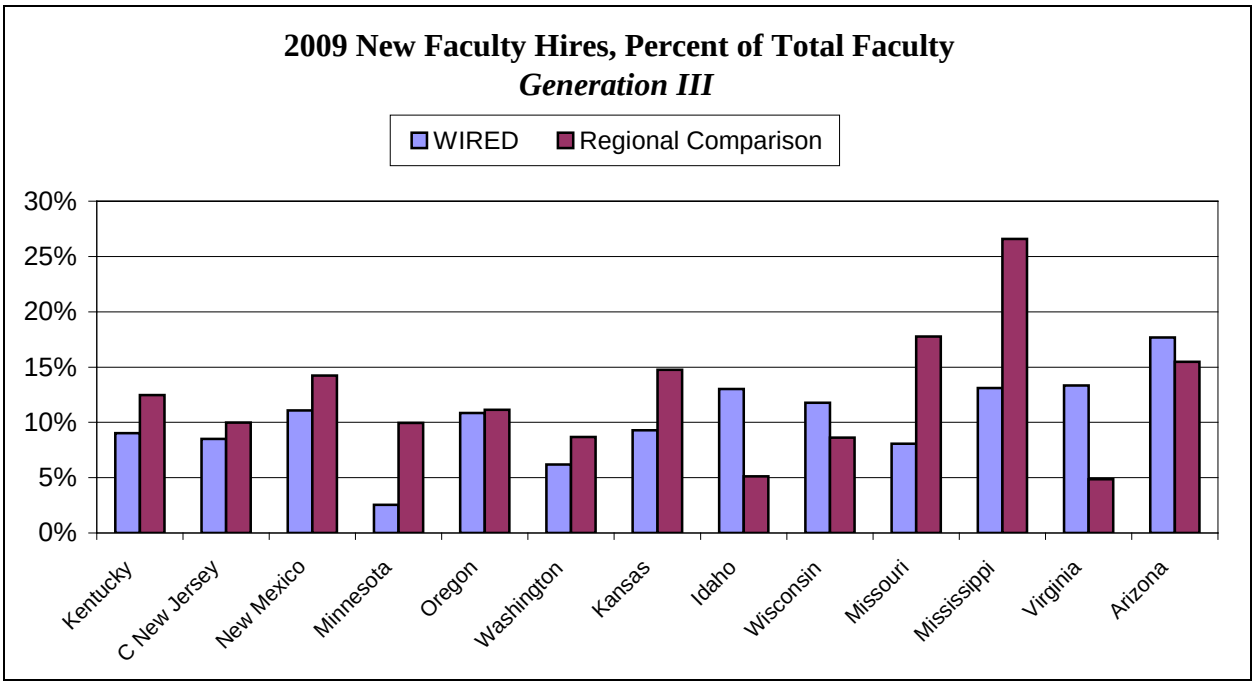

Figure 12
Source: NCES IPEDS

IPEDS also provides data on the percentage of student completions that are in science, technology, engineering, or math fields (STEM). Figures 13 and 14 show these data for 2009 for each region and comparison region. These data refer to all levels of completion in postsecondary education—certificates, associate degrees, baccalaureate, and graduate degrees. Many of the funded regions have some focus on expanding or supporting workforce training, or on starting or expanding educational programs in community colleges, tech schools, and universities in STEM fields. These data provide a benchmark measure of each region's relative development pipeline capacity for such programs.

For most regions, this percentage is around ten percent, although there are four WIRED regions with much higher percentages – I n some cases more than double the six percent figure (Southeast Michigan, Tennessee Valley, South Central and Southwestern Wisconsin, and Southern Arizona). All together, there doesn't seem to be a systematic difference between the regions and their comparison regions. Nine of the regions surpass the percentage in their comparison regions, whereas 15 of the comparison regions have higher percentages.

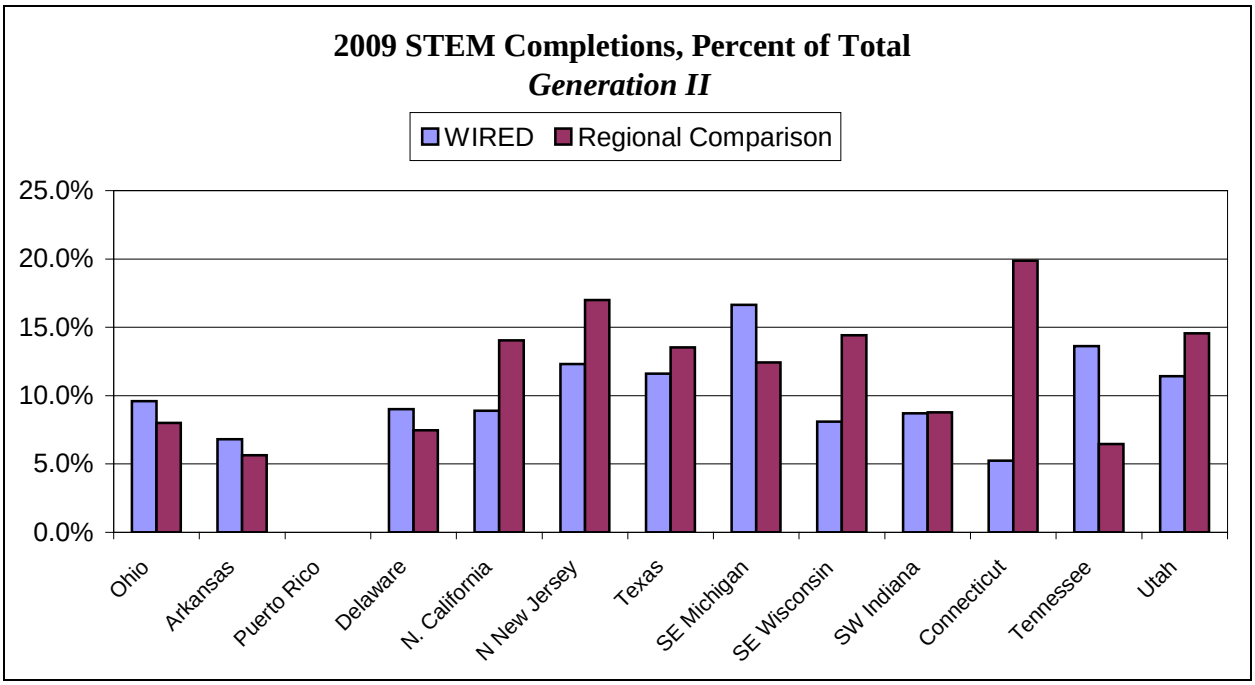

Figure 13[71]
Source: NCES IPEDS

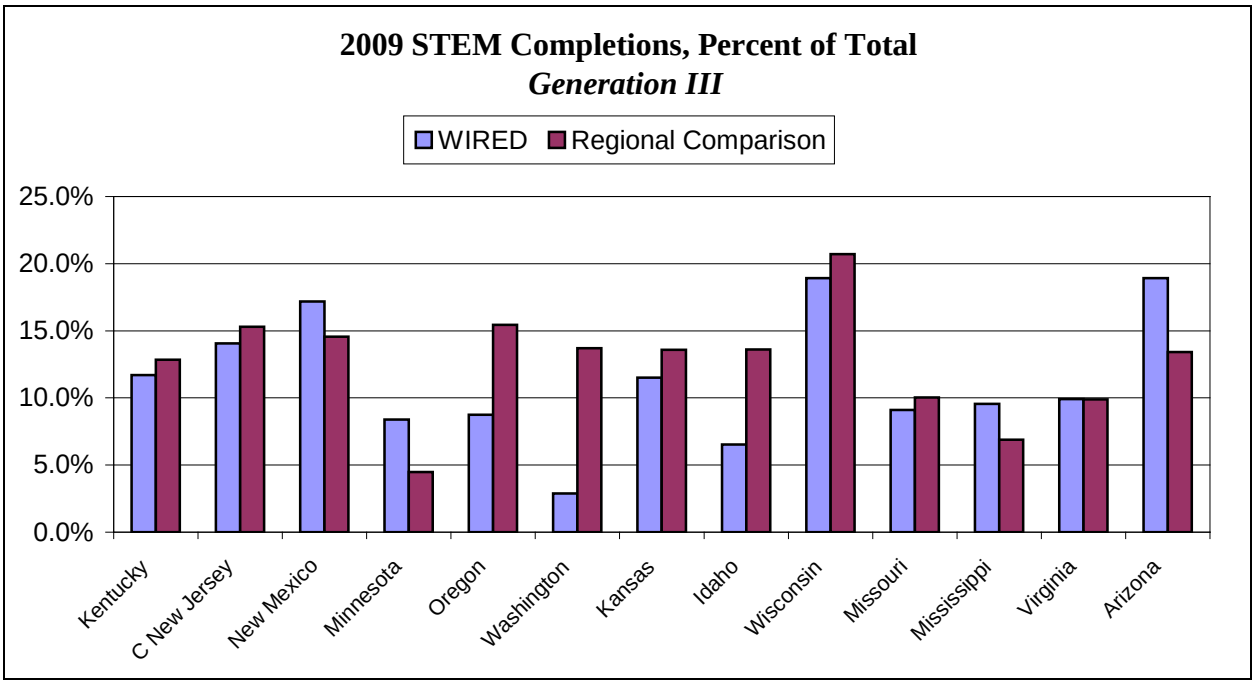

Figure 14
Source: NCES IPEDS

[71] Puerto Rico is omitted because of a data anomaly for its comparison region.

Summary

A major thrust of the Initiative was to unleash ideas and innovations from the "bottom up;" i.e., from regions. While the initiative was highly successful in having regions implement innovative activities targeted on their localized concerns, the autonomous nature of the grants made it very difficult to measure outcomes in a consistent and complete manner.

By reviewing regions' proposals, implementation plans, site visit reports, and quarterly progress reports, we have found that WIRED funded training for at least 37,500 individuals distributed across several broad sectors. Approximately 80 percent of the individuals who were trained completed their training, and approximately 10 percent entered employment after their training. It was not possible to identify the sector of training for about two-thirds of the participants. However, for those trainees where sector was identified,life sciences was by far the largest sector. Documents suggested that over 14,000 individuals received degrees or certificates as a result of their training, and over 18,500 individuals participated in career development or guidance activities.

In addition to incumbent or emerging workers being trained, regions also invested resources in the professional development of educators. Data suggest that almost 12,000 educators received some sort of professional development. In the specific curriculum area of STEM, the reports that were reviewed indicated that over 21,000 students were enrolled in STEM programs, of whom about 90 percent completed.

Finally, documents suggested that considerable business incubation and entrepreneurship training was conducted by regions. Almost 300 business startups were documented that employed over 820 individuals.

The Common Measures are a consistent framework for workforce development agencies to track outcomes for individuals served by Federal training programs such as WIA or Trade Adjustment Assistance (TAA). An econometric analysis using a difference-in-difference methodology found that the Generation I regions seemed to foster successful use of the workforce system, but that no effect was seen for Generations II or III.

To examine the relative economic performance of the various regions, employment by place of residence from the BLS's Quarterly Census of Employment and Wages has been used to track the trends in employment in the funded regions relative to a matched set of comparison regions. These data show that employment trends between the beginning of 2007 through the third quarter of 2010 in both Generation II and Generation III regions were similar to the average of the comparison regions. Generation II regions suffered a slightly greater decline in overall employment and in manufacturing employment in the recession than did the Generation III regions. Furthermore, relative to comparison regions, the Generation II regions lagged in manufacturing employment and the Generation III regions lagged in overall employment.

Another important employment dynamic is job creation. Throughout the 12 quarters from 2007Q1 through 2009Q4, the average job creation for the 26 regions was around five percent per

quarter. The Generation II regions lagged behind their comparison regions in all but one quarter, and it was exactly even for that quarter. The Generation III regional average job creation exceeded the comparison group average half the time and lagged behind it half the time. A likely explanation for this pattern is that the Generation II regions were more heavily concentrated in the manufacturing sector than the comparison regions, and manufacturing lost more employment over the time period. Presumably our matching algorithm more closely matched the percentage distribution by sector in the Generation III regions.

The average regional net job flows, which essentially net out the job loss in regions from job creations, indicate that the average region had employment growth in the first two quarters of 2007, although not nearly as strong as the comparison regions. Then, in the third quarter of 2007, the average region lost employment. Note that this was prior to the official start of the recession in December 2007. The average region recovered in the next three quarters—the fourth quarter of 2007 and the first two quarters of 2008—and then suffered significant employment losses in five of the next six quarters as the economy went into a deep recession.

The average net job flows for the regions in Generation II seem to be less volatile than the average for the comparison regions—for quarters when the comparison regions' average is positive, the WIRED regions' average is typically smaller. When the comparison regions' quarterly average is negative, the WIRED Generation II regions' average is typically a smaller negative. The average net job flow rates for the Generation III regions exceeds the comparison regions' average for half of the quarters, and vice versa for half of the quarters.

A multivariate difference-in-difference analysis of the job creation and job flow data found no impact of WIRED on these dynamics.

Finally, many of the funded regions had a focus on expanding or supporting workforce training in, or on starting or expanding educational programs in community colleges, tech schools, and universities in STEM fields. U.S. Department of Education postsecondary data find little impact that funded regions had on faculty hiring or STEM completions.

Chapter V: Sustainability

This chapter explores regional experiences in continuing regional initiative activities after the close of the grant, including the nature of what was sustained and the means by which efforts were sustained. This chapter also identifies the factors relevant to the capacity of the region to sustain their strategies, and the implications for the five overarching WIRED Initiative goals. Findings here are based primarily on conversations with multiple stakeholders in 23 of the 26 Generation II and III regions, and site visits to eight regions, after the close of the grants.

Introduction

Sustainability in Context

The overarching goal of the WIRED Initiative was to foster the transformation of regional economies by bringing the disparate and often contradictory efforts of economic developers and workforce developers together to more effectively respond to the challenges of job creation in the 21st century. While achievement of this goal required more time to develop and mature than was made possible through time-limited WIRED grants, evidence of the transformative nature of WIRED was found in the numerous efforts that grant recipients implemented to change their respective organizations and activities. Of equal importance was the continuation of these efforts beyond the end of the WIRED period of performance.

For purposes of this analysis, we define sustainability as (1) the continuation of WIRED activities beyond the end of the period of performance, (2) continuation of WIRED-inspired organizations beyond the end of the grants, and/or (3) the transformation of WIRED activities and/or organizations into new activities or organizations that maintained the WIRED vision or sought to achieve WIRED goals beyond the end of the grants.

Recognition of the importance of sustainability to achieving WIRED goals was manifested throughout the WIRED experience in a variety of ways. Preparing for sustainability was addressed by almost every WIRED grantee at some point although only some of these proposals were carried out. Many of the WIRED grantees identified explicit plans for sustaining their efforts after the conclusion of the funding period. For example, the three-state (Delaware, New Jersey, and Pennsylvania) Delaware Valley Innovation Network WIRED grantee (DVIN) explicitly identified preparation for sustainability within its implementation plan, as per this excerpt from that document;.

> In order for DVIN to continue after USDOL funding has ended, DVIN must transform into a self-sustaining, revenue-generating organization. To meet this goal, DVIN will assemble a Sustainability Steering Committee to explore the feasibility of becoming a non-profit entity and the effect it would have on the states and institutions that currently sit on the Executive Committee. DVIN will make a decision regarding the feasibility of applying for non-profit status by September 2008. If DVIN becomes a non-profit entity, DVIN would have an opportunity to identify alternative funding sources, including corporate and private dollars. DVIN would also shift from being a project to being an

> organization, giving DVIN more public recognition and potentially increasing its ability to attract private sector support.[72]

Some WIRED grantees did not explicitly address sustainability in their implementation plans, yet recognition of the importance of sustainability to their proposed efforts is evident by examining the goals they established. In the case of the Appalachian Ohio WIRED region, discussion of the proposed impact of their goals for regional transformation clearly states that their initiative will "create lasting partnership[s] with employers, high schools and higher education to transform the IT/IDT workforce development system and to support the region's growth in IT/IDT."[73]

Additional efforts by WIRED grantees to address the issue of sustainability following the end of the grant period included the explicit requirement that project plans (e.g., requests for funding) identify how the project would be sustained after WIRED funding expired, the establishment of a sustainability committee within the WIRED governance structure, or ad hoc efforts to address sustainability issues among WIRED leadership once the Initiative was under way. The diverse approaches identified to support sustainability included:

- Identifying opportunities to leverage WIRED funding by finding additional funding streams to support ongoing activities following the end of WIRED funding.
- Requesting local partners and stakeholders to match funds they request from the WIRED region to support their programs.
- Designing programs and activities that will be self supporting over time.
- Reorganizing the WIRED regional partnership (or a portion of the WIRED collaborative) as a non-profit 501(c) 3 organization.
- Continue pre-WIRED provider activities that were incorporated into the local WIRED initiative past the conclusion of WIRED funding.

Ideally, examination of the sustainability of WIRED organizations and activities should be conducted at regular intervals—say two years, five years, and ten years—after the conclusion of WIRED funding. That approach, however, goes beyond the scope of this analysis. Instead, the information reported here is limited to what was learned during a relatively short period of time from several weeks to several months after the end of the WIRED grant. During the late summer and early autumn of 2010 telephone conversations were conducted with multiple stakeholders in 23 of the 26 Generation II and Generation III WIRED regions.[74] The evaluation team used the results of these calls to identify eight WIRED regions where sustainability was reported and

[72] Delaware Valley Innovation Network, *WIRED Implementation Plan, Final Draft*, last modified December 2007 (Philadelphia, PA, 2007).

[73] Ohio Valley Interactive Technology Alliance, *WIRED Implementation Plan*, last modified October 19, 2007 (Athens, OH, 2007).

[74] Two of the regions were not contacted as they had received non-funded extensions and, as they had not concluded their WIRED-funded activities, could not report on their post-WIRED sustainability. Numerous attempts to reach the leadership and key partners of a third WIRED region were unsuccessful.

where the team recognized an opportunity to explore interesting and successful examples of sustainability in greater detail than was offered by telephone conversations alone.[75]

Observations on Sustaining Efforts

The idea that WIRED activities, organizations, and processes might be sustained beyond the end of the funding period was evident throughout much of this project for most of the WIRED regions, especially during the last two years. Sustainability was explicitly mentioned in several of the 26 Generation II and Generation III WIRED Implementation Plans. Questions about sustainability were addressed in all of the reports prepared following the second round of site visits, and sustainability was an important item of discussion among the 23 WIRED regions that were called following the end of their WIRED funding as well as with eight regions that were visited briefly during the fall of 2010.

Based on the data compiled from these sources—especially post-WIRED telephone calls and site visits—we have drawn the following conclusions:

1. Almost every region has sustained some aspect of their WIRED initiative—a product, activity, or collaborative structure—following the end of the WIRED funding period.
2. There was considerable variation in what has been sustained by the regions in terms of
    a. The types of products, activities, and collaborative structures (including both formal organizations and informal groups) that have been sustained from region to region
    b. The number of products, activities, and collaborative structures that have been sustained from region to region—from individual products or activities in some regions to several different products, activities, or structures in others
    c. The number of stakeholders and partners involved in what has been sustained also varies from one or two stakeholders involved with a single activity or product to a region-wide collaboration of diverse stakeholders and partners attempting to sustain region-wide interests.
3. Those activities, products, and/or collaborative structures that were sustained represent aspects of the individual WIRED Regions' initiatives that were
    a. Feasible for the WIRED Region to sustain
    b. Of value to at least one of the WIRED Region's stakeholders
4. Most sustained activities, products, or structures served as indicators of the WIRED Regions' collaborative efforts towards achieving WIRED goals despite the conclusion of WIRED grants. Alternatively, products, programs, or activities that reflected the efforts of a single entity (rather than the collaborative efforts that were established during the WIRED funding period)—especially activities and programs that existed prior to WIRED and that continued to be offered during and after the end of WIRED funding—were not considered to represent WIRED sustainability.

[75] Brief follow-up site visits were conducted in the Appalachian Ohio, Northern New Jersey, Rio South Texas, Central New Jersey, Minnesota, Northern Oregon, Kansas, and Southeastern Virginia WIRED regions.

Findings on the Nature of Sustained Efforts

While one of the key goals of the Initiative was to transform the economy of the participating regions through the marriage of economic and workforce development systems, the specific products, programs, activities, collaboratives, and formal organizations that were sustained by the individual regions all represented distinct steps towards regional transformation. Based on data collected through follow-up phone calls and brief site visits to eight of the Generation II and III WIRED regions, the evaluation team identified more than 100 instances of sustained programs, projects, organizations, and collaborations. Those activities, programs, and collaborative efforts identified were, in turn, categorized by type of sustained activity. (It should be noted that these categories, while exhaustive, are not necessarily mutually exclusive. Several activities cited overlap categories and may legitimately be assigned to more than one category. For example, the North Jersey Partners WIB consortium may be identified as part of an ongoing governance structure as well as a 501(c) 3 organizations that was established to collect dues and receive grants funds in order to maintain its operation beyond the WIRED funding period.

Among the activities that have been sustained by one or more of the WIRED regions (excluding regions that were granted extensions to continue their work) are the following.

- Ongoing region-wide governance structures
- Establishment and/or maintenance of WIB/WDB consortia
- Establishment and/or maintenance of organizations providing region-wide leadership
- Career awareness products, programs, and activities
- Community college educational programs, including
  - For-credit classes
  - Non-credit training courses
- Four-year college classes and programs
- Collaboration agreements between educational organizations, including
  - Articulation agreements
  - Curriculum sharing
- On-going collaboration between educational institutions and the business community
- Establishment of educational pipelines for specific, targeted occupations
- Programs, activities, and organizations promoting entrepreneurship
- Establishment and/or maintenance of organizations devoted to regional economic development

Governance. The continuation of a governing or coordinating structure to maintain at least some regional dialogue and activity following the end of WIRED funding was reported by sixteen (16) WIRED regions. Examples included:

- Industry councils that bring together representatives of an industry cluster in order to address common workforce needs, training, and other issues;

- Alliances made up of local WIBs that are working together to provide support for an emerging regional industry such as the consortium in Southeastern Wisconsin that is working to establish a fresh water resources industry;
- Re-establishment of a governing body, as in Central Kentucky, that is charged with managing (and funding) a major regional project that has been sustained beyond the end of the WIRED funding period; and
- Transformation of some regional governing structures into 501(c) 3 organizations in order to continue managing ongoing projects and to raise funds to support these projects as was undertaken in Minnesota to promote alternative energy development.

Local WIB Consortia. Some of the ongoing governing structures were built around consortia of local WIBs. Seven of the WIRED regions reported some level of continuing local WIB collaboration that includes a range of activities. At one end of the spectrum, local WIBs have continued to meet quarterly since the end of the Initiative in their region in order to explore ways in which they can continue to work together. At the other end of the spectrum, some local WIB consortia have maintained the same (or a similar) name and much of the governmental structure of the Initiative within which they first came together. Some have maintained themselves as dues-paying members of 501(c) 3 organizations that are recruiting other stakeholders and partners to rejoin the organizations and reinvigorate some of their WIRED activities. One example of this approach is the P-20 Council that was established in southeastern Missouri to continue the region's WIRED efforts.

Regional Leadership. There was considerable overlap among WIRED regions that sustained a governance structure for region-wide economic- and workforce-development efforts and those that exhibited some level of regional leadership that goes beyond the continuing oversight of a program, product, or activity. In a few cases region-wide development leadership and the ongoing governing structure of a program, activity, or product are indistinguishable. In Central Kentucky, for example, four local WIBs recognized the need to continue leading their region toward high-skill/high-wage employment and, in so doing, reestablished themselves as the post-WIRED governing structure to oversee maintenance of support for a web portal targeting high-wage/high-skill jobs and employers. In most cases, however, governance alone is not sufficient to assure regional leadership for innovative economic and workforce development. In Southeastern Wisconsin the region has maintained a governing structure consisting of three local WIBs that are coordinating their efforts to develop a new industry cluster, but region-wide leadership for building regional awareness and developing new economic initiatives mainly comes from an established industry consortium that proceeded WIRED and continues to exist separately from this governing structure. There are also a few regions where governing organizations are continuing to provide region-wide leadership where none existed before (e.g., Puerto Rico) or have transferred their leadership role to another organization (e.g., Southeastern Virginia). In both of these examples, the sustained governing organizations are continuing to build regional awareness and attract new organizations to join in region-wide efforts and to solicit funding to support these activities.

Career Awareness. Fourteen (14) instances of career awareness programs were identified, ranging from the continuing opportunity for students to participate in clubs devoted to

information technology and related "cyber" activities in Appalachian Ohio to continuing availability of on-line career awareness web-sites designed for both high school- and college-age individuals (e.g., South Central Idaho). At least two of the regions (Kansas and Tennessee Valley) were continuing to offer summer career awareness camps for secondary school students. The Southwest Indiana region was continuing to provide mobile science and technology career awareness to students through the use of "STEM trucks" from the University of Southern Indiana that visit local schools.

Community College Programs. Fourteen (14) WIRED regions indicated that community college programs, curricula, and classes that had been implemented and funded through the Initiative were still being offered following the end of the WIRED funding period.

- Community colleges in southeastern Michigan, for example, were offering engineering classes that provide students with transferable credits to area four-year colleges and universities.
- Community colleges in South-Central Kansas were continuing to provide short-courses for engineers working in that region's targeted aircraft industry.
- Offerings in supply chain and logistics that were developed through WIRED in Southeastern Virginia were continuing to be offered by three community colleges in one of the regions.
- A career pathway in engineering from community college to a four-year university was continued in the Southern Arizona WIRED region.
- Other reported ongoing community college programs include welding, nursing, and information technology.

College Programs. Five (5) of the WIRED regions reported that educational programs developed and implemented for students at four-year colleges and universities and post-graduate programs have been sustained following the end of the WIRED funding period. For example, professional Master of Science degrees developed for the Delaware Valley and Central New Jersey WIRED regions have continued to be offered. Both provide pathways to managerial careers in the biotechnology and pharmaceutical industries by combining graduate-level education in science with graduate-level business classes as an alternative for science students who do not wish to become research scientists. The Central New Mexico WIRED region has continued to offer a master's degree in science for teachers to expand their ability to teach science to elementary and middle school students. Two other WIRED regions reported that undergraduate curricula in logistics, modeling and simulation, coal gasification, and mechatronics[76] were sustained after their respective WIRED Initiatives ended.

[76] According to the McGraw-Hill Dictionary of Science and Technology Terms, "Mechatronics" is "A branch of engineering that incorporates the ideas of mechanical and electronic engineering into a whole, and, in particular, covers those areas of engineering concerned with the increasing integration of mechanical, electronic, and software engineering into a production process." "Mechatronics," McGraw-Hill Science and Technology Dictionary, last accessed November 4, 2011, http://www.answers.com/topic/mechatronics.

Based on a discussion with one local WIB director, mechatronics in his region described the use and maintenance of high speed and highly complex machinery for producing and packaging goods.

Educational Collaboration. An even greater number of regions reported some form of educational collaboration, either among educational institutions at the same academic level or across levels, such as collaborations between community colleges and four-year institutions. In total, eleven Initiative regions reported continuing educational collaborations of various sorts.

- The Texas region reported continuing collaboration among five area community colleges to provide rapid response to manufacturing industry needs as they arise in that region
- Renewable energy training was the specific target of collaboration established between a state university branch campus and a community college in the Arkansas Delta WIRED region
- The Southwestern Connecticut-New York WIRED region established ongoing health careers training collaboration among three community colleges and a local hospital to address the nursing shortage on both sides of the state line. Two of the community colleges in this collaboration also assisted in developing a new nursing program at a third college, which has continued to educate nursing students since WIRED funding ended.
- In Southeastern Wisconsin the business and education communities have continued to collaborate to acquire funding for training students to work in an emerging water resources industry cluster; as a result, area community colleges have developed articulation agreements with the four-year colleges and universities to provide a training system for students who wish to work in this industry.
- At a different level, several WIRED regions established or expanded dual enrollment programs in their respective regions, allowing high school students to continue to receive community college credit for courses in engineering, technology, and related fields at little or no cost to them.[77]

Business-Educational Collaboration. Several of the regions also reported ongoing collaboration between business interests and educational institutions or among local WIBs, business, and education. These included the following:

- Ongoing green training for utility workers, miners, and industrial maintenance workers in Southwestern Indiana was reported to be continuing as a collaborative effort of local industry and local colleges and universities.
- Internship programs were being sustained through the joint efforts of educational organizations, local businesses, and the regional Chamber of Commerce in Southeastern Michigan.
- In Northern Oregon the local workforce system, area employers and community colleges were continuing to collaborate in order to provide employees with advanced manufacturing training.
- Collaboration between employers, the local workforce system, and career and technical educators in Southeastern Virginia has continued to promote science and technology career awareness among young people. In this instance, Youth Career Centers were established in local malls using both WIRED funds and local business community funds. These centers

[77] In some regions the costs assessed for high school students to be enrolled in dual credit classes were subsidized by the WIRED region prior to the end of the WIRED-grant period. The extent to which these costs have been assumed by other organizations within these regions since then is not known.

then continued to operate following the end of WIRED with financial support provided by some of the region's career and technical education high school programs.

Educational Pipelines. The establishment and continuation of educational pipelines for occupations within a specific targeted sector is interwoven within several of the other ongoing educational collaborations. As discussed earlier, these provide the means for students to be prepared for a smooth transition from entry level work through increasingly higher levels of training that can result in advanced levels of professional responsibility.

- In Southeastern Virginia, the modeling and simulation industry worked with WIRED partners to develop and institutionalize curricula to fill in the gaps between diverse skill levels needed by the industry. The approach provides the industry with well-trained workers while also providing students and incumbent workers with a clear pathway to higher skill levels and wages. These curricula have been sustained by the career and technical education centers, community colleges, and four-year universities in the region as a legacy of the Initiative.
- The Central New Jersey region recognized the need not only for highly educated life science researchers but also for a graduated set of curricula to prepare both new labor force entrants and incumbent workers with various levels of skill and responsibility in biotechnology manufacturing operations. A new curriculum was developed that prepares high school students for employment in the manufacturing branch of the biotechnology industry, while also allowing them to move on to technician training in bio-manufacturing through a two-year community college degree. A four-year baccalaureate program was also developed to allow those students completing the community college program to continue on to higher levels of employment in the bio-manufacturing sector.
- The Northern California region worked with high schools, community colleges, and baccalaureate-granting institutions to create dual credit courses in such industries as renewable energy technology and transportation technology.
- The Southwestern Connecticut-New York region chose to concentrate mainly on workforce development for disadvantaged youth in a region that is mainly known for high skill-high wage industry. Through this region several partnerships were developed to begin training youth for work in health care and green technology with the potential to move students into technical training for these fields after high school.
- The Tennessee Valley region reported on the continuing post-WIRED expansion of Project Lead the Way to nearby areas to promote engineering education as a way of recruiting students to support the workforce needs of the region's aerospace industry.

These regions, however, are the exceptions. Most other WIRED regions' efforts were limited to narrowly defined career awareness efforts or to specific, but limited, technical training courses and expanded community college curricula that lacked clearly articulated pathways to move upward within a specific occupation or industry. As an example, one region established several educational programs to promote engineering, green building technology, optics and laser technology, science education, and alternative fuels, some of which may, ultimately, result in more clearly articulated career pathways; however, these endeavors do not provide workers and students a smooth transition from entry level to higher levels of responsibility.

Entrepreneurship. Eleven WIRED regions indicated that activities or programs involving some aspect of entrepreneurship have been sustained following the completion of WIRED funding. The ongoing entrepreneurial activities vary widely and each is distinct from the others.

- Among the most basic ongoing entrepreneurial activities identified were those where business skills are being provided along with vocational skills in area career and technical education (CTE) programs or where on-line business classes are offered to local business people (and others) at little or no cost. These types of approaches were observed in several regions.
- A focus on entrepreneurship with a fast-track educational program to help prospective entrepreneurs gain vital business skills more quickly has continued in the South-Central Kansas region.
- Education in entrepreneurship for younger people is continuing in the Central Kentucky region as the result of a WIRED-funded Junior Achievement curriculum receiving national recognition. Expansion of this program outside of the region and into an adjoining state has been supported by local educational organizations since the Initiative ended.
- Direct entrepreneur support has been sustained in Puerto Rico by providing information technology entrepreneurs training in the use of open-source software. Another region has maintained a web site that connects technology innovators to one another and the dominant industry in that region.
- At least three of the regions are continuing to support business incubators, and one of these three is also maintaining a network of angel investors to provide seed money and mentoring to would-be entrepreneurs.
- A completely different approach has been sustained in Central New Jersey where foreign entrepreneurs are invited to the region to participate in a university-based "mini MBA" program that provides them with basic business training with the hope that this experience will encourage them to establish new businesses in the region or to establish U.S. branches of their businesses in the region.
- Perhaps the most ambitious effort to sustain and grow entrepreneurship is the morphing of WIRED-based business development efforts that were originally targeted mainly towards transportation, warehousing, and distribution (TWD) into a full-fledged, technology-based regional economic development effort that is encouraging entrepreneurs in Southeastern Virginia to apply locally-available technology to serve a wide variety of activities.

Regional Economic Development. Again, it is difficult to discuss WIRED regions that have sustained region-wide economic development initiatives that are separate from most of the other categories of sustained WIRED activities. Nonetheless, six regions have indicated that they have explicitly sustained ongoing economic development activities.

- One region indicated that a site license for a workforce and industry software package was purchased for use in analyzing and promoting local economic development activities.
- In contrast, an organization with more than 60 members that was established through WIRED to expand regional development efforts in advanced manufacturing explicitly incorporates ongoing collaboration among industry, education, and workforce development

organizations, and it also serves as an example of continuing regional leadership and governance for regional economic development.
- Another region has maintained its LWIB consortium to serve as the workforce development adjunct to developing and expanding a new regional industry cluster.
- One region used WIRED to strengthen existing regional collaboration and has since transferred its governing structure and its focus on high skill-high wage industry in order to support and strengthen a regional economic development consortium (which participated in the region's WIRED initiative). The new structure is continuing and expanding high-tech entrepreneurship, training, and development efforts for the region.

How Efforts Were Sustained

Review and analysis of the data collected following the end of the WIRED grant and subsequent site visits to eight of the regions lead to the conclusion that three factors help to explain the ability of WIRED regions to sustain their activities, programs, and organizations: (1) Resources; (2) Relationships; and (3) Resonance.

- **Resources** refer to the ongoing support for sustained activities and structures, either as financial support or in-kind support.
- **Relationships** refer to the various types and levels of collaboration among key WIRED organizations and partners to achieve mutually beneficial ends.
- **Resonance** refers to the alignment of WIRED initiatives or programs with other regional and/or statewide initiatives.

As in the prior section of this chapter, the typology presented here illustrate the predominant factors involved in promoting and supporting sustainability beyond the end of the WIRED grant period. None of these factors alone appears to be sufficient to sustain ongoing WIRED activities, but our observations indicate that the presence of at least one of them is necessary for sustainability.

Resources

For many of the WIRED regions, financial support was a critical factor in maintaining the staffing, programming, and activities that were established and paid for during the prior three years. Support for maintaining WIRED staff, office, and initiatives was sought from a number sources, including ARRA (American Recovery and Reinvestment Act) grants, grants from other federal and state governmental agencies, support from philanthropic organizations, contracts to provide services to other organizations, continuing financial support from partner organizations, and the provision of in-kind services such as office space or "borrowed" staff. In a few cases, ongoing activities were sustained through fees paid by individuals participating in those activities, and there a few instances where new or ongoing organizations agreed voluntarily to support themselves out of their respective operating funds or through the assessment of dues from the member organizations.

- Although the Central New Mexico WIRED region was granted an extension, they were already planning to support ongoing WIRED activities with funds made available from a $6 million ARRA grant associated with the Governor's Green Jobs Initiative. Planning for this included a decision that management of the grant would be maintained by the same organization and individuals that had been responsible for managing the WIRED grant.
- North Jersey Partners, in contrast, had began discussing acquisition of a grant from the National Fund for Workforce Solutions prior to the end of WIRED, and they reported success in achieving this goal after the end of the WIRED funding period. In addition, as this funding required a four-to-one match from local funders, North Jersey Partners reported success in raising financial support from the Prudential Insurance Company in Newark, New Jersey, as well as from other corporate foundations in the region. North Jersey Partners, in collaboration with the Newark Alliance and the New Jersey Transportation Planning Authority also collaborated to acquire a Comprehensive Economic Development Strategy (CEDS) grant to continue activities in the region.
- Some of the activities supported by the successor organization to SEVA-PORT in Southeastern Virginia were also being supported through a different grant. The Southwestern Connecticut-New York WIRED region has maintained its focus on serving the workforce development needs of disadvantaged youth through receipt of public and foundation grants, including a major grant from the Wall Mart Foundation. The Arkansas Delta WIRED region has been highly successful in acquiring grants from governmental and other sources in order to fund commercial transportation and biodiesel programs at the local community college.
- In some cases, grant funding has not been enough to continue supporting the programs and activities that were implemented through WIRED. For example, in the Rio South Texas region support for the North American Advanced Manufacturing Research and Education Initiative (NAAMREI) had been mainly provided through state and local grants; however, 25 percent of ongoing support for NAAMREI is expected to be provided through fees paid for customized training by manufacturers throughout the Rio South Texas region. NAAMREI also reported relying on the provision of in-kind resources—especially training equipment, training sites and computer laboratories—provided by their manufacturing clients.

Despite these and other instances of sustained WIRED activities and organizations, the impact of the Great Recession was identified in several cases as limiting the availability of funds—especially state and local grants—to help maintain programs and activities that were launched through WIRED funding. Either the funds previously sought to support ongoing programs are no longer available or, in a few instances, budget issues at the state level have temporarily halted access to funds. In the Northern California region, for example, continuation of health care-related training was on hold because completion of the state budget had been held up and, as one interviewee noted, "everything is in a standstill right now." In Southeastern Michigan it was reported that the recession had led to cutbacks in business financial support for continuing WIRED efforts, particularly the funds needed to support a full-time convener who is needed to go beyond *ad hoc* collaboration and once again bring all of the critical players together to address common, region-wide issues. A similar observation was offered for the Southwest Indiana region where business support for ongoing regional activities has shrunk as a result of the recession.

Relationships

When asked about the most salient aspects of the Initiative, individuals in almost all of the Generation II and III regions reported that WIRED provided an opportunity to collaborate and build relationships that may not have occurred without the stimulus provided by WIRED. While many of the relationships involving educational institutions, workforce development organizations, economic developers, and business organizations were reported to be continuing informally since the end of the WIRED grant period, some regional relationships have gone to a higher level of development and have become fundamental to the sustainability of WIRED activities across the country. As stated by one interviewee in the Southern Arizona region, "when funds ended we closed out everything, [but] we still have the relationships."

Local WIB consortia, for example, are central to continuation of the WIRED concept in Northern New Jersey and in Central Kentucky.

- North Jersey Partners is the 501(c) 3 organization that emerged from the LWIB/AJC consortium that was originally established to strengthen collaboration on workforce issues of common interest while WIRED was still underway. As noted above, LWIBs have been paying dues to support this consortium since the end of the WIRED grant. The consortium's leaders are also pressing New Jersey government officials to fund the programs they support, such as the designation of an industry liaison to serve as an intermediary between groups of employers within an industry sector and the AJCs that serve them.
- Local WIBs in Central Kentucky similarly formed a consortium to continue their activities following the conclusion of WIRED funding, especially to sustain the on-line KIX (Kentucky-Indiana Exchange) Portal they had established with WIRED funding.

Other relationships that were established during WIRED that have been maintained include educational organizations that have continued to take advantage of the benefits of working together. Local WIBs in the Northern Oregon region have continued to meet quarterly, and community colleges in the region have continued to work together to provide advanced manufacturing training for the defense and metals industries in the region. Prior to the end of WIRED funding, the four colleges that were members of the Rio South Texas Manufacturing College Alliance committed themselves to continuing their skills credentialing and customized training activities. This consortium has committed to continuing and expanding these activities, and they have actively sought funding from the University of Texas system as well from local tax revenues.

Alignment with State and Regional Projects

Several of the WIRED regions have been able to continue operating beyond the end of the WIRED funding period by aligning some or all of their core activities with initiatives that are being promoted separately by the states or regions in which they are located.

- In Utah, the Wasatch Range WIRED region's efforts to meet the needs of the biotechnology industry sector involved considerable attention being paid to expanding science, technology,

engineering, and mathematics (STEM) education as a foundation for progress and success in biotechnology. This region is being sustained through its increasing focus on STEM education which is being folded into an existing statewide STEM initiative. Governance of the WIRED region's efforts is being converted to an existing state-level advisory board that is focuses on STEM education through curriculum development at state colleges and universities.

- The Central New Mexico WIRED region operated for a time in parallel to a statewide green/alternative energy initiative that was independently promoted by the Governor's Green Jobs Cabinet and through the 2009 publication of a report identifying opportunities for economic development and job creation within this sector of the economy. There were four WIRED activities in the region at that time—ranging from green construction techniques to solar power and biofuels curricula—at four different schools that were independent of one another. This region's sustainability is being made possible by converting these uncoordinated efforts into a more coordinated effort to promote alternative energy and green jobs across the entire state. A new initiative is being supported with ARRA funds and will be overseen by the Governor's Green Advisory Council, many of whom have also been members of the WIRED Advisory Council.
- A third and somewhat different example of sustainability through alignment with state or other initiatives is found in the Minnesota WIRED region where several activities focused on alternative energy. Although few alternative energy projects were expected to survive the completion of the WIRED grant period, the WIRED governing body in this region, instead, transformed itself into a statewide advocacy group for alternative energy policy based on the recognition that alternative energy involves a variety of businesses that are not well represented in policy discussions. This new organization is also reflective of state-level policy requiring the expanded use of alternative energy in Minnesota in years to come.

It should also be pointed out that in a few cases sustaining key aspects of the regional WIRED initiative were facilitated by efforts along all three dimensions: resources, relationships, and resonance. North Jersey Partners is a particularly good example of this. With the imminent conclusion of the WIRED funding period, activities and structures that had been established during WIRED were actively continued or reestablished. The WIB-One Stop Consortium that had been established a few years earlier continued to meet and decided to reorganize as a 501(c)3 organization that would be sustained by assessing each of the constituent members dues. The WIB-One Stop Consortium renamed itself North Jersey Partners and continued to pursue talent development goals that were aligned with the State of New Jersey's REDI (Regional Economic Development Initiative) program. Among the most notable of these, North Jersey Partners has continued to facilitate REDI-funded liaisons to work with targeted industry clusters and the local workforce development agencies targeting the TLD and health care industries. In addition, the Newark Alliance, which had been the lead agency for the Northern New Jersey WIRED region has also continued to promote workforce development for the education, arts, and retail sector through collaboration among diverse partners within the region and support from foundation grants and the National Center for Workforce Solutions.

Conclusions and Implications Regarding WIRED Goals

One of the most important observations regarding Generation II and III WIRED regions is that innovative economic transformation does not occur quickly. While the WIRED regions have developed innovative ideas and have started to realign the relationships between workforce and economic development, in almost all cases it will be years before these changes reach fruition. On the other hand, the provision of $5 million and three years time have provided a context in which many small steps towards achieving transformative regional development have emerged to demonstrate movement in the appropriate direction.

Sustainability of WIRED activities, programs, relationships, and ideas beyond the conclusion of the Initiative was one of the key indicators of success in moving towards achieving regional economic transformation. However, although sustainability was necessary to indicate movement towards regional economic transformation, it was not a sufficient indicator that the WIRED region had moved forward. Some ongoing activities or programmatic characteristics of the 26 Generation II and III WIRED initiatives were clearly original, innovative, unusually resourceful, or particularly productive and, thus, may have contributed towards regional transformation; in contrast, other ongoing WIRED activities or organizations might not be seen as very innovative or transformative and, thus, sustainability in these cases would best have been viewed as continuations of "business as usual."

The extent to which WIRED regions sustained innovative economic development, workforce development, entrepreneurship, and investment, however, varied widely from region to region. Almost all of these efforts—even the most successful of them—represented only initial steps in a longer-term effort to effectively transform their regions. The many activities, programs, and products of the twenty-six Generation II and III WIRED regions illustrated the diverse paths that the regions took and the varying levels of success they achieved. Instances of sustained activities associated with each of the major goals identified in this report are discussed below.

Regional Economic Development

All of the Generation II and III WIRED regions originally adopted a regional approach to economic development both in form (e.g., in written plans) and in practice, but only three of them sustained the region-wide economic development efforts they originally planned to establish with WIRED funding. These three—in Kansas, South Texas, and Virginia—were sustained more or less intact since the conclusion of the Initiative.

- In Kansas, ongoing region-wide support for advances in composite materials for the aerospace industry has sustained a composites material laboratory, training programs to enhance workers' skills with composites, short courses for engineers, along with continued organizational support for the expanded use of composites in non-aerospace manufacturing in and around South Central Kansas. This region is advancing towards becoming a

nationwide center of excellence for the use of advanced composites materials for the manufacture of a wide variety of products, including farm machinery and wind turbine equipment.

- NAAMREI in the Rio South Texas region has continued to support the transformation of its manufacturing base into a center of excellence in advanced manufacturing. WIRED was instrumental in supporting the educational consortium of local community and four-year colleges, which has focused on developing curricula and employing advanced equipment to train local manufacturing workers and provide customized training for local manufacturers. This effort, along with strong regional economic development efforts to establish a new industrial/research park devoted to advanced manufacturing, has continued with virtually no change in governance, organizational membership, or training programs since the end of WIRED.
- Southeastern Virginia (SEVA-PORT) similarly has worked to capitalize on its regional strengths by broadening the value and appeal of modeling and simulation (M&S) technology that is used mainly to build highly complex military equipment. Curricula to educate intermediate-level M&S technicians have been sustained since the end of WIRED, as have efforts to employ M&S in the region's other major industry, shipping. More importantly, the collaborative that brought together workforce and economic development agencies, educational institutions, the Jefferson National Laboratory, and local entrepreneurs has been folded into the Hampton Roads Partnership—an economic development organization that is focusing its efforts on region-wide economic transformation.

Beyond a relatively narrow focus on one sector or even an industry subsector, each of these regions also devoted relatively little of their attention or resources towards additional industries or interests, unlike many of their peers. Instead, they looked for opportunities to expand the value of their core interests into other industries or new businesses that could be started by local entrepreneurs.

In conclusion, therefore, future efforts to promote and sustain new and innovative regional economic development will benefit from adoption of the following principles:

1. Identify and focus on a single industry sector or subsector;
2. Target an industry sector or subsector that already is present within the region;
3. Focus on an industry sector or subsector that has potential to grow and change in the future through the adoption of new technologies, new techniques, or new thinking; and
4. Focus on the core industry sector or subsector and do not be distracted by competing interests or activities.

Partnerships and Collaboration

Of more than one hundred activities, programs, and structures that Generation II and III WIRED regions reported that they had maintained following the end of their WIRED grants, more than 25 percent were specific collaborations among WIRED partners. These have included local WIB consortia in six different WIRED regions (e.g., Northern New Jersey, Northern Oregon, Central Kentucky, and others); collaborations among educational organizations such as the ADTEC

Consortium in Arkansas, as well as similar groups in Rio South Texas and Southeastern Wisconsin; collaborative efforts between business and educational organizations, such as the internship program in Southeastern Michigan; and collaborations between WIBs and educational organizations, such as the Consolidated AJC service center on the campus of Mid-South Community College in Arkansas.

While ongoing collaborative efforts like these do not guarantee continuing social networking among former WIRED partners, each of these sustained activities provides an environment in which networking may occur as well as an opportunity for sharing ideas, contacts, information, and support. Moreover, interviews and site visits revealed that many of these opportunities for social networking would not have existed without the motivating influence of the Initiative. Also, according to some key informants, networking among members of different sectors within the region was one of the most beneficial products of the entire WIRED endeavor. As noted in one of the second round of WIRED region site visits, through the many trials and tribulations that these stakeholders experienced over the course of this initiative, they believe that they have forged some lasting partnerships and have gained a mutual understanding and respect for each other. One post-WIRED interview noted "when [WIRED] funds ended we closed out everything, [but] we still have the relationships."

The ongoing opportunity for networking was forged in the WIRED requirement that diverse stakeholders and partners come together as the active ingredients in the development process, and networking continues to serve as a critical component in moving regional collaboration and development forward. Several interviewees commented that collaboration that is continuing past the end of WIRED would not have been possible without the influence of the WIRED model. Future efforts to foster innovative regional development will continue to require a high level of networking among a diverse set of partners and stakeholders in order to foster the exchange of ideas and information. Future development efforts should continue to promote this fundamental activity.

Workforce Development System

Seven of the 26 Generation II and III WIRED regions reported that they had sustained formal WIB collaboratives beyond the end of the WIRED grant period. These collaboratives have been sustained in the Northern New Jersey, Northern Oregon, South Central Kansas, Southeastern Wisconsin, Southwestern Connecticut-New York, and North Central Kentucky regions, as well as in Puerto Rico.[78] Each of these represents local efforts to reduce the lack of coordinated programming and competition for resources that characterized these regions in the past. Collaboration and coordination among local WIBs and AJC agencies has been particularly helpful in high density areas such as northern New Jersey where county- or municipal-based local WIBs serve small geographic areas but the labor shed typically extends across several county and, often, state lines.

[78] The Delaware Valley Region, including Philadelphia and nearby areas in Delaware, Pennsylvania, and New Jersey may have sustained its local WIB collaborative, but efforts to contact them following the conclusion of the WIRED grant period were unsuccessful.

The value of these ongoing WIB collaboratives is the perspective and coordinated resources that allow them to address larger, region-wide workforce issues and to promote larger, region-wide solutions to these issues—both of which would not have been possible by any individual WIB. In Northern Oregon, for example, the WIB consortium has continued to promote bi-state regionalism between the Portland area and southwestern Washington, and it has encouraged the consortium to address region-wide issues by seeking larger grants than had been possible without the support from the collaborative.

Of these seven WIB collaboratives that have been sustained, however, only one has continued to work towards changing the fundamental operation of the local workforce development system and its role in addressing local employer needs. A key feature of the North Jersey Partners (NJP) WIB collaborative has been the creation of an industry liaison position to serve as an intermediary between employers and the workforce system for targeted industry sectors. The key is that individuals hired into these positions are experienced and knowledgeable about both the targeted sector as well as the workforce system. For NJP there is an industry liaison focused on TLD occupations with a particular emphasis on the Port of Newark and its employers' needs, and two liaisons have been hired to coordinate nursing education with the needs of area hospitals. These positions are currently funded by the New Jersey Department of Labor. It is uncertain if these positions will be sustained after state support runs out.

Despite the value that LWIB collaboration has had for the regions that have sustained these relationships, and despite the potential value that these collaboratives might provide in grant-making and regional mobilization for innovative economic development, the workforce development system in most WIRED regions has, to date, had minimal impact on achieving most of WIRED's original goals.

High-Skill/High-Wage Workforce Development

As noted in the Regional Economic Development section, above, only a small handful of regions continued to conduct activities and organizations that were clearly having a positive impact on transforming their regional economies. These three regions (South Central Kansas, Rio South Texas, and Southeastern Virginia) focused their efforts on *relatively* high-skill/high-wage workforce development, including employees with advanced manufacturing skills, employees with the specific skills sets required to work with composite materials in manufacturing, and all levels of employees—from entry-level technicians to highly educated scientists—developing modeling and simulation applications for a wide variety of industries. Some other efforts towards continuing high-skill/high-wage workforce development that were advanced through the Initiative were also sustained at varying levels of implementation.

In the Central New Jersey region the impact of WIRED might have been found in the funding of an industry liaison (see Workforce Development System, above) for the technology and science occupations within the biological sciences industry. This industry liaison coordinated activities with BioNJ, New Jersey's biological sciences industry association, and temporary support for this position comes from the New Jersey Department of Labor. The Wasatch Range region in Utah had moved further along in promoting high-skill/high-wage jobs in STEM fields by being

subsumed under the Governor's State Advisory Council for Science and Technology and by coordinating its activities with statewide economic development plans. Much of their activity had been focused on STEM education in the K-12 system and expanding two- and four-year postsecondary certificate and degree programs for the growing life sciences sector. Southeast Wisconsin was continuing to promote a new, technology-based fresh water-based economic sector to generate high-skill/high-wage jobs in the future, but this ongoing project was just getting started as the Initiative was winding down. The Central New Mexico region was planning to use ARRA funds to promote technology jobs following the completion of their WIRED grant, and in Minnesota the focus on alternative energy shifted from direct interest in training and employment through WIRED to an indirect focus through economic development policy.

While all of these efforts reflected one of the original tenets of WIRED to transform regional economies through the creation of high-skill/high-wage jobs, the limited sustainability of these efforts revealed some concerns with the WIRED process that need to be addressed. First, it is not clear whether or not some regions saw the promotion of high-skill/high-wage jobs as an end in itself or as a concomitant to economic transformation. Second, it is evident that the creation of a critical mass of high-skill/high-wage jobs needed to support a transformative economic process is not a short-term task. Even in the Central New Jersey and Delaware Valley regions, where highly-skilled but displaced research chemists and pharmaceutical researchers were trying to transition to comparable work in the life sciences, there was relatively little success.

Where there were some successes, movement towards economic transformation appeared to be a longer-term, organic process of development. The implication is that training workers for new, high-skill jobs may be useful for attracting a new industry to a region, but this may not be sufficient to produce the critical mass of high technology industry or highly skilled workers that would ultimately transform the regional economy. Instead, data presented here imply that regional economic transformation was more likely to emerge through a longer-term process—an evolutionary process rather than a revolutionary process—in which regional employers expanded and improved in order to better compete and, in so doing, expanded their employees' knowledge and skills and, in time, became centers of excellence that attracted more development.

Low-Skill/ Low-Wage Workforce Development

Several of the Generation II and III WIRED regions implemented activities targeting workforce training for low-skill/low-wage workers during the last half of the WIRED funding period, often in response to the recession and an urgency to help displaced workers acquire the skills needed to rejoin the employed labor force. Only four of these activities were sustained beyond the completion of the WIRED grant, including continued training: for entry-level health care workers and information technology among disadvantaged youth in the Southwest Connecticut-New York region, in green construction and renewable energy for displaced and underemployed workers in Northern California, for entry-level health care workers in Northern Oregon, and computer controller training in the Pacific Mountain Washington region. The North Jersey Partners and the Newark Alliance also moved towards reestablishing some low-skill/low-wage training activities that were originally established during the WIRED grant. Support for these

training activities was provided from a variety sources, including several corporate foundations and the National Fund for Workforce Solutions.

Although workforce development for relatively low-skill/low-wage occupations was not originally a goal of the Initiative, these sustained or reestablished training programs represented unique and unanticipated instances of WIRED influence on innovative regional transformation. Unlike other training programs that were terminated at the end of WIRED funding or that may in some cases have been maintained following WIRED but were not identified as WIRED activities, the five examples identified here all involved multiple stakeholders or interests, which was the hallmark of the Initiative. Training efforts along the Connecticut-New York border continued to involve collaboration among three local WIBs in two states, cross-border collaboration among community colleges and employers, and they involved a number of foundations and non-governmental organizations cooperating in identifying and training disadvantaged youth. In Northern California, Shasta College and NORTEC were continuing to collaborate on funding and training displaced and underemployed workers in the areas of renewable energy and green construction. The Regional Education and Training Center (RETC) in the Pacific Mountain Washington region that was established through WIRED continued to operate following the end of WIRED. This was a collaborative effort of several colleges, a workforce consortium, and others that continued to offer a licensed practical nurse (LPN) program targeting those learning English as a second language, crane operator training, and forestry training, among others.

Many of the low-wage/low-skill training programs that were established during WIRED did not continue beyond the end of WIRED. For example, the portion of WIRED funding not used for Digital Information Technology efforts in Appalachian Ohio was directed toward supporting traditional workforce system efforts to assist workers displaced mostly from low-skill/low-wage positions. Although the funds served a valuable purpose during the height of the national recession, these simple short-term training efforts were not expected to be sustained in any major way after the end of the WIRED grant period. Even programs, services, or activities that might have been maintained by individual organizations past the end of WIRED funding, but that were not associated with other sustained activities or organizations, by definition did not represent efforts to sustain the WIRED concept. In contrast, activities and organizations which involved multiple stakeholders or interests indicated ongoing attempts to marry workforce and economic development and, by extension, to address regional economic development. These efforts reflected at least some recognition of the value of collaboration among multiple stakeholders in addressing common, region-wide goals, and these should be noted as small but important preliminary steps in achieving regional economic transformation. The efforts were likely to expand local understanding of, and support for, even greater regional collaborative efforts that, in the long term, would encourage region-wide economic transformation.

Chapter VI: Conclusions

Based on the data in the preceding sections, it is evident that all 26 Generation II and III WIRED grantees embraced the need to foster regional economic development and entrepreneurship in their proposals and implementation plans, and all of them attempted to create new and innovative opportunities for employers and workers in their respective regions. However, one of the most important observations regarding Generation II and III WIRED regions is that economic transformation does not occur quickly. While the WIRED regions developed innovative ideas and started to realign the relationships between workforce and economic development, in almost all cases it would likely be years before these changes reach fruition. On the other hand, the provision of $5 million and three years' time provided a context in which many small steps towards achieving transformative regional development emerged to demonstrate movement in the appropriate direction.

Under WIRED ETA expanded its programmatic portfolio from its traditional focus on the plight of the unemployed, especially disadvantaged individuals, and on the public labor exchange. In contrast, the main purpose of WIRED was to facilitate regional competitiveness and economic growth. In implementing the initiative, ETA gave regions considerable discretion in designing their approaches; a departure from the usual practice of specifying an intervention or a target population and inviting grantees to propose a solution. As might be expected from such a substantial variance from the norm, some aspects of the Generation II and III WIRED grants succeeded, and some aspects were less successful. The purpose of this chapter is to enumerate the successes so that future initiatives can emulate them and dissect what was less successful, so that policymakers and practitioners can learn from them. The chapter is organized around the roles and perspectives of different stakeholders.

Lead Agency in Region

An important attribute of each WIRED region was the organizing or convening entity that handled fiscal matters and grant reporting; developed and facilitated a governance structure; actively promoted collaboration and partnerships; established communication networks that kept the collaborations together; and networked with supporting organizations in the region that facilitated regional activities. Typically in Generations II and III, the WIRED organizing entity was a nonprofit or governmental entity that brought together the private and public sectors to accomplish the objectives agreed upon by the partners.

Site visits to the regions illuminated the challenges, and the resilience, faced by lead agency staff members who faced continually changing constraints and/or circumstances. After receiving the WIRED grant and becoming either a Generation II or III region, the regional directors encountered the following:

- An extensive planning period that required regions to work with an assigned "ETA lead" to review and revise the work that they originally proposed to do to ensure that the planning process and implementation plans met ETA's basic requirements,

- A requirement to produce an asset map, whether or not they saw much value in the exercise.
- Changes in Federal and state rules and expectations about what constituted an "allowable expense." For example, some regions included educational programs for middle-school or elementary-school children in their implementation plans, only to be told afterword that these activities were disallowed.
- Difficulties maintaining viable activities in the face of a recessionary economy.
- Changing priorities from ETA. WIRED started out as an initiative targeted on high-wage, high-skilled occupations. Then an emphasis on low-skilled, disadvantaged workers or unemployed individuals arose. Finally, faced with an unprecedented, in recent times, recession, ETA changed the major focus of WIRED to placement or retention of workers.
- Difficulties breaking down programmatic silos that had arisen within and between the workforce development, educational, and economic development systems at the local level.

For the most part, the regional directors and governance bodies handled these issues with aplomb. As demonstrated in the report on summary findings from all three WIRED generations of grants,[79] the initiative resulted in considerable amounts of training, curriculum and equipment purchases, support for postsecondary institutions, entrepreneurship support, leveraged funding, and collaborative networks. Furthermore, the initiative seemed to engender a genuine attitude of regionalism[80] in almost all of the regions that received funding.

For a number of reasons, the evaluation team was not able to accurately assess *outcomes* as opposed to *outputs* for each region. So it was not possible to make causal statements with certainty. However, based on site visit observations, quarterly progress reports, and other sources of information, the evaluation team suggests that the following seemed to be precursors of regional vitality:

- Respected leadership.
- Engaged employers, and
- Relatively narrowly targeted sector with history of collaboration

As noted, virtually every region's director was able to overcome obstacles that arose over the course of the grant period. However, in some regions, the director exhibited strong leadership skills and was generally recognized as one of the strengths of the program. These leaders were detail-oriented, were committed to thorough and complete communication, and were quick to give credit to others, even though most of the key stakeholders in the region gave credit to the leader. Many of the top leaders, but not all of them, had been in or had recently come from the private sector.

[79] Nancy Hewat, Ph.D., et al., *Workforce Innovation in Regional Economic Development (WIRED): A Summary of Findings from the Evaluations of Generation I, II and III WIRED Grants* (Washington, DC: U.S. Department of Labor, 2011).

[80] In this context, we are defining regionalism to mean that individuals and organizations within a region have an attitude that a win (economic attraction or expansion, for example) anywhere within the region is a win for all in the region. This contrasts with the stereotypical status quo of rivalry and competition across localities.

As documented in Section II, businesses and employers were reported to be, by far, the most underrepresented stakeholder group in regions. However, in many regions, there were employers who were actively engaged in the governance structures or in the design and implementation of activities. In virtually all of the cases when site visitors drew positive pictures of the vitality and likely success of a region, there were one or more business people who were actively engaged in the initiative. While the evaluation team was not able to ferret out exactly what techniques worked best to obtain employer engagement, it was very easy to observe the difference between employers or business association staff members who were participating but not really engaged and those who had bought into the effort.

Finally, in terms of targeting, the regions that seemed to be most likely to be sustained and to make a difference tended to target fairly narrow niche economic sectors and to be based on a pre-existing collaborative effort. It may be simply the economics of specialization, but our sense was that fairly narrow targets like composites in South Central Kansas or Simulation Modeling in Southeastern Virginia were more likely to succeed than regions that specified targets such as "Advanced Manufacturing" or a "Green Economy," at least in the short term. Furthermore, it appeared to the evaluation team as though having a pre-existing collaborative effort was a big advantage. WIRED usually expanded the collaboration or had slightly different partners, but having the base was helpful.

Collaborative Partners

The lead agency in the region was a key entity, but it required committed partners from the private sector, workforce development system, education, or economic development system to succeed. Ideally, the collaboration had representatives from all four sectors. In some regions, the partnerships included organized labor, philanthropic organizations, other nonprofit agencies, or elected officials. Across the 26 regions, there were literally hundreds of collaborative partners.

What motivated these partners to volunteer hundreds of person hours to the governance and ongoing operational committees of regions? Undoubtedly each person and organization had their own motives, but in general, it appeared to the evaluation team that the primary reason was to help the initiative in its mission of community and area development. Individuals were proud of their region, but they also knew of the struggles experienced by some individuals and areas within their region. Many partners opined that WIRED was a chance to grow the region's economy and contribute to the region's development.

A second benefit for individuals who participated in the partnership, aside from contributing to regional development, was to generate revenue. This was especially true of educational institutions. This is not intended to be pejorative, but rather to simply point out that virtually every region felt that it was important to strengthen the pipeline of future workers and to upgrade training of incumbent workers. Many K-12 school districts benefited from investments in Project Lead the Way. Community and technical colleges that developed curricula and received equipment from the WIRED initiative also benefited, and these indirect investments supported increased enrollment.

A third benefit, which may not have been obvious to the partners, was the networking that occurred. Time and again, the evaluation team was told about opportunities that arose because individuals met each other and learned of capabilities or needs during meetings. These opportunities were generally unrelated to the WIRED initiative, but rather were day-to-day business transactions. Undoubtedly, the networking opportunities that arose had considerable economic value to the parties undertaking the transactions; economic value to the WIRED initiative that could not be tracked or documented. Indeed, it is entirely possible that the value derived from the networking opportunities may have been the largest component of economic benefits of the WIRED initiative.

The partners, then, potentially gained three benefits: facilitating community/ regional development, gaining enrollment or other program revenue, and engaging in transactions developed through the initiative's networking. What was the cost? In some cases, partners brought leveraged funding to the local effort; however, that was in a small minority of cases. Generally, the major cost of participation was individuals' time. Apparently for the individuals who participated in the partnerships, the benefits likely exceeded the costs.

ETA as a Stakeholder

Besides the lead agency in the region and the collaborative partners, a third major stakeholder is ETA. Having invested over $325 million in the three generations of WIRED, the question of how the government's benefits and costs compare may be asked. From a policy and economics perspective, the question is "What is the market failure that justified the ETA investment?" That is, "Why wouldn't the regions, in the absence of Federal funding, have found the resources to formulate their own collaborative partnership?"

One answer is that ETA may have come to realize that the country's macro-economy is comprised of the aggregation of all of its regional economies. Considerable spillover benefits would occur to the competitiveness and strength of the U.S. economy if some or all of the WIRED regions experienced significantly enhanced economic growth. No single region would reap the spillover benefits to the entire economy, and thus may not, on its own, invest in a collaborative partnership.

As an executive agency of the Federal government, ETA has a role in developing, implementing, and evaluating workforce development policy. Several studies had suggested that promoting the alignment of the economic development, education, and workforce development systems in a region was a viable and vital means of enhancing regional economic development. Thus it was appropriate for ETA to test this policy tool to determine what sorts of collaborative activities work for what types of regions under what conditions. An important facet of the initiative was having the regions develop their own goals and objectives, whose effectiveness was another area of learning for ETA.

A final benefit for ETA was that it expanded the agency's portfolio of programs to include the preparation of workers for high-skilled, high-wage occupations. Traditionally, ETA had focused on disadvantaged populations with its major programs, and WIRED deviated from that focus.

As the SGAs for WIRED stated, "The ultimate goal of the WIRED initiative is to expand employment and advancement opportunities for American workers and catalyze the creation of high-skill and high-wage opportunities."

The investment costs to ETA to gain these potential benefits was high. As noted, the grants to the regions totaled over $325 million in Federal funds. In addition to the grants, ETA invested considerable staff time in monitoring and providing managerial oversight to the regions, and the agency invested in the evaluation and technical assistance activities.

While some may wish for an unambiguous answer to the question of whether ETA's benefits exceeded the considerable investment costs, it is not possible to provide that answer for at least two reasons. First, shortly after regions developed their implementation plans, the national economy went into a tailspin and labor markets throughout the U.S. softened dramatically. The recession did not affect every region simultaneously, but it eventually blanketed all areas. ETA had invested considerable resources in the regions, and the regions had developed (implementation) plans that listed the activities that were going to be pursued and the metrics to be used to measure success. Many of them had contracts in place with entities within the region to provide activities in support of their mission. It is, at best, a thought experiment to try to estimate the extent to which the recession dampened the economic benefits of the WIRED initiative.

Secondly, the evaluation team's judgment as to what may have been the most highly valued benefit of the regional initiatives -- the networking within and beyond the WIRED context -- cannot be estimated. Business people, educators, workforce development agency staff members, and economic development agency members made acquaintances that undoubtedly led to peer-to-peer transactions or to informational leads of great value.

Other Stakeholders

Many other entities or groups were directly or indirectly affected by the WIRED initiative. These groups included public school students and their parents, postsecondary students, nonparticipating businesses or educational systems, local or state government agencies, workers (including organized labor), and others. These groups are not considered separately because, for the most part, they bore no costs from WIRED, and thus any benefits that accrued to them through improved educational or training opportunities, or spillovers from an enhanced regional economy, are net benefits.

The WIRED initiative was a significant Federal investment that affected many individuals and entities in each of the funded regions. This report documents the outputs of that investment - trained workers, students, entrepreneurs, and skilled job seekers. In each region, the lead agency and its partners accrued significant benefits and costs. It is fair to say that the most optimistic forecasts of the outcomes of WIRED did not materialize, but it is also fair to say that many stakeholders in the 26 regions across the country and in Puerto Rico were committed to the initiative in their region and through their efforts, offered productive activities to hundreds of

thousands of clients with the potential to reach far more by virtue of the lasting benefits of new curricula and innovative trainings.

Multiple stakeholders in WIRED indicated that there were ongoing attempts to marry workforce and economic development and, by extension, to address regional economic development. These efforts reflected at least some recognition of the value of collaboration in addressing common, region-wide goals, and these should be noted as small but important preliminary steps in achieving regional economic growth. These efforts were likely to expand local understanding of and support for even greater regional collaboration that in the long term will encourage economic transformation. While local WIBs in many areas of the country may continue to eagerly participate in collaborative efforts, many other WIBs may decide to remain detached and protective of formula funds until there is greater clarity and support from ETA with respect to the future of the workforce system transformation goals that were issued in conjunction with WIRED.

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