# Appendix B

# Data Items for WIRED Conceptual Model

# Appendix B
# Data Items for WIRED Conceptual Model

| Inputs | Regional Wired Initiative | Indicators of Progress | Outcomes | Long-Term Results (Impacts) |
|---|---|---|---|---|
| Regional Context:<br>• Economic problem or challenge to be addressed<br>• Economic, social & political environment<br>• Demographics<br>• Physical & governmental infrastructures (roads, airports, railroads, communications, water, power) to support efficient movement of people & goods<br>• Barriers to collaboration & effectiveness — political, geographic, jurisdictional, professional, cultural<br>• Pre-existing networks crossing those barriers<br>• Assets:<br>o Labor pool<br>o Industry<br>o Educational resources<br>o Local foundations | Strategic Planning:<br>• Asset mapping (SWOT analysis)<br>• Gap analysis of workforce skills<br>• Regional implementation plans<br>Structures:<br>• Governance & decision-making<br>• Communication<br>• Subgrants or subcontracts; related selection & funding mechanisms<br>Activities:<br>• Building regional identity<br>• Developing collaborative planning process<br>• Implementing education & training programs<br>• Creating career pathways<br>• Facilitating entrepreneurship<br>• Attracting venture & angel capital investment<br>• Bringing entrepreneurs & investors together<br>• Linking regional partners with federal resources<br>• Other capacity-building activities | Commitment:<br>• Involvement of senior level decision-makers<br>• Contributions of time, reputation, skills & experience<br>• Willingness to take appropriate risks to attain shared vision<br>• Financial investments<br>• Changes in processes & procedures as a result of collaboration<br>Innovation:<br>• Talent, creativity, inventors<br>• Venture sources & entrepreneurial know-how<br>• Patents obtained<br>• R&D capacity<br>• Identifying new markets for existing products<br>Collaboration:<br>• Cross-disciplinary & cross-professional activities<br>• Multiple & overlapping networks<br>• Willingness to share knowledge & competence within & across traditional boundaries | Business Production & Delivery Capacity (Infrastructure):<br>• Supply pipelines<br>• Industry production capacity<br>• Growth in business services sectors (banks, accountants, lawyers)<br>Entrepreneurship:<br>• Business starts<br>• New products<br>• New markets<br>• Venture & angel capital attracted<br>High Skill/High Wage Job Creation:<br>• Reduced unemployment<br>• Increased labor force participation<br>• Increased wages & income<br>• Reduced outmigration (brain drain) | Regional economic well-being:<br>• Increased average wages<br>• Increased tax base<br>• Reduced reliance on public sector subsidies<br>• Increased productivity<br>• Increased regional share of target industries<br>• Globalization (exports, etc.)<br>Ongoing Investment:<br>• Institutionalized financial support for WIRED strategies & activities<br>• R&D funding (both private & public)<br>• Venture & angel capital<br>Sustainable Economic Transformation:<br>• Extent to which new businesses thrive<br>• Wealth accumulation & investment within the region<br>• Proportion of new jobs in high-growth industries, high-wage occupations, "knowledge-based" sectors<br>• Expressed optimism about the region's future<br>• Institutionalized changes in practice |

| Inputs | Regional Wired Initiative | Indicators of Progress | Outcomes | Long-Term Results (Impacts) |
|---|---|---|---|---|
| Key Partners:<br>• Education<br>• Business<br>• Workforce investment system<br>• Academia<br>• Economic development<br>• Venture capital & angel investors<br>• Civic leaders<br>• Entrepreneurs<br>• Foundations<br>• Community & faith-based organizations | National WIRED Initiative:<br>• WIRED grant funding<br>• Support from ETA Leads<br>• WIRED Academies<br>• ETA-sponsored web resources<br>• Technical Assistance<br><br>• Using collaborative strategies during proposal development<br>• Informed approaches assessing opportunity & risk<br>• Collaborative involvement in strategic planning<br>• Mechanisms for building innovation, confidence & trust | • Culture of innovation<br>• Confidence in potential success of venture<br>• Trusted community of Competence<br>• Mechanisms to link region to critical external resources & networks<br><br>Improved Workforce Investment System:<br>• Partnerships with industry & education system<br>• Increased involvement of business in the design & delivery of education & workforce training<br>• Increased community college & regional training capacity<br>• Number of individuals entering training<br>• Number of training-related placements | • Performance outcomes (in WIA, TAA, & Wagner-Peyser & WIRED programs)<br>o Employment retention<br>o Entered employment<br>o Average earnings<br><br>Talent development capability:<br>• Strengthened K-12 education system<br>o Improvements in attendance<br>o Career advising activities<br>o High school graduation rate<br>• Increased K-12 STEM participation<br>• Increased training capacity | • New academic research capacity<br>• New faculty<br>• Transformation from solo training opportunities to integrated systems<br>• STEM<br>• Lifelong learning opportunities<br><br>Educated & Trained Workforce:<br>• Reduced outsourcing<br>• Reduced importing workers<br>• Increased graduation & college completion rates<br>Reduced unemployment rate |

# Appendix C

## Generation I WIRED Regional Development Goals[1]

- Figure C.1: Generation I WIRED Economic Development Goals
- Figure C.2: Generation I WIRED Workforce Development Goals
- Figure C.3: Generation I WIRED Social and Community Development Goals

[1] Please note that the goals that follow reflect the Generation I WIRED regions as of summer 2007.

**Figure C.1**
**Generation I WIRED Economic Development Goals**

| Generation I WIRED Regions | Increase Innovation | Increase Competitiveness | Identify, Assess & Align Regional Resources | Adapt to Global Manufacturing Transformation | Develop Toolkits to Assess Sustainability & Replicability of Models | Expand Current Markets & Create New Ones | Increase Investment from External Sources |
|---|---|---|---|---|---|---|---|
| **WAEM** | | X | X | X | | X | |
| **California Corridor** | X | X | X | X | X | | |
| **Metro Denver** | | X | | | | | |
| **Northwest Florida** | X | X | X | | | X | X |
| **NCI** | X | | | X | | | |
| **Kansas City** | | X | X | | | | |
| **North Star Alliance** | X | X | | X | X | X | X |
| **Mid-Michigan** | X | | | X | | | |
| **West Michigan** | X | | | X | | | |
| **Montana** | | | X | | | X | X |
| **Finger Lakes** | X | | X | | | | |
| **Piedmont Triad** | X | | X | X | | X | |
| **Wall Street West** | X | | | | | | |

**Figure C.2**
**Generation I WIRED Workforce Development Goals**

| Generation I WIRED Regions | Create Quality, High- Skilled Jobs | Assess Labor Needs & Worker Skill Gaps | Retain workers in Region | Create High Skilled Workforce | Train Entrepreneurs | Increase Knowledge of Global Competitiveness | Increase Graduation Rates | Train K-12 Teachers | Mentor High School Math & Science Students |
|---|---|---|---|---|---|---|---|---|---|
| **WAEM** | X | | X | X | X | | | | |
| **California Corridor** | X | X | | X | X | X | | X | X |
| **Metro Denver** | X | | | X | | | | | X |
| **Northwest Florida** | X | X | X | X | | X | X | | X |
| **NCI** | X | | X | | X | X | | | X |
| **Kansas City** | X | X | | X | X | X | | X | X |
| **North Star Alliance** | X | X | X | X | X | X | | | |
| **Mid-Michigan** | X | | | X | X | X | X | | X |
| **West Michigan** | X | | | X | X | | | | X |
| **Montana** | X | | X | | X | X | | | |
| **Finger Lakes** | | | | | X | X | | | X |
| **Piedmont Triad** | X | X | | X | | | X | | X |
| **Wall Street West** | | X | | X | X | | | | X |

**Figure C.3**
**Generation I WIRED Social and Community Development Goals**

| Generation I WIRED Regions | Build New Organizational Relationships | Increase Support Network | Create & Adopt Regional Identity & Mindset | Change Employment Expectations | Create Leadership Structure | Increase Collaboration Across Business, Education & Government | Broad Community Engagement | Create Entrepreneurial Culture |
|---|---|---|---|---|---|---|---|---|
| **WAEM** | X | | X | X | X | X | X | X |
| **California Corridor** | X | X | | | | X | | X |
| **Metro Denver** | X | | | | | X | | |
| **Northwest Florida** | X | X | | X | | X | | |
| **NCI** | | | X | X | | | X | X |
| **Kansas City** | X | | X | | X | X | | X |
| **North Star Alliance** | | X | | | | X | | |
| **Mid-Michigan** | X | X | X | X | | | X | X |
| **West Michigan** | | | | X | | X | | X |
| **Montana** | | X | X | | | X | X | |
| **Finger Lakes** | X | | X | | | X | | X |
| **Piedmont Triad** | | X | X | X | X | X | | X |
| **Wall Street West** | X | | | | | X | | |

# Appendix D

# Measures of Success

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

# 1. WAEM

The measures defined by WAEM are:

- People and communities will identify themselves as being part of the WAEM region
- Formation of a formal regional alliance of community colleges and other partners around workforce credentialing and training
- Recognition of regional development goals, formation of regional groups to accomplish goals
- Cross-border support by state and regional agencies for regional development initiatives
- Engagement of regional leaders in events like the Goal Committees, regional roundtables and Governor's Summit.
- Implementation of a CRC credentialing program
- Implementation of Modern Multi-skill Manufacturing M3) Credentialing program
- Increased number of enterprise-ready workers as the result of implementation of WIRED training and credentialing programs.
- Increased number of enterprise-ready communities that are capable of training and supporting entrepreneurs
- Formation of a permanent council or alliance of business and civic leaders to sustain regional activities

# 2. California Corridor

## PROPOSED METRICS FOR WORKFORCE INNOVATION IN REGIONAL ECONOMIC DEVELOPMENT (WIRED) (July 31, 2007)

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| 1.1 ***Economic Development Model***<br>Creation of an economic development innovation model and "tool kit" featuring replicable innovation support elements for regional innovation, innovator skill-building, technology commercialization and entrepreneurial growth. | Bay Area Economic Forum/Bay Area Science Innovation Consortium (BAEF/BASIC)*<br>California Council on Science & Technology (CCST)<br>California Space Authority (CSA)<br>Los Angeles Economic Development Corporation (LAEDC)<br>East (San Diego) County Economic Development Corporation (ECEDC)<br>San Luis Obispo Economic Vitality Corporation (SLOEVC)<br>Chabin Concepts<br>Golden Capital | Economic Development Organizations (EDOs) and ED stakeholders<br>Workforce Investment Boards (WIBs)<br>State<br>Entrepreneurs and Innovation-Oriented Companies | Research innovation, innovation strategies, potential drivers and creative economic development tools (Years 1/2)<br>Create template for entrepreneur boot camp module/ venture community culture-building event (Year 2)<br>Determine and design elements of replicable innovation and entrepreneurship training module for EDOs (Year 2)<br>Recruit innovators, sponsors, report writer; coordinate logistics for Innovation Roundtable (Years 1/2)<br>Recruit innovators, entrepreneurs, angels, sponsors and innovation support presenters; coordinate logistics for development of Venture Communities, entrepreneurship culture-building events (Year 2/3)<br>Determine speakers, topics for EDO/WIB briefings (Years 2/3)<br>Coordinate matchmaking event for entrepreneurs/ potential international partners (Year 2)<br>Complete Corridor portal design according to design document in Proj 1.3<br>Coordinate with | Training of 30 entrepreneurs as part of "entrepreneur boot camp" module of key entrepreneurship culture-building event in three target "venture communities" (interface w/Proj. 1.4, 3.14) Track applicable common measures - MCSC<br>Replicable innovation and entrepreneurship training module for EDOs (interface w/Proj. 1.4) CSA<br>Entrepreneur boot camp event template to foster replication of entrepreneur instruction/support across Corridor (interface w/ Proj. 1.4) CSA<br>Creation of economic development innovation kit to include insights, sample innovation support projects (interface w/ 1.3, 1.4, 1.7 and 3.5, 3.14) BASIC<br>Establishment of three "Venture Community" pilot projects supporting entrepreneurship development and sustainability (interface with Project 1.3, 1.4, 1.7, 3.5, 3.14) GCN<br>Innovation roundtable event/report highlighting innovation insights from 25 Bay Area innovators BASIC<br>Identification and description of regional innovation drivers (interfaces with Proj. 1.3, 1.4, 1.7, 3.14) CSA, BASIC, ECEDC, SLOEVC, LAEDC, CCST.<br>Innovation briefing to 50 economic development stakeholders at statewide California | Ongoing instruction of EDOs regarding innovation support strategies, tools generating from development of Economic Development Innovation Kit<br>Crafting of innovation support methods by economic sub-regions based on Economic Development Innovation Kit, informed by WIB "Racing for the Future" Toolkit (1.7), the Learning Collaboratory (3.14) the Innovation Asset Inventory (1.3) and the Science, Technology, Engineering and Math Collaborative Action Plan (STEMCAP) (3.5)<br>Increase in economic impact in three pilot Venture Communities<br>Greater understanding and support of innovation and entrepreneurship statewide through CALED/WIRED affiliation<br>Visible support for innovation and entrepreneurship on State economic development agenda |

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | Project Teams 1.3, 1.4, 1.7 and 3.5 in regard to integration of insights and learning around innovation for inclusion and/or highlighting in Economic Development Innovation Kit (Year 2) | Local Economic Development (CALED) conference, introducing them to development of economic development innovation kit (interface with Proj. 1.3, 1.4) CSA, BASIC, ECEDC, Chabin<br>Innovation briefing to 25 WIB stakeholders, introducing them to development of economic innovation kit incorporating WIB toolkit highlights (interface with Proj. 1.7, 3.14) ) CSA, BASIC, ECEDC, CCST<br>Featuring innovation assets identified and profiled in Project 1.3, new California Corridor web portal created as part of the California Connectory ECEDC<br>As element of Venture Community pilot, minimum of 10 new innovation partnerships established supporting entrepreneurship GCN<br>Introduction of at least 5 entrepreneurs to prospective international partners CSA | |
| 1.2 ***21st Century Worker Profiles*** to define future workforce skills of three target career paths | BAEF/BASIC*<br>CCST<br>CSA<br>LA County Workforce Investment Board (WIB) (unfunded)<br>NOVA<br>Riverside WIB<br>San Bernardino WIB<br>South Bay WIB<br>South Bay Economic Development Partnership (SBEDP)<br>San Diego Workforce Partnership (SDWP) | Training Providers for planning support<br>WIBs for future workforce needs identification<br>21st Century workforce employers<br>Economic development entities | Define industries/careers to be studied (Year 1)<br>Identify firms, universities and labs for study (Year 2)<br>Conduct research (Year 2)<br>Coordinate with Learning Collaboratory and Economic Development Toolkit (Year 2)<br>Develop regional training strategies, with suggested approaches for leveraging resources (Year 3) | Develop job profiles for three careers in targeted advanced industry sectors [All Partners]<br>Identify workforce skills in the three careers identified in the job profiles [All Partners]<br>Identify regional training strategies to address skill shortages [NOVA, Riverside WIB, San Bernardino WIB, South Bay WIB]<br>Track number of organizations that receive and/or utilize the profiles and other products [ All Partners] | Implementation of regional training strategies to address skill shortages |
| 1.3 ***Innovation Asset*** | BAEF/BASIC* | Workers, for understanding | Develop Carlifornia Corridor innovation | Incorporation of 150 Corridor innovation | Increase in relevant economic indicators |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| ***Inventory*** to be used by regional partners to better understand the assets available to foster innovation and entrepreneurship | CSA<br>ECEDC<br>Antelope Valley Board of Trade (AVBOT) - in-kind<br>Greater Antelope Valley Economic Alliance (GAVEA)<br>Kern Co. Economic Development Corporation (Kern EDC)<br>LAEDC<br>City of Lompoc Economic Development Department<br>Orange County Workforce Investment Board (OCWIB)<br>SBEDP<br>SLOEVC<br>San Berdu WIB<br>Ventura County Economic Development Association (VCEDA)<br>University of California, Riverside (UCR) | breadth and diversity of local companies with potential openings<br>Primes and suppliers for products, services, partnerships, specialized work, expertise<br>Workforce Investment Boards (WIBS) for understanding the employers and skill sets needed in their regions<br>Economic Development entities for referrals, understanding of their regions, cluster work<br>Government, for understanding local, regional and statewide buyer-supplier activity | asset templates (Year 1)<br>Inventory 150 key innovation assets (Year 1)<br>Design the California Corridor "portal" within the Connectory.com to display, search and link innovation assets to California Corridor partners and companies (Yr 1) | asset profiles (companies, universities, federal labs) into the California Connectory ECEDC - Completed<br>Development of 1 template/1 guide for federal labs/military installation profiles All Partners - Completed<br>Development of 1 template/1 guide for University profiles All Partners - Completed<br>Development of 1 template/1 guide for industry profiles All Partners - Completed<br>100 economic development and/or WIB organizations advised of the products above, oriented to their use in economic and workforce development – CSA, ECEDC, BASIC | (identified in 1.4) for communities where assets are inventoried, indicators such as jobs created, business start-ups or expansions, patents obtained, and VC investments |
| 1.4 ***Entrepreneurial Ventures Demonstration Project*** Demonstration project with entrepreneurial companies including Small Business Innovation Research (SBIR) Phase II awardees to identify best practices in helping innovative companies to commercialize technology and create jobs | ECEDC*<br>SDWP<br>LA County WIB<br>Golden Capital Network (GCN)<br>CSA<br>LAEDC<br>Mission Community Service Corporation (MCSC) | Entrepreneurial companies<br>Economic Development and Workforce Stakeholders | Coordinate logistics, instructors, recruit participants for Vision to Venture courses (Yr 1-2)<br>Development, design of replicable entrepreneur, WIB instruction modules (Year 2)<br>Research entrepreneur training resources (Years 1/2)<br>Coordinate logistics, secure 20 participating investors and 20 Innovation All-Stars for involvement in entrepreneur support model | At least two "From Vision to Venture" 14-week courses with targeted enrollment of 25 students in each course. Track applicable common measures. MCSC- Completed<br>Track number of students beginning Vision to Venture training, number completing training. MCSC- SLOPIC?<br>A replicable training module for instructing entrepreneurs, to be shared with Project 3.14 MCSC, CSA<br>Replicable innovation and entrepreneurship training module for WIBs (interface with | State/EDO/WIB development of effective entrepreneurship support strategies and programs<br>Acceleration of commercialization for Corridor entrepreneurs<br>Increase of contribution to economic impact by entrepreneurial sector of Corridor<br>Cumulative and aggregated data on economic impact of entrepreneurial companies supported in project |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | (Years 1/2)<br><br>Facilitate participation of 10 companies, at least two of them SBIR companies, in successfully moving products or services to commercialization (Years 1/2)<br><br>Monitor target companies, gathering data for reporting out of progress indicators (Years 2/3)<br><br>Research and determine indicators reflecting economic growth in entrepreneurial companies (Yr 1-2)<br><br>Develop best practices from data collected from participating Innovation All-Stars (Year 3) | Project 1.1, 1.7 and 3.14) SDWP, CSA<br><br>Matrix of entrepreneur training resources resident in Corridor to be shared with EDOs, WIBs (through Project 3.14)CSA, SDWP, LAEDC<br><br>Replicable entrepreneur "best practices" support model (All-Star event with funding/ commercialization features) to become an element of the Economic Development Innovation Kit in Project 1.1, with model to address ongoing entrepreneur support needs; model to be shared with Project 1.7 WIB Toolkit/3.14 WIB Learning Collaboratory – CSA, ECEDC<br><br>Identification of indicators reflecting economic growth in entrepreneurial companies (interface with Project 1.1, 1.7, 3.14)CSA<br><br>Documentation of the number and type of businesses benefiting, services received from the project during its term CSA, LAEDC<br><br>For entrepreneurial companies mentored through this project, reporting of level/status of progress indicators, CSA | |
| 1.5 ***Pilot: Joint Professorial and Student Exploration of Innovation/Entrepreneurship Environment*** | Stanford University*<br><br>UCR<br><br>CSA | Innovation companies looking for employees<br><br>University programs seeking to foster innovation<br><br>Workforce and economic development entities seeking university innovation resources | | "Action Research" model to engage minimum of two professors, two students at University of California Riverside in exploration of innovation/entrepreneurship with goal of transforming academic understanding and teaching of innovation (linkage with 1.1, 1.7 and 3.5) UCR<br><br>"Action Research" model to engage | Real – world innovation culture to become the basis of teaching and learning about innovation in university setting<br><br>Stronger linkage between companies, professors participating in project – leading to future partnering |

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | | minimum of two professors, two students at Stanford University in exploration of innovation/entrepreneurship with goal of transforming academic understanding and teaching of innovation (linkage with 1.1, 1.7 and 3.5) Stanford<br><br>Action Research model above to include:<br><br>• Literature review of best practices in technology transfer and innovation<br><br>• Multi-day site visits, tours, consultations and interviews with executives of at least six companies to identify elements of successful innovation in a corporate setting<br><br>• Identification of key elements of how innovation is fostered and commercialized in real world corporations<br><br>• Summary report of each of 6 corporate consultations<br><br>• Student/Faculty Practicum with presentation of key learning<br><br>• Findings to be reported in various professional publications and industry fora, including UC Riverside Industry Week, UC Riverside Tech Horizons conferences, the Stanford Innovation Summit | |
| 1.6 ***University and Student Payload Demonstration Project*** Demonstration project to create development model of small payload launcher | CSA*<br><br>Naval Postgraduate School (NPGS) – ***contract pending*** | University students and professors<br><br>Space entrepreneurs and small business | Attend CubeSat/RideShare conferences to inform needs/requirements assessment (Years 1, 2, 3)<br><br>Draft and validate requirements/process document (Yr 2)<br><br>Build development | Minimum of two professors and 20 students engaged in creation of a development model of a CubeSat launcher for EELV launch vehicle demonstrating ability to deploy multiple university CubeSats on military launches (interface w/ Project 3.5) | CubeSat launcher deployed on EELV launch vehicle, placing multiple university payloads on-orbit |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| (NPGS yet to be engaged due to military requirements for contracting) | | | model to align with specifications identified in requirements/ process document (Year 3) | (interface w/ Project 3.5)<br><br>Development of requirements/process document to instruct university and student payload developers necessary specifications for payloads seeking military launch acceptance (linkage with Project 3.3)<br><br>Minimum of two rideshare orientation briefings presented to potential university/ student launchers (linkage with white paper development, dissemination in 3.2, Project 3.3) | |
| 1.7 ***WIB Toolkit*** "Racing for the Future" Toolkit, designed for Workforce Investment Boards (WIBS) innovation in alignment with California Corridor WIRED transformational goals | CCST*<br><br>California Workforce Association (CWA)<br><br>California Education and Workforce Institute (CSEWI) | WIBS desiring to help lead the development of a regional innovation culture<br><br>Economic development entities interested in better understanding WIB assets and potential role in development of regional innovation culture<br><br>Companies/individuals considering WIB services, volunteer opportunities<br><br>Government and other funders interested in sustainability of fostering an innovation culture | Task and content development, refinement of work plan (Year 1)<br><br>Identification of background research/data collection needs (Year 1)<br><br>Collection of background research/data (Year 2)<br><br>Development of working draft of Toolkit (Year 2)<br><br>Key stakeholder (WIB/elected officials) review/feedback to Toolkit draft (Yr 2)<br><br>Sharing of draft Toolkit with WIBS at CWA "Meeting of the Minds" conference (Yr 2)<br><br>Prepare and seek input on revised Toolkit draft based on stakeholder input (Year 2)<br><br>Produce final WIB Toolkit (Year 3)<br><br>Roll out Toolkit and product derivatives for use by WIBs (Year 3)<br><br>Provide discussion | Completion and publishing of the WIB Toolkit designed to stimulate understanding of and foster an innovation culture throughout California WIB network. Toolkit to include three major components: (1) How Science is Changing Industry Skill Requirements for California's New Workforce (2) The WIB as Strategic Planner for the Development of Local Workforce Policy (3) An Annotated Bibliography of Research on Bridging Community Organizations to Take Advantage of Opportunities for Workforce Development CSEWI, CCST, CWA<br><br>Production of brief annotated bibliography of surveys and other major research documents that identify how WIBs in particular, other business and professional associations as well, have identified potential challenges/solutions like those in Innovation Corridor (appendix to Toolkit) CCST<br><br>Six case studies of | Innovation support by individual WIBs and the WIB network through workforce policy, strategic plans and programs throughout California Corridor based on the "Racing for the Future" Toolkit informed by the Economic Innovation Kit (1.1) Learning Collaboratory (3.14), the Innovation Asset Inventory (1.3), and the STEM Collaborative Action Plan (3.5) |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | on impact of Toolkit to date at annual "Meeting of the Minds" conference (Year 3)<br><br>Orient various audiences to WIB Toolkit through forums throughout Corridor (Year 3) | successful WIBs, business associations, community colleges or others that have successfully joined together and responded to a high technology and workforce development opportunity (To include key findings from Proj 3.14) CCST, CWA<br><br>Creation of a 10-person working group of leading WIB administrators, community colleges, economic development experts, labor and other groups facilitated by CCST and CWA to prioritize research findings, fill in gaps and flesh out more details for the "Racing for the Future" Tool Kit CCST, CWA | |
| 2.1 ***Supply Chain Advisory Group and "Smart Supplier" Survey*** Create a Supply Chain advisory body, characterize the Supply Chain Transformation, identify priority supplier training needs and develop Supply Chain survey | CSA*<br><br>AvBot<br><br>SVLLC<br><br>Antelope Valley College (AVC) | Supply Chain Training Providers<br><br>Suppliers<br><br>Primes<br><br>WIBs<br><br>Economic Development Organizations (EDOs) | Recruit Steering Committee (Yr 1)<br><br>Host orientation webinar (Year 1)<br><br>Recruit industry and stakeholder presenters, panelists for Supply Chain Transformation/ Training Forum (Yr 1)<br><br>Create and disseminate survey polling industry needs/requirements resulting from Supply Chain Transformation (Year 2) | Recruitment of at least 15 key supply chain stakeholders for Supply Chain Industry Advisory Group (SCIAG) to provide Forum inputs and expertise in developing outputs of Project 2.2 SVLLC, CSA - Completed<br><br>Supply Chain Transformation Orientation Webinar for SCIAG SVLLC, CSA - Completed<br><br>Minimum of two industry briefings on supply chain transformation2 SVLLC, CSA - Completed<br><br>Minimum of three training provider or other supply-chain stakeholder briefings addressing supply chain training needs. 2 SVLLC, CSA - Completed<br><br>Forum characterizing Supply Chain Transformation/Training Needs with minimum of 40 attendees 2 SVLLC, CSA - Completed<br><br>Development of Supplier Network | Increase in number of suppliers seeking training to respond to supply chain transformation<br><br>Supply Chain Training Providers comparing current curriculum to new training needs resulting from Supply Chain Transformation<br><br>WIB understanding of, addressing of new worker skills needed as result of Supply Chain Transformation |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | | Transformation Survey to inform/educate suppliers and assess current state of supplier network (Interface with Project 2.2, 2.3 and 2.4) CSA - Completed | |
| 2.2 ***Smart Supplier Maturity Capabilities Model and Common Learning Outcomes*** Characterize in a supplier Maturity Capabilities Model (MCM) foundational "smart supplier" global competitiveness skills, articulating a set of common smart supplier requirements and common learning outcomes across supply chain training provider network; demonstrate criticality of accelerated information flow throughout supply chain and provide training resource matrix | CSA*<br>CMTC<br>AVC<br>NOVA<br>L5/Supplier Excellence Alliance (SEA) – in-kind<br>Western Research Applications Center, University of Southern California (WesRAC/USC) | Suppliers and Supply Chain workers<br>Primes<br>Government<br>Supplier Training Providers<br>Economic Development and Workforce Stakeholders | Analyze 2.1 survey results, sharing with SCIAG (Yr 2)<br>Develop Maturity Capabilities Model, drawing from expertise of SCIAG (Project 2.1) and survey analysis above (Year 2)<br>Develop common smart supplier requirements and common learning outcomes; disseminating to WIBs, suppliers, supply chain training providers (Year 2)<br>Identify key supplier training resources in Corridor and disseminate training resources matrix (Year 2)<br>Host Supply Chain Transformation Forum #2 (Year 2)<br>Create demonstration project incorporating common learning outcomes (Year 3)<br>Generate computer simulation demonstrating the oscillations of a negative feedback system in a small supply chain (case study), meant to document value of accelerated information-sharing throughout supply chain network | Introduction of minimum of 50 suppliers and/or supply chain training providers to smart supplier common learning outcomes derived from Maturity Capabilities Model (MCM – see below)All partners<br>Introduction of minimum of 5 WIBs to smart supplier learning outcomes derived from MCM (see below) CSA<br>Minimum of 100 smart supplier surveys analyzed All partners<br>Development of a Maturity Capabilities Model (MCM) of Common Core Requirements All partners<br>Development of key learning outcomes recommended for inclusion in supply chain training curriculum, with outcomes derived from MCM All partners<br>Analysis of survey developed in Project 2.1, to be used as cornerstone of for MCM All partners<br>Development of and dissemination to 1000 supply chain stakeholders a Training Resource Matrix All partners<br>Hosting of a 2007 Supply Chain Forum to provide information/education regarding Maturity Capabilities Model, key supply chain learning outcomes CSA<br>Strategies for implementing common learning outcomes from | Increase in economic impact of suppliers benefiting from training that incorporates smart supplier key learning outcomes derived from CMC<br>An increasing number of training providers adopting key learning outcomes and other elements of the MCM<br>Voluntary increase of supplier network accelerated information flow |

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
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| | | | | three training providers All partners<br><br>Demonstration project utilizing common learning outcomes with "lessons learned" report CMTC, NOVA, AVC<br><br>Computer simulation demonstrating the oscillations of a negative feedback system in a small supply chain (case study), meant to document value of accelerated information-sharing throughout supply chain network WESREC<br><br>Final report incorporating learning outcomes encouraged, sample training strategies to address supply chain transformation All partners | |
| 2.3 ***Smart Supplier Training Resource Outreach*** Educate 3000 supplier companies about California Corridor smart supplier training resource providers/potential funding for training | CSA*<br><br>California Employment Training Panel (ETP – a non-funded WIRED partner) | Suppliers<br><br>Primes<br><br>Government and commercial customers of primes/suppliers<br><br>Economic and workforce development stakeholders | Invite ETP representative to participate in/present at WIRED-related events (Year 1)<br><br>Facilitate information flow and broker relationships among training funders/training providers/companies (Year 1and 2)<br><br>Design outreach strategy (Year 2)<br><br>Distribute training resource provider/training funding resource information to 3000 supplier companies (Year 3) | 1000 incumbent employers trained in satellite production (Years 2 and/or 3) Track applicable common measures NOVA<br><br>82% employment retention of trainees above (Year 3) NOVA<br><br>Average earnings of at least $12,000 over two quarters NOVA<br><br>Participation of ETP in at least one policymaker education event (Yr 1) CSA<br><br>Participation of ETP in one supplier event each year of performance period (Years 1-3) – interface with Projects 2.1/2.2 CSA<br><br>ETP smart supplier briefing (Year 1) – interface with Projects 2.1/2.2 CSA<br><br>Outreach strategy targeting 3000 California Corridor suppliers, 50 EDOs, 25 WIBs with "smart supplier" information regarding supplier transformation. | Enhanced skills for 21st century competitiveness through satellite production training<br><br>Better understanding among training support network (EDOs, WIBs) that supplier training resources and funding are broadly available<br><br>Increased utilization of training resources/funding by Corridor companies, suppliers |

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| | | | | training provider resources, training funding support (Year 2) CSA<br><br>Implementation of outreach strategy, disseminating information regarding supplier transformation, training provider resources, training funding support to 3000 suppliers, 50 EDOs, 25 WIBs (Year 3) Interface with Projects 2.1/2.2/1.1/3.14 CSA<br><br>A minimum of 3 new training-related partnerships established, with at least one participating WIB CSA | |
| 2.4 ***Manufacturing Technician Community College Certification Program*** Development and piloting of an industry-driven community college manufacturing technician program | El Camino* (community) College<br><br>South Bay Workforce Investment Board (Los Angeles area WIB) | Primes<br><br>Suppliers<br><br>Economic Development and Workforce programs<br><br>Other community colleges | Establish Industry Advisory Committee (Yr 1)<br><br>Review assessment instruments (Yr 2)<br><br>Establish curriculum development team (Year 2)<br><br>Develop manufacturing technology technician (MTT)curriculum (Year 2)<br><br>Develop program orientation program for outreach to college, One Stop Career Centers (Year 2)<br><br>Recruit incumbents, students, others into MTT certification program (Year 2)<br><br>Conduct pilot training (Year 3)<br><br>Develop relationships, articulation agreements with local high schools, 4- year universities (Yr 2- 3) | Training of at least 50 individuals in pilot manufacturing technology technician certification program, with trainees sought from both student and incumbent worker populations. ECC<br><br>Track applicable common measures. So Bay WIB<br><br>Track number beginning training, number completing training. So Bay WIB<br><br>75% retention of training enrollees through completion of program So Bay WIB<br><br>82% retention of trainees in current employment, with average wage of at least $12,000 over two quarters So Bay WIB<br><br>Development of a certificated manufacturing technology curriculum for students and entry level and displaced workers referred through the South Bay WIB (Interface with Projects 2.1, 2.2, 3.5, 3.11) ECC<br><br>Minimum of two | Replication of Manufacturing Technician Certificate Training program at several California community colleges<br><br>Increased recruitment of high school students into technical training programs at community college level<br><br>Increased utilization of community college graduates by manufacturing-related corporations and small business |

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| | | | Evaluate pilot project outcomes, make recommendations (Year 3) | educators trained in delivery of MTTC curriculum ECC<br><br>Development of a student/trainee retention strategy through ongoing student support services including tutoring, counseling, mentoring and financial aid ECC<br><br>Industry-driven analysis and validation of accurate workforce assessment instruments for development of sequential certification process in manufacturing (to include instruments of WorkKeys, Manufacturing Skills Standards Certification, National Institute of Manufacturing Skills and Society of Manufacturing Engineers) ECC<br><br>Development of MTTC orientation program for college, One Stop Career Center counselors/case management personnel ECC<br><br>Articulation agreement with at least two local high school pre-engineering programs ECC<br><br>A minimum of 10 organizations (classified as to category – college, corporation, small business) will receive products derived from Project 2.4 ECC | |
| 3.1 ***Workforce Skills Analysis*** Assessment of 200 high-technology companies to determine regional high-demand occupations/skill needs | CSA*<br><br>GAVEA<br><br>Kern EDC<br><br>LA County WIB<br><br>LAEDC<br><br>OCWIB<br><br>Riverside WIB<br><br>South Bay WIB<br><br>San Bernardino WIB | Workforce Investment Boards and other workforce entities<br><br>Economic development entities<br><br>Training providers<br><br>Higher education<br><br>High school educators | Team with WIB or economic development partner to identify prospective survey participants (Yr 1)<br><br>Develop project survey tool, reviewing opportunities to better coordinate common skills language (Year 2) | Development of survey tool to assess regional high-demand occupations/skill needs CSA (LMID)<br><br>Distribution of survey to 200 companies All partners<br><br>Development of regional workforce development and training strategy to meet survey-identified needs All partners | Ongoing joint activities by WIBs/economic development entities paired for Project 3.1 assessment activity<br><br>Increase in industry's ability to fill key positions in surveyed companies<br><br>Increased economic productivity/economic impact in companies surveyed |

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| | WIB<br>SBEDP<br>SLOEVC<br>SLOPIC<br>VCWIB | Industry | Recruit participation in survey by a minimum of 200 targeted companies (Yr 2)<br>Compile and analyze survey data (Year 2)<br>Develop strategies to address identified education/training gaps (Year 2)<br>Share strategies across the nine regions and the entire Corridor (Year 2) | Distribution of findings to WIBs throughout Corridor, orientation to minimum of 5 non-project WIBs of training strategy (through Learning Collaboratory<br>in Proj. 3.14) CSA | |
| 3.2 ***Industry/University Consortium to Enhance Global Space Competitiveness*** Consortium of space science and research, university communities to support affordable space opportunities for small satellite and university payloads, enabling real-world experience for future space workers | California Space Education and Workforce Institute (CSEWI)*<br>CSA | University students and professors<br>Small business (small satellite builders)<br>Government space stakeholders | Identify forums, conferences and symposia currently available which address the affordable space access issue, determining a participation schedule (Year 2)<br>Attend events identified in participation schedule (Yr 2 & 3)<br>Establish consortium and a schedule at least three webinars or meetings one in Year 2 and two in Year 3 to discuss obstacles, recommendations, white paper, white paper presentation at target events | Development of consortium comprised of representatives of space science and research and university communities, with minimum of three universities represented, three companies represented. (Interface with Project 1.6, 3.3) CSEWI,CSA<br>White paper outlining promising developments and recommendations for enhanced partnering between the space science and research/university communities and industry to foster affordable space opportunities for small satellites and university payloads, as well as opportunities to provide university students critical real-world space experience (linkage with Project 1.6, 3.3) CSEWI,CSA<br>Hosting of a minimum of three moderated dialogues, one in Year 2 and two in Year 3, for discussion of obstacles and recommendations, white paper development and distribution (webinars or face-to-face) CSEWI,CSA | Affordable space access for student and university payloads, providing more experiential training for U.S. engineering students entering U.S. workforce, opportunities for more students to launch of their payloads |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
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| | | | | List of current small satellite and payload conferences attended jointly by university faculty and students as well as industry, with suggested participation schedule for Project partners CSEWI,CSA<br><br>White paper dissemination plan describing distribution, possible presentation opportunities CSEWI,CSA | |
| 3.3 ***Space-Related University Internships and Industry Mentoring*** | Stanford University*<br><br>Garvey Spacecraft Corporation<br><br>CSA | University students<br><br>Industry<br><br>Government space stakeholders | Recruit three interns: two for support of student payload launcher development, one for balloon launch program and student assessments (Years 1 and 2)<br><br>Assign industry mentors (Year 1)<br><br>Put industry/university program in place (Year 1)<br><br>Generate launch vehicle development, launch vehicle alteration schedules (Year 1)<br><br>Perform flight tests on experimental vehicles (Years 2 and 3)<br><br>Develop balloon launch program (Years 1 and 2)<br><br>Create concept for distance learning pilot (Year 2)<br><br>Field distance learning pilot (Years 2 and 3)<br><br>Host participant webinar, seminar to document internship/mentoring project conclusions (Yr 3)<br><br>Develop procurement practices and | Development of Stanford student payload internships to include three interns: two undergrads developing payload launchers for student payloads, one graduate research assistant to develop balloon launch program and quarterly student assessments in project 3.10 Stanford<br><br>Development of university (California State University Long Beach) aerospace student rocket/launch development program featuring minimum of two industry mentors (Garvey Spacecraft Corporation). Project to interface with Stanford student payload internship program above and also Stanford mentoring program in Project 3.10 Garvey<br><br>Student-supported alteration and flight test of existing experimental launch vehicle to accommodate payload integration for student – developed payloads (Linkage with Projects 1.6, 3.2) Garvey<br><br>Development and flight of a new experimental launch vehicle with university students playing key roles in all aspects of development (Linkage with Projects 1.6, 3.2) Garvey<br><br>Development of balloon | Mentor-supported university students will bring hands-on, real-world experience to aerospace careers, supporting U.S. global competitiveness<br><br>An increase in students choosing space-related careers due to elementary and high school exposure to STEM-related hands-on experiences<br><br>Ongoing industry/university partnerships growing out of positive WIRED project experience |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
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| | | | policies with student involvement (Yr 3) | launch program to carry minimum of 300 miniature student payloads (PongSats) Stanford<br><br>Distance learning pilot linking classrooms with launch sites for student experience with launch protocols Stanford<br><br>Online project review/conferencing webinar among interns, students and external participants to introduce interns/students to webinar, project and teaming protocols Stanford<br><br>Development of participant seminar to document project conclusions (with Project 3.10) Stanford<br><br>University student-supported development of a set of procurement practices and policies providing student exposure to key industry activity Stanford | |
| 3.4 ***Systems Engineering Outreach Systems*** engineering outreach, curriculum development and training program | The Aerospace Corporation (TAC)*<br><br>California Space Education and Workforce Institute (CSEWI)<br><br>California Polytechnic University, San Luis Obispo (Cal Poly) | Primes<br><br>Suppliers<br><br>Government and Commercial Customers of Primes, Suppliers<br><br>Universities<br><br>Economic and Workforce Development Organizations | Assess systems engineering needs through survey to companies requiring systems engineering professionals or skills (Year 1)<br><br>Develop pilot systems engineering orientation and survey course "Elements of Systems Engineering" (Yr 2)<br><br>Train instructors in delivery of pilot (Year 2)<br><br>Deliver orientation and systems engineering survey course to 20 recruited incumbent workers/students; evaluate (Year 2)<br><br>Interview target companies | Instruction of 20 incumbent engineers through pilot systems engineering course described below CalPoly, TAC<br><br>Delivery of piloted course to 80 incumbent engineers. Track applicable common measures CalPoly, TAC<br><br>82% employment retention with a minimum salary of $12,000 for two quarters for 80 incumbent engineers trained SLOPIC?<br><br>Training of minimum of two instructors in delivery of pilot course CalPoly, TAC<br><br>Development of two-day systems engineering survey course "Elements of Systems Engineering; will include additional orientation day CalPoly, TAC | A more competitive U.S. engineering skills base, founded on understanding of relationships among various engineering disciplines<br><br>Increased utilization of systems engineering training provider resources by companies and individuals<br><br>Fewer technical integration issues/production issues in companies benefiting from systems engineering<br><br>Greater visibility for and understanding of importance of systems engineering to 21st century technology development, design and production |

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| | | | regarding systems engineering needs/current solutions (Year 2)<br><br>Refine curriculum of pilot course according to recommendations in evaluation (Yr 3)<br><br>Train minimum of two new instructors in delivery of refined curriculum (Year 3)<br><br>Deliver refined curriculum to 80 incumbent workers recruited from industry (Year 3)<br><br>Disseminate training provider information to minimum of 100 systems engineering stakeholders (Yr 3) | day CalPoly, TAC<br><br>Development of online systems engineering courses within the Corridor to address identified skills gap CalPoly, TAC<br><br>Online needs assessment (survey) for companies, government agencies requiring systems engineers, systems engineering skills (Interface with project 3.1, 3.5) CalPoly, TAC, CSEWI<br><br>Minimum of 15 interviews with companies and **ADD -** academic institutions hiring systems engineers or for systems engineering skills (Interface with project 3.1, 3.5) CalPoly, TAC<br><br>Identification of 10 systems engineering content providers (Interface with Project 2.1, 2.2) CalPoly, TAC<br><br>Distribution of systems engineering training provider catalogue to minimum of 100 systems engineering stakeholder organizations (companies, associations, etc.) (Interface with Project 3.14) CalPoly, TAC, CSEWI | |
| 3.5 ***Science, Technology, Engineering and Math Collaborative Action Plan (STEMCAP)*** Develop a collaboration and strategic action plan to increase the number of STEM students, teachers, professors and mentors in the California and | CSEWI*<br><br>CCST<br><br>Cal Poly, San Luis Obispo<br><br>Strategic Vitality, LLC<br><br>El Camino College<br><br>In-kind participation by key public education policymakers and practitioners, major California education systems, private industry and the informal | Industry and small business<br><br>STEM-related university disciplines seeking increased enrollment<br><br>Schools recruiting and attempting to retain STEM teachers<br><br>STEM stakeholders statewide | Establish Steering Committee (Yr 1)<br><br>Host two STEMCAP-related fora (Year 1)<br><br>Contract with primary STEMCAP development contractor (Year 2)<br><br>Host third STEMCAP forum (Year 2)<br><br>Form advisory group and coordinate minimum of three targeted | Establishment of STEMCAP Steering Committee drawn from industry, education, workforce and informal science All partners - completed<br><br>Establishment of minimum of three STEMCAP working groups All partners completed:<br><br>Recruitment/ retention of STEM students/ Educators; Industry-Relevant Curriculum Development; Seamless STEM Transitioning All | Adequate pool of 21st Century STEM-related workers to ensure U.S. global competitiveness<br><br>An increase in the number of students entering and graduating from STEM university disciplines<br><br>An increase in the number and quality of STEM-related teachers and professors<br><br>Better alignment of STEM strategies across all sectors of industry, informal science and education communities |

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| statewide | science community | | targeted stakeholder focus group meetings (Year 2)<br><br>Perform environmental scan of key existing STEM-related reports/studies (Year 2)<br><br>Characterize role of industry and informal science community, enhancements to teacher training/professional development (Year 2)<br><br>Provide STEM and education-related inputs to Projects 1.1 and 1.7 (Yr 2)<br><br>Produce draft of STEMCAP for Steering Committee review (Q1/Year 3)<br><br>Implement dissemination plan (Year 3)<br><br>Coordinate STEMCAP-related pilots in 3 regional collaboratives (Yr 3) | STEM Transitioning All partners completed<br><br>Convening of minimum of three broad-based forums of STEM stakeholders (industry, K-12, community college, university, informal science – minimum of 40 attendees each) to support content development for the STEMCAP All partners completed<br><br>Case study to assess program benefit to technical student recruitment (client population): Project Lead the Way (PLTW) as a STEM best practice, based on El Camino College's monitoring of PLTW programs at four Los Angeles-area high schools<br><br>Development of advisory group to provide feedback to target stakeholder focus groups All partners<br><br>STEMCAP insights garnered from a minimum of three targeted stakeholder focus groups, in addition to working groups mentioned above All partners completed<br><br>Summary of minimum of three STEM-related reports/studies to provide environmental scan content - CCST<br><br>Role of teacher training, industry and informal science articulated as part of STEMCAP All partners<br><br>Identification/description of minimum of three STEM-related teacher professional development summer or retreat programs All partners<br><br>Inputs from minimum of 150 STEM stakeholders | education communities<br><br>More strategic investment in STEM as a result of identification of STEM best practices and model programs |

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| | | | | All partners<br>Minimum of two WIRED integration dialogues with Project 1.1 and 1.7 partners All partners<br>STEM Collaborative Action Plan featuring recommendations, best/promising practices and model programs, dissemination plan (Linkage with Projects 3.3, 3.6, 3.8, 3.9, 3.10, 3.12 and others)CSEWI<br>STEMCAP-related presentations at minimum of 10 education, workforce and/or economic development conferences, events All partners<br>Pilot minimum of three STEMCAP-related initiatives in regional collaboratives CSEWI | |
| 3.6 ***MESA Teacher Training Academies*** Initiate summer institutes for teacher professional development in STEM | Math, Engineering and Science Achievement (MESA) Program* - ***contract pending*** | California teachers<br>California students<br>Parents<br>Schools<br>Industry | Generate teacher institute schedules (Year 2)<br>Develop curriculum (Yea 2)<br>Coordinate institute logistics (Yr 2 - 3)<br>Recruit teacher enrollees ((Yr 2 - 3)<br>Develop evaluation element for final report (Year 3) | Establishment of 6 summer teacher institutes (academies) providing instruction in STEM-related teaching strategies (linkage with 3.5 and other projects) MESA<br>Minimum total of 150 teachers trained in six summer institutes MESA<br>Institute syllabus MESA<br>Institute curriculum MESA<br>Include program evaluation element in final report, detailing program successes and lessons learned MESA | 24,000 students positively impacted annually (150 teachers x 32 students x 5 classes) |
| 3.7 ***Certificated Software Development Training Program*** Training program for unemployed software developers and others interested in software | NOVA*<br>(University of California, Santa Cruz Extension – Subcontractor) | Aero, space and defense companies<br>Individuals<br>Aerospace and defense industry<br>Community colleges<br>Economic Development organizations | Convene industry/ stakeholder Advisory Group to identify skill needs, review training strategy, curriculum (Year 1)<br>Develop proposed "Software Development for Aerospace/ Defense Applications" | Training program piloting certificate curriculum to include minimum of 15 unemployed, underemployed or dislocated workers. Track applicable common measures. NOVA<br>76% of trainees to be placed in training-related positions . | Enhanced mobility of software developers industry to industry<br>More rapid filling of software developer positions within the aerospace and defense sector in the Corridor<br>Better understanding of training needs of individuals moving from IT to aerospace/defense |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
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| software development training for positions in aerospace and defense | | Workforce organizations | curriculum to be delivered through US Santa Cruz Extension (Year 1)<br>Submit curriculum for University of California certificate approval (Year 2)<br>Recruit trainees to pilot curriculum (Year 2)<br>Conduct pilot training (Yr 2 and/ or 3)<br>Support placement of trainees (Yr 2 and/ or 3)<br>Develop curriculum outline to foster replication Corridor-wide (Year 3) | NOVA<br>82% of trainees placed will be retained in positions paying at least a $12,000 average wage for two quarters. NOVA<br>80% of training enrollees receive Certificate in "Software Development for Aerospace/Defense Applications." NOVA<br>Track number of students beginning training, number of students completing training. NOVA<br>Skills needs identification for software engineers transition to aerospace/defense applications (Interface with Project 3.1). NOVA<br>Development of curriculum for certificate to train software engineers to transition to aerospace/defense applications. NOVA<br>University-approved certificate program for "Software Development for Aerospace/Defense Applications" . NOVA<br>Development of curriculum outline to foster expansion of similar certificate programs statewide. NOVA<br>Minimum of three new partnerships among workforce, education system and the private sector (Interface with Project 1.7, 3.14). NOVA | to aerospace/defense |
| 3.8 ***Student Advisor/ Counselor Space Career Orientation Program*** Orient university student advisors, counselors | CSEWI*<br>CSA/New Space Professionals Working Group (NSPWG) | Employers<br>Future STEM career workers/University students in STEM disciplines<br>High technology stakeholders: workforce and economic | Define project (Yr1)<br>Identify of at least three target universities (Yr 2)<br>Identify of key student undergraduate advisors/counselors in each university (Year 2) | Recruitment of new graduate advisory pane CSEWI, CSA/NSPWG<br>Development of three program models (to align with three target universities) to orient undergraduate advisors/counselors with space-related STEM careers (linkage with | An increase in the number of university students entering STEM-related space careers<br>More strategic cooperation of target universities with space industry employers/recruiters<br>Expansion of undergraduate student |

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| about the opportunities and benefits of space-related STEM careers | | development entities | (Year 2)<br>Recruit new graduates for advisory panel (Year 2)<br>Research, develop and publish outreach materials (Year 2)<br>Outreach to prospective university undergraduate advisors/ counselors (Yr 2-3)<br>Host orientation session (Year 3)<br>Generate case studies on orientation effort at 3 universities (Yr 3) | careers (linkage with Project 3.5) CSEWI, CSA/NSPWG<br>Development of orientation session featuring high-tech career discussion for target university student advisors/ counselors CSEWI, CSA/NSPWG<br>Development of outreach materials on space-related STEM careers CSEWI, CSA/NSPWG<br>Element of final report to include implementation case studies of three program models, detailing obstacles, solutions, successes and lessons CSEWI, NSPWG learned | advisor/counselor orientation program to other universities |
| 3.9 ***Troops to Teachers Accelerated Credentialing Initiative for Science and Math Teacher Recruitment*** Accelerated credentialing program targeting recruitment of math/science teachers for California elementary and high schools | Project Pipeline /California Troops to Teachers*<br>CSEWI | | Develop math and science teacher recruitment outreach materials (Year 1)<br>Develop outreach schedule (Year 1)<br>Implement outreach schedule (Year 2)<br>Counsel teacher recruitment prospects (Yr 2 - 3)<br>Recruit prospects into advanced counseling, testing (Years 2 and 3)<br>Find placement options for teacher recruits (Yr 2 - 3) | Minimum of 70 people will be recruited for Troops to Teachers pre-program counseling Troops<br>Minimum of 25 people will participate in required credentialing testing Troops<br>Minimum of 80% of those participating in required credentialing testing will successfully complete requirements for intern placement Troops<br>Minimum of five presentations to employer groups housing potential teacher recruits from retiree pool Troops<br>Participation in targeted outreach at minimum of five events identified as prospective teacher recruitment opportunities Troops<br>Development of teacher recruitment outreach schedule Troops<br>Development of teacher recruitment outreach materials Troops | An increased pool of qualified math and science teachers with real-world employer experience |
| 3.10 ***Development*** | | | Define project (Yr1) | 500 elementary students will participate | Sustainability of mentoring program through |

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| ***Development of University and High School Mentoring Program*** Pilot one elementary and one high school mentoring program based on the Stanford University model of using industry mentor recruits on multi-year mentoring assignment | | | Recruit industry/employer mentors (Yr 1- 2)<br><br>Develop elementary program (Yr 1- 2)<br><br>Develop high school program (Years 1 and 2)<br><br>Recruit elementary and high school mentoring program participants (Yr 2)<br><br>Establish employer relationships regarding ongoing mentoring program support (Year 2)<br><br>Instruct teachers in mentoring program success factors (Year 2)<br><br>Implement mentoring program (Years 2 and 3)<br><br>Administer pre and post quarterly student assessments (Years 2 and 3)<br><br>Create online tools (Years 2 and 3)<br><br>Perform online project assessment through webinar for participants (Yr 3)<br><br>Coordinate participant seminar to share conclusions (Yr 3)<br><br>Draft project review element for final report (Year 3) | students will participate in the PongSat balloon launch, receiving instruction though mentor recruited from STEM-related employer base Stanford<br><br>Minimum of 250 elementary students receiving instruction will be drawn from Latino community Stanford<br><br>Minimum of 12 high school students receiving instruction through project mentor drawn from industry Stanford<br><br>One elementary school mentoring program developed Stanford<br><br>One high school mentoring program developed serving approximately 20 students Stanford<br><br>Recruitment of at least 6 industry engineers for student mentoring Stanford, CSEWI<br><br>Relationships established with minimum of 6 employers regarding mentoring sustainability Stanford, CSEWI<br><br>Recruitment of at least one elementary school, one high school, minimum of five teachers total to support mentoring program Stanford, CSEWI<br><br>Instruction of minimum of five teachers in success factors of mentoring programs Stanford<br><br>Development of pre and post quarterly student assessment for elementary students administered annually (development to be accomplished with graduate student from Project 3.3) Stanford<br><br>Creation of set of online tools to support | program through established relationships between employers and schools<br><br>Expansion of mentoring program through use of student and teacher mentoring program guidelines and sharing of mentoring program success |

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| | | | | mentoring activities Stanford<br><br>Online project review and conferencing webinar among interns, students and external participants to introduce interns/students to webinar, project and teaming protocols (linkage with Project 3.3) Stanford<br><br>Development of participant seminar to document project conclusions (with Project 3.3) Stanford<br><br>School and teacher mentoring program guidelines to be included as element of final report Stanford | |
| 3.11 ***Community College Mechatronics Degree Program/ Technical Certification Outreach to High Schools*** Pilot community college industrial technology-based degrees in mechatronics in coordination with demonstration project providing case studies of various outreach strategies | Allan Hancock College (AHC)*<br><br>Cerritos College<br><br>College of the Canyons<br><br>Lancaster University Center<br><br>CSEWI | Industry needing mechatronics skills<br><br>Future technology workers currently studying in community colleges<br><br>Economic and workforce development organizations | Convene industry advisory group for technical support (Year 1)<br><br>Develop mechatronics curriculum (Year 1)<br><br>Integrate mechatronics curriculum with Engineering Technology and Electronics Technology curricula; submit to Chancellor for State approval of AA degrees: Engineering Technology/ Emphasis in Mechatronics, (Years 1-2)<br><br>Develop outreach strategies for high school student recruitment into technical community college or university coursework (Yr 1)<br><br>Design outreach materials; disseminate materials to high schools in appropriate community college, university center | Piloting of mechatronics coursework developed as curriculum for mechatronics degree programs described below: 100 unduplicated students served in mechanical core coursework AHC<br><br>70% completion rate for students taking mechatronics coursework AHC<br><br>**DELETE-** Minimum of 50% of mechatronics students from traditionally under-served populations (e.g. Latino, etc.) AHC<br><br>**DELETE** Employment retention of mechatronics students of at least 82% with an average wage of at least $12,000 for 2 quarters AHC<br><br>Development of new community college AA degree for Engineering Technology/Emphasis in Mechatronics (Interface with Project 3.1, 3.5) AHC<br><br>Development of new AA degree for Electronics Technology/Emphasis in Mechatronics (interface with Project 3.1, 3.5) | Industry benefiting from highly qualified mechatronics-trained skilled workers<br><br>Greater awareness of mechatronics as a career pathway<br><br>More students entering engineering and mechatronics-related disciplines<br><br>More students entering engineering and other STEM-related careers<br><br>Numerous community colleges offering mechatronics degree program<br><br>Better understanding of community college training providers of interfaces, differences/similarities among mechatronics, electronics, engineering technology, role of IT and robotics in engineering setting |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | university center jurisdictions (Yr 2)<br><br>Conduct outreach activities, evaluate and develop replication protocols to share with other community college, education center stakeholders (Years 2/3) | AHC<br><br>Development of Mechatronics curriculum to support new AA degrees described above (Interface with 3.5) AHC<br><br>Community College Chancellor's Office approval for AA degrees described above AHC<br><br>Minimum of 100 junior high school students participating in STEM course-related outreach activities at College of the Canyons (Interface with 3.5) COC<br><br>Minimum of 100 high school students participating in STEM curriculum and career outreach activities course-related outreach activities at Cerritos College (Interface with 3.5) Cerritos<br><br>Minimum of 300 K-14 students participating in STEM curriculum and career outreach activities in the Allan Hancock College service area (Interface with 3.5) AHC<br><br>Minimum of 50 high school students participating in STEM course-related outreach activities at Lancaster University Center (Interface with 3.5) LUC<br><br>Replication protocols for STEM-related community college outreach programs described in final report (interface with Project 2.4) All partners<br><br>Replication protocols shared with minimum of six other community colleges (Interface with Project 2.4) All partners | |
| 3.12 ***Development of Science Educator Launch Conferences*** | Space Information Laboratories (SIL, parent of Endeavour Center) | Science and elementary school teachers<br><br>Students | Identify potential Educator Launch Conference opportunities based on NASA mission launch | Development of earth science curriculum articulating with at least one university system for use by California high schools SIL | 24,000 students impacted through classroom efforts of teachers participating in Educator Launch Conferences |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| ***and Earth Science Curriculum*** Development of earth science curriculum articulating with at least one university system for use by California high schools; development of science educator launch conferences to provide teacher professional development utilizing real-world, relevant space-related STEM training to K-12 teachers | | School Districts<br>Industry | schedule (Year 1)<br>Recruit NASA mission chiefs, Subject Matter Experts (SMEs) for initial Educator Launch Conference; recruit teacher participants; coordinate lodging, meal, tour and program logistics; host initial Educator Launch Conference providing classroom activities for teachers recruited for professional development opportunity (Yr 1)<br>Host additional Educator Launch Conference (Yr 2-3)<br>Develop earth/science curriculum in cooperation with JPL, other stakeholders, ensuring articulation with University of California (Yr 2- 3) | high schools SIL<br>Minimum of 150 teachers instructed in STEM-related professional development supported by classroom activities through the SIL (Endeavour Center) Educator Launch Conferences planned to coincide with actual NASA missions launched at Vandenberg AFB SIL<br>California Science Teachers Association engaged as distribution channel for earth science curriculum SIL<br>Jet Propulsion Laboratory engaged as curriculum development partner SIL | Potentially impact all California students through adoption of earth science curriculum in California schools |
| 3.13 ***Virtual California Space Center*** Creation of a participatory web-based space learning center (collaboratory) that sponsors and features content of real-world space-related education and STEM outreach programs | CSEWI*<br>CSA<br>In-kind: California Space Center<br>NASA Centennial Challenge Office<br>Zero South organization | K-University students<br>K-University teachers<br>Parents<br>Entrepreneurs and innovation-oriented companies<br>General public | Develop three internship programs to support virtual space education learning site and eventual physical California Space Center (Yrs 2 - 3)<br>Research and identify target audiences for web-based learning center (Year 2)<br>Develop outreach campaign to educate target audiences about web-based learning center and its real-world programs (Year 2)<br>Determine design and hosting | Development of three internships in support of the virtual California Space Education Center and the eventual physical California Space Center: one historical research internship, one environmental research internship, one additional internship TBD CSA, CSEWI<br>Development of web-based "California Space Education Center" , a virtual learning center and outreach platform for student, teacher, education stakeholder outreach supporting space and STEM-related learning and careers CSEWI<br>Attraction of minimum of | A larger STEM and space workforce pool<br>A sustainable "one stop" virtual learning site for space-related education in California Corridor as well as supporting STEM education, potentially impacting thousands of students a year through teacher and curriculum support<br>Ongoing attraction of students into STEM disciplines, graduates into STEM and especially space careers<br>Follow-up of teacher professional development with year-round classroom support, distance learning opportunities, student exposure to SMEs, etc. |

| Project | Partners (* indicates lead) | Customers | Timelines/ Critical Path Activities | Expected Metrics (Outcomes/Outputs) | Transformation (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | protocols for development of virtual space education center (Year 2)<br><br>Establish internal CSA/CSEWI infrastructure to support content review, approval and technical updating of the virtual learning site (Year 2)<br><br>Determine and establish educational partnerships critical to content relevance, virtual learning center's online success (Year 2)<br><br>Coordinate with Zero South and Centennial Challenge programs to bring their outreach content online (Year 2)<br><br>Explore with WIRED partners which elements of Projects 3.5, 3.11, 3.12 and others might benefit from outreach opportunity provided by virtual California Space Education Center (Year 2)<br><br>Develop and launch virtual California Space Education Center learning site, ensuring effective navigation of the web-based tool, continuing enhancement to site (Yrs 2 and 3)<br><br>Coordinate live coverage of Zero South Expedition on virtual education site | 500 students to Zero South project outreach, 150 students to NASA Centennial Challenge information, inspiring study of STEM disciplines for STEM careers CSEWI<br><br>Live coverage of Zero South expedition on new site CSEWI<br><br>Creation of online element showing typical "consecutive steps" to a STEM career, featuring sample STEM career ladders CSEWI<br><br>Attraction of 15 educational exhibits as part of outreach to minimum of 400 attendees of NASA Centennial Challenges even CSA<br><br>Recruitment of 5 inspirational STEM career professionals to speak at NASA Centennial Challenges event, inspiring students to study STEM disciplines in preparation for STEM careers CSEWI<br><br>Attraction of 150 students to NASA Challenges, exposing them to STEM education/career opportunities, to robotics teams competing and to STEM career professionals CSEWI<br><br>Introduction of a minimum of 20 STEM stakeholder organizations to online "California Space Education Center" and its current attractions: Zero South project participation and NASA Centennial Challenges CSEWI<br><br>Attraction of a minimum of 20 K-12 teachers to online California Space Education Center to review potential classroom earth science lessons (Linkage with | |

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | | Project 3.12) CSEWI | |
| 3.14 ***Workforce Investment Board (WIB) Learning Collaboratory*** A set of activities designed to accelerate WIB understanding and addressing of the 21st Century innovation-entrepreneurship environment and its impact on workforce skills and needs, resulting in a more effective Corridor-wide approach to development of a globally competitive U.S. workforce | CWA*<br>CSA | California workers<br>Industry<br>WIBs<br>Economic development stakeholders | Develop and administer to WIBs a pre-survey to enable benchmarking and tracking of transformative activities (Year 1)<br>Coordinate program and logistics for two conferences, one WIB Chairs meeting, one Community College meeting and one One Stop meetings (Year 1)<br>Coordinate program and logistics for three conferences, one WIB Chairs meeting, one Community College meeting and two One Stop meetings (Year 2)<br>Coordinate program and logistics for two conferences and one One Stop meeting (Year 3)<br>Develop two web-based trainings: innovative workforce and economic development; innovative approaches for building partnership investment in demand-driven training<br>Identify 10 existing and emerging innovative practices among workforce, economic development and education practitioners for providing workforce and training services related to demand-driven STEM worker | Development and administering of pre and post surveys of WIBs to benchmark and track transformative activities. Survey distribution to all 50 WIBs; a minimum of 30 responses in each pre and post effort, with predominant focus on the 23 WIBs in the Corridor CWA<br>Development and promotion of a self-assessment tool for local WIBs, informed by the Council on Competitiveness' monograph on "Measuring Regional Innovation" CWA<br>Sponsoring of a minimum of seven conferences and a minimum of six regional meetings (WIB Chairs (2), Community Colleges (2), One-Stop Operators (4) to gather and disseminate best practice information and improve communication among partners CWA<br>Development of web-based trainings on new and innovative workforce and economic development strategies and on innovative approaches for building partnership investment in demand-driven training CWA<br>Identification of 10 existing and emerging innovative practices among workforce, economic development and education practitioners for providing workforce and training services in response to businesses with existing and future needs for workers with STEM skills CWA<br>Publish 5 white papers targeted to key strategic audiences including WIB Chairs, youth workforce practitioners, elected officials. one- | Workforce development and training strategies and priorities in Corridor and California WIBs is aligned with today's need for a demand-driven system responding to an innovation-oriented, globally competitive marketplace seeking workers with 21st Century skills |

| **Project** | **Partners** (* indicates lead) | **Customers** | **Timelines/ Critical Path Activities** | **Expected Metrics** (Outcomes/Outputs) | **Transformation** (longer term impacts possibly beyond life of project) |
|---|---|---|---|---|---|
| | | | needs<br><br>Develop and publish five white papers, one each for:<br>• WIB Chairs<br>• Youth workforce practitioners<br>• Elected officials<br>• One-Stop communities<br>• Economic & Business Service professionals | stop communities and economic development and business service professionals. Included will be: 1) targeted to youth practitioners: STEM Opportunities and the Workforce Pipeline; 2) for business services professionals: Integrated Workforce, Education and the Economic Development Strategies; 3) for workforce development and economic development community at large: Best Practices for Building Communities with a Competitive Workforce Advantage; 4) Leveraging Resources; 5) WIRED Success Stories (linkage with Project 1.1 Economic Development Innovation Model, 1.5 and 1.7 WIB Toolkit) CWA | |

# 3. Metro Denver

| Panel | Measures |
|---|---|
| Four Targeted Industry Panels: Aerospace, Bioscience, Energy and Information Technology/Software | Employer satisfaction with workforce skills of the applicant labor pool in each sector<br>Training capacity and remaining needs (skills gaps) of each sector<br>Employer investment in human development in each sector<br>**Three year outcome: Increase number of employees in each sector by 10%** |
| Metro WIB Association | Capacity of incumbent worker and dislocated worker training<br>WIA performance measures<br>**Three year outcome: Increase the number of incumbent workers enrolled in training in the region by 20%** |
| K-12 Education | Number of students exposed to career opportunities in science, technology, engineering and math (STEM)<br>**Three year outcome: Increase the number of students taking advanced STEM courses by 10%** |
| Higher Education | Number of students from Metro Denver area entering technical post-secondary training<br>Number of Metro Denver high school students who enter post-secondary school, with a special emphasis on students who qualify for college but choose not to go<br>**Three year outcome: Increase the number of low-income students in participating districts who go directly from high school to college by 20%** |
| Entrepreneurship/Small Business Development | Number of students in technical fields who start businesses<br>Number of business start-ups<br>Number of small companies that win contracts from government or large private-sector companies<br>**Three year outcome: Increase the number of business start-ups in targeted sectors by 10%** |

# 4. Northwest Florida

The measures defined by the Initiative are:

Customized Job Training Grants

- # positions created & funded, by targeted industry - via WIRED
- # positions created within the region, by targeted industry - AGGREGATE DATA
- Wage rates of positions created & funded, by industry -via WIRED
- Wage rates of positions created within the region, by industry - AGGREGATE DATA
- Retention of positions created & funded, by targeted industry - via WIRED

Entrepreneurship Grants

- # new businesses created & funded - via WIRED
- # positions created & funded, by targeted industry - via WIRED
- # positions created within the region, by targeted industry - AGGREGATE DATA
- Wage rates of positions created & funded, by industry - via WIRED
- Wage rates of positions created within the region, by industry -AGGREGATE DATA

Secondary Education Grants

- # training programs created & funded - via WIRED
- # eligible students enrolled (% of eligible student population)
- Completion rate, by semester
- # industry certifications earned

Post Secondary Education Grants

- # training programs created & funded
- # students enrolled
- Completion rate, by semester
- # industry certifications/degree
- # students/scholarships funded
- % increased program enrollment
- # interns funded
- Post internship activity – continued post secondary education, job placement

# 5. NCI

The Goal (Strategic Purpose) of this initiative is: 1) To make entrepreneurship a vibrant, mainstream part of the region's economic and educational culture; 2) To develop regional cooperation across multiple jurisdictions; 3) To nurture early stage ventures from start-up through survival and success; and 4) To establish networks for entrepreneurs and for the community leaders and policy makers who support them.

| KEY STRATEGIES | DESIRED OUTCOMES (SMART GOALS) | METRICS |
|---|---|---|
| 1.1 Launch the Enterprise Council: Entrepreneurship training and support network | SMART Goal: Create a region-wide entrepreneurship training and support network with nodes in all 14 counties by June 2007. Use a series of business plan competitions to develop the network.<br>SMART Goal: Establish a micro-enterprise network in at least one county by June 2007.<br>SMART Goal: Measure a baseline productivity of the network by June 2007 and increase output 3X by June 2008. | Number of stage 1 businesses forming in high performance production; Funding flowing to Stage 1 businesses; Funding flowing to micro-enterprises. Key metric: Number of high quality business plans completed, as rated by outside reviewers. |
| 1.2 Establish Centers for Enterprise Advancement: network of innovation centers in secondary and post secondary schools | SMART Goal: Create a region-wide network of Enterprise Advancement Centers with nodes in all 14 counties by June 2007. Use a series of business plan competitions to catalyze the network.<br>SMART Goal: Measure a baseline productivity of the network by June 2007 and increase output by June 2008. | Number of high performance businesses started by youth under 25; Graduates of youth training programs; Number of reviewed and rated business plans. Key metric: Number of high quality business plans completed, as rated by outside reviewers. |
| 1.3 Create entrepreneurship compact among local officials | SMART Goal: Create a region-wide compact to support business growth in the region with coordinated public policies in economic development and workforce, including “no poaching” provisions. Complete with elected officials in all fourteen counties by June 2007. | Key metric: Number of cities, towns and counties agreeing to terms of the Compact. |
| 1.4 Establish regional financing consortia focusing on Stage 1 and Stage 2 businesses | SMART Goal: Create one new angel capital network by June 2007. | Key metrics: Number of accredited investors participating in angel networks. Volume of investment placements through angel networks. |

The Goal (Strategic Purpose) of this initiative is: 1) To increase innovation, sales and job growth among firms in three high performance production clusters: Advanced Manufacturing, Advanced Materials, and Agribusiness; 2) To align workforce, economic development and education systems to support growth in these clusters as examples of high performance production in the region.

| KEY STRATEGIES | DESIRED OUTCOMES (SMART GOALS) | METRICS |
|---|---|---|
| Initiative 2.1: Launch prototype cluster initiative in one of three areas of high performance production: advanced manufacturing; advanced materials, and agribusiness/food processing. Use initial prototype to develop a process to align workforce development, economic development and education resources in support of the cluster. | SMART Goals: Organize a prototype cluster by June 2007 and three clusters by June 2008. | Key metrics: Number of companies participating in collaborative projects within the cluster. Cluster-specific metrics on investment and innovation velocity. |
| 2.2 Bring Advanced Manufacturing Education Initiative to scale and deploy the model to advanced materials and agri-business | SMART Goal: Expand the Initiative 3X by June 2008 | Key metrics: Number of companies participating in the initiative; volume of co-investment in the initiative; number of partners |

The Goal (Strategic Purpose) of this initiative is: 1) To increase postsecondary educational attainment rates among the region's mature residents, but especially low-skilled, mature incumbent workers in declining industries; 2) Prepare businesses in the region for the demographic reality of an aging population and mature workforce; and 3) Create new talent networks within the region to accelerate the production of a talented workforce with 21st century skills.

| KEY STRATEGIES | DESIRED OUTCOMES (SMART GOALS) | METRICS |
|---|---|---|
| 3.1 Establish Life Long Learning Institute | SMART Goal: Draft a business plan by January 2007 to achieve sustainability by 2009. SMART Goal: By June 2007, establish baseline to measure increased enrollment and completion of certificate, degree and training programs in high skill occupations by mature workers | Key metrics: Investor funds committed to the Institute; increased enrollment and completion of certificate, degree and training programs in high skill occupations by mature workers. |
| 3.2 Create older worker employment network | SMART Goal: Launch a region-wide learning network of at least fifty companies by June 2007. Establish baseline for measuring performance of the network by June 2007. | Key metrics: Number of companies adopting internal HR policies designed to support older workers. Employment of older workers by companies in the network. |

The Goal (Strategic Purpose) of our operations plan is: To develop self-sustaining civic networks to facilitate the integration of workforce, economic development and education resources in the region.

| KEY STRATEGIES | DESIRED OUTCOMES (SMART GOALS) | METRICS |
|---|---|---|
| 4.1 Create a Regional Leadership Development Forum to introduce local leaders to the disciplines of building civic networks. | SMART Goal: Conduct two regional forums with an average 60 participants in each forum by June 2007.<br>SMART Goal: Develop and launch a series of two hour leadership learning labs. Conduct labs in all fourteen counties by June 2007.<br>SMART Goal: Establish a series of quarterly regional forums each quarter throughout the region beginning in February-March 2007. | Network metrics with social network analysis measuring density of civic networks within and across counties; Number of participants. Participant evaluations; Number of forums attracting sponsorship. |
| 4.2 Launch a creative, long term communications program that provides visibility about the region's strengths and opportunities | SMART Goal: Launch a web-based communications platform to support the formation of "communities of practice" emerging around different WIRED initiatives by June 2007.<br>SMART Goal: Engaged civic networks of at least 200 civic leaders working on the various dimensions of regional transformation: talent, innovation, infrastructure, branding and collaboration. | Network metrics with social network analysis measuring density of civic networks within and across counties; Number of participants. Participant evaluations; co-investment in the WIRED process |

# 6. Kansas City

## ONEKC WIRED INITIATIVES
## GOAL 1
## BUILDING CAPACITY –
## MEETING TODAY'S WORKFORCE NEEDS

The OneKC WIRED initiative will focus initially on the three industry sectors of **advanced manufacturing**, **biotechnology**, and **healthcare**.[2] There are several reasons the three sectors were selected, including:

- Strength of existing alliances and partnerships
- Significant overlap in required core competencies
- Alignment of education and training programs, including a substantial regional commitment – both public and private sector – to increased emphasis (and investment) in the areas of **science**, **technology**, **engineering** and **math** (STEM).

In addition, the three industry sectors have critical employment needs, and they all fall within the high-skill, high-growth, and high-wage categories.

While there is a critical demand for highly skilled workers in all three sectors, there are some differentiating factors. For example, advanced manufacturing and biotechnology have a growing demand (employer) side, but they both face the challenge of filling the pipeline with qualified, skilled workers. At the same time, the number of qualified high-school students interested in healthcare-related careers far exceeds the capacity of area nursing schools. The primary barriers to expanding capacity in healthcare are the lack of qualified clinical faculty and adequate training facilities. The major barriers for the other sectors are more along the lines of an outdated perception (for manufacturing) and a lack of career awareness for both.

OneKC WIRED public education and outreach efforts will include information about careers in all three industry sectors and resources about related education and training programs throughout the bi-state region. The perception issue surrounding manufacturing will be addressed in a number of ways, including the continuation of some of the key awareness programs initiated under the *Dream It. Do It.* manufacturing careers campaign.

There are certain limitations associated with the three-year period of the WIRED grant, so most initiatives will adhere to a **design-demonstrate-disseminate** model. The rate at which initiatives move from the demonstration phase to dissemination will vary. In some cases, broad dissemination – both geographic and to other industry sectors – may not occur until after the initial three-year period.

During the course of the grant, programs and assets on both sides of the Stateline will be leveraged to produce a systemic, sustainable change in the way we educate and train workers as a region. And throughout all of the initiatives, intentional steps will be taken to reach nontraditional populations. In addition, in-process reviews will be conducted on a regular basis with special emphasis being placed on barrier issues – especially those faced by nontraditional workers.

[2] During the initial stages, healthcare-related initiatives will be focused principally on hospital-based nursing due to critical shortages in this area. With time, however, these programs could be adapted (or expanded) to address similar needs in the allied healthcare fields and in long-term care. This is consistent with the design-demonstrate-disseminate model.

## Goal 1: Building Capacity – Meeting Today's Workforce Needs

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Clinical Faculty Academy** | Develop formal curriculum for the Clinical Faculty Academy, including training materials and resources to prepare bed-side nurses to serve as clinical faculty | **KC Metropolitan Healthcare Council – lead**<br><br>Collegiate Nurse Educators<br><br>Kansas City Area Nurse Executives | 1. Meet with project coordinator to develop process to manage initiative, organize volunteers, implement tracking system, budget oversight system by 3/06<br>2. Assemble project team by 6/06<br>3. Seek DOL clarification on use of curriculum (intellectual property) by 6/06<br>4. Develop legal agreements for use with subject matter experts and execute agreements by 7/06<br>5. Design and development of participant modules and field test the initial curriculum during the Fall Clinical Faculty Academy by 9/06<br>6. Continue design and development of participant modules by 12/06<br>7. Design and development of Instructor and Administrator Guide by 12/06<br>8. Print Participant Manual and Instructor/Administrator Guide by 12/06<br>9. Identify and enroll participants for Jan 07 Academy by 12/06 | WIRED: $57,400 (first year budget through 01/07)<br><br>Other: $4,000 Hospital funds to operate Clinical Faculty Academy<br><br>Note: Additional funds are being made available via the Full Employment Council and both states. In addition, there are a number of in-kind contributions from area hospitals. | 1. Increase the number of nursing faculty in the region by 20 additional clinical instructors.<br>2. Increase the effectiveness of clinical faculty who attend the Clinical Faculty Academy<br>3. Reduce the administrative time and cost associated with future Clinical Faculty Academy operations<br>4. Sustain the expanded nursing school enrollment in the region at the current level of 20 percent or approximately 200 additional nursing students |

**Notes:** Area hospitals, nursing schools, local employers and civic leaders have developed a strategic initiative to expand educational capacity of nursing schools in the metropolitan region of Kansas City. The number of qualified high school students interested in pursuing nursing careers far exceeds the capacity of area nursing schools. The primary barrier to expanding capacity is the lack of qualified clinical faculty. Solution:

- Area hospitals agreed to use bedside nurses to serve as adjunct clinical faculty
- Area nursing schools agreed to expand the size of their entering classes by 20 percent or approximately 200 students
- Collegiate nurse educators agreed to design and operate a Clinical Faculty Academy — a two-day intensive course to prepare bedside nurses for their new educational duties
- Missouri State Board of Nursing provided a five-year demonstration project to permit BSNs (who are actively pursuing their master's degree) to serve as clinical faculty
- Area hospitals provided seed money to cover start-up costs

The development of curriculum for the Clinical Faculty Academy is one of five health care related programs designed to expand and sustain our clinical faculty and nurse expansion initiatives. Each health care initiative is interrelated and strategically linked to the other programs.

**Goal 1: Building Capacity – Meeting Today's Workforce Needs**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Human Patient Simulator Initiative** | Creation of a shared community human patient simulator lab to provide clinical training for the additional nursing students created by the nurse expansion initiative. | **KC Metropolitan Healthcare Council –lead**<br><br>Metropolitan Community College – Penn Valley (grant sub recipient)<br><br>Collegiate Nurse Educators | 1. Assemble project team with MCC by 6/06<br>2. Meet with METI vendor by 6/06<br>3. Obtain input on space design for new building by 6/06<br>4. Contact HPS Advisory Committee volunteers from other nursing schools to develop preliminary usage plan for initial input by 6/06<br>5. Follow-up with builder regarding required design elements for final HPS Lab layout by 9/06<br>6. Finalize preliminary usage plan with HPS Advisory Committee by 9/06<br>7. Monitor progress of HPS construction phase by 12/06 | WIRED: $0<br>(first year budget thru 1/07)<br><br>Other (if applicable) | 1. Hire and train coordinator to oversee all human patient simulator laboratory operations<br>2. Develop customized nursing curriculum modules to augment standard METI protocols<br>3. Purchase and install initial METI equipment (one adult, one pediatric and one mobile unit) by Q4 2007<br>4. Operate pilot HPS lab for Penn Valley nursing students<br>5. Form HPS Laboratory Advisory Committee and conduct periodic meetings<br>6. Purchase and install final METI equipment (one adult, one pediatric and one mobile unit) by Q2 2008<br>7. Integrate HPS clinical training for other area nursing schools by Q3 2008<br>8. Provide supplemental clinical training to 500 regional nursing students annually |

**Notes:** The expansion of educational capacity at area nursing schools has created an increased demand for clinical sites, where nursing students receive practical hands-on training with actual patients under close supervision. A barrier to expanding educational capacity is the shortage of clinical sites to accommodate the increased number of additional nursing students.

Opportunity:

- The Collegiate Nurse Educators and Kansas City Area Nurse Executives have a long-standing collaborative relationship in the metropolitan region
- Both groups work closely together to coordinate the scheduling of nursing student clinical training at area hospitals for pediatric, medical/surgical, OB/GYN and mental health rotations
- Available time slots at hospital clinical training sites are limited and additional clinical rotations are needed
- Human patient simulator technology represents an excellent alternative to actual interaction with real patients
- MCC-Penn Valley has volunteered to operate a community human patient simulator laboratory at a new clinical training site scheduled for completion in late 2007

The Human Patient Simulator Laboratory is one of five health care related programs designed to expand and sustain our clinical faculty and nurse expansion initiatives. Each health care initiative is interrelated and strategically linked to the other programs.

**Goal 1: Building Capacity – Meeting Today's Workforce Needs**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Nurse Preceptor / Mentorship Initiative** | Create a segment of the Academy to train bed-side nurses to serve as preceptors/mentors for the purpose of nurturing new graduate nurses to the rigors of acute care medicine and physical demands of the profession, including long working hours in hospital settings | **KC Metropolitan Healthcare Council - lead**<br><br>Collegiate Nurse Educators<br><br>Kansas City Area Nurse Executives<br><br>Area acute care hospitals | 1. Conduct survey of chief nursing officers for information on existing programs and preferences<br>2. Develop and execute legal agreements for use with subject matter experts/administrative overseers by 6/06<br>3. Assemble project team for preceptor/mentor program by 9/06<br>4. Meet with chief nursing officers, human resources directors, nursing schools to establish goals, objectives and program content by 9/06<br>5. Develop and implement communications plan by 9/06<br>6. Finalize initial training modules for program by 12/06<br>7. Identify and enroll nurses for preceptor program by 12/06 *(program is estimated to be a year-long program with 1-2 days initially and with ongoing training sessions every other month)* | WIRED: $50,300 (first year budget thru 1/07)<br><br>Other (if applicable) | 1. Develop training modules to support the preceptor/mentor program<br>2. Provide training for 50 nurses annually to serve as preceptor/mentors (estimate 125 nurses will complete the program during the grant funding period)<br>3. Develop and begin using tool to measure the nurse retention rates (Note: The long term outcome is to reduce the number of nurses prematurely leaving the hospital setting by 10 percent.) |

**Notes:** Expanding nursing school enrollment in the region is critical to meeting the future health care needs of our community. The retention of newly graduated nurses in acute care settings is a challenge for hospitals across the nation — a significant number of new graduates leave the hospital setting after two or three years. Producing more nursing graduates, without addressing the underlying cause for nurses exiting the acute care work environment is counter productive.

Opportunity:

- There is a significant need to nurture new graduate nurses to the rigors of acute care medicine and the physical demands of the profession, including long working hours in hospital settings
- The Collegiate Nurse Educators and Kansas City Area Nurse Executives have agreed to collaborate with Kansas City Metropolitan Healthcare Council to develop a formal preceptor/mentor program for bedside nurses
- A preceptor/mentor program represents a significant opportunity to improve retention of graduating nurses and existing nursing personnel

The Nurse Preceptor/Mentor Program is one of five health care related programs designed to expand and sustain our clinical faculty and nurse expansion initiatives. Each health care initiative is interrelated and strategically linked to the other programs.

**Goal 1: Building Capacity – Meeting Today's Workforce Needs**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Nurse Re-entry Initiative** | Retool and expand the new nurse re-entry program at Johnson County Community College (JCCC program began in 2005), which will double the number of training sessions and nurses who can receive specialized training prior to returning to the nursing profession. | **KC Metropolitan Healthcare Council - lead**<br><br>Johnson County Community College (grant sub recipient)<br><br>Metropolitan Community College – Penn Valley | 1. Assemble project team for nurse re-entry program by 3/06<br>2. Orient and train project team by 3/06<br>3. Plan curriculum, syllabus, lesson plans, program schedule by 3/06<br>4. Facilitate additional meetings of project team by 6/06<br>5. Continue to orient and train project team by 6/06<br>6. Continue to plan curriculum, syllabus, lesson plans and program schedule by 6/06<br>7. Kick off communications plan by 8/06<br>8. Identify and enroll 10-12 nurses for each program—complete for first fall program by 8/06<br>9. Conduct 9-week training program starting 9/06<br>10. Continue to orient and train project team by 9/06<br>11. Finalize curriculum, syllabus, lesson plans, continue communications plan by 9/06<br>12. Continue communications plan by 11/06<br>13. Identify and enroll 10-12 nurses for each program by11/06<br>14. Conduct 9-week training program starting 11/06<br>15. Identify and enroll 10-12 nurses for next program by 1/07<br>16. Evaluate and update training materials as needed by 1/07 | WIRED: $50,070 (first year budget thru 1/07)<br><br>Other (if applicable) | 1. Expand the existing nurse re-entry program by creating collaborative relationship between two local community colleges (using JCCC's existing nurse re-entry program and incorporate the new facility/human patient simulator lab at MCC-Penn Valley)<br>2. Increase the size of the JCCC nurse re-entry program by 100 percent. An increase of 20 additional nurses annually will mean 40 nurses will be ready to re-enter the workforce each year.<br>3. During the period of the grant, 110 nurses will have completed the re-entry program and will be ready to join the workforce. |

**Notes:** The aging workforce, the economy and other factors have resulted in non-practicing licensed nurses desiring to re-enter the health care workforce. Changes in medical technology, new medications and advances in medicine represent a barrier for non-practicing licensed nurses to feel competent and comfortable to re-enter the profession. Non-practicing nurses need to also strengthen their critical thinking skills, which is essential to today's health care workplace.

Opportunity:

- Retool and expand the existing nurse re-entry program at Johnson County Community College
- JCCC currently conducts two programs annually
- JCCC currently has more applicants for the existing re-entry program than they can accommodate
- JCCC will double the number of training sessions and nurses who can receive specialized training prior to returning to the nursing profession
- Due to a lack of available space at JCCC, MCC-Penn Valley and JCCC have agreed to coordinate the additional training sessions at the new facilities at Penn Valley
- Broader community support by all area hospitals for expanding the JCCC re-entry program
- The Nurse Re-entry Program is one of five health care related programs designed to expand and sustain our clinical faculty and nurse expansion initiatives. Each health care initiative is interrelated and strategically linked to the other programs.

**Goal 1: Building Capacity – Meeting Today's Workforce Needs**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Financial Assistance for New Clinical Faculty** | Increase the number of clinical faculty in the region to sustain the recent expanded nursing school enrollment by providing cost of living assistance (through the local public workforce system) for baccalaureate prepared bed-side nurses to pursue a post graduate degree in order to serve as clinical faculty | **KC Metropolitan Healthcare Council –lead**<br><br>Full Employment Council (grant sub recipient)<br><br>Collegiate Nurse Educators<br><br>Kansas City Area Nurse Executives | 1. Develop an advisory committee comprised of CNOs, human resource executives, nursing educators and public workforce by 6/06<br>2. Determine goals, objectives, guidelines for financial assistance program by 6/06<br>3. Finalize financial assistance guidelines and determine kickoff date for financial assistance program by 9/06<br>4. Develop and implement communications plan by 9/06<br>5. Solicit and compile applications for funding requests by 9/06<br>6. Review funding requests by 12/06<br>7. Notify applicants for funding requests by 12/06 | WIRED: $6,311 (first year budget thru 1/07)<br><br>Other (if applicable) | 1. Provide financial assistance to 10 hospital nurses to return to school to obtain a post graduate degree for purpose of serving as clinical faculty<br>2. Coordinate financial assistance program in order to supplement hospital scholarships or other funding sources<br>3. Sustain the expanded nursing school enrollment in the region at the current level of 20 percent or approximately 200 additional nursing students |

**Notes:** The ability to sustain the regional clinical faculty/nurse expansion initiative is dependent upon our ability to attract and retain clinical faculty. The use of bedside nurses to serve as adjunct clinical faculty eliminates one significant barrier — the pay differences between practicing nurses and nurse educators (bedside nurses are paid 25 to 30 percent more than educators). The other barrier is a state licensure requirement for nurse educators, which requires a master's degree.

Based on feedback from area nursing schools, approximately one-third of the existing nursing faculty in the Kansas City region will retire within the next five years — jeopardizing the progress of the clinical faculty/nurse expansion initiative.

Opportunity:

- Missouri State Board of Nursing provided a five-year demonstration project to permit BSNs (who are actively pursuing their master's degree) to serve as clinical faculty
- The Clinical Faculty Academy will expose a number of BSNs to the rewards of teaching the next generation of nurses
- Area hospitals have existing tuition assistance programs for current employees
- Financial assistance for cost of living expenses would permit BSNs to accelerate completion of their postgraduate degree while continuing to work part-time
- Structure the financial assistance application process to prioritize funding for BSNs to pursue their MSN degree (including a commitment to serving as clinical faculty upon graduation)
- Priority would be given to applicants who receive tuition assistance from their hospital employer

The Financial Assistance for New Clinical Faculty Program is one of five health care related programs designed to expand and sustain our clinical faculty and nurse expansion initiatives. Each health care initiative is interrelated and strategically linked to the other programs.

**Goal 1: Building Capacity – Meeting Today's Workforce Needs**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Making It in KC manufacturing program** | 1. Develop manufacturing job-ready program (MJRP) curriculum for entry-level manufacturing workers.<br>2. Hire and train faculty for delivery of MJRP training.<br>3. Recruit and qualify trainees to fill MJRP classes.<br>4. Train 350 potential workers over three years (this number was expanded from 300 to 350 based on the additional funding from the WIRED grant.<br>5. Qualify manufacturing firms as partners to participate in determining training specifications, review curriculum and provide placement opportunities.<br>6. Support trainees in job acquisition, successfully placing 75% in positions with manufacturing partners.<br>7. Expand partnerships by adding at least 3 partner-employers per year.<br>8. Develop a credential in basic manufacturing skills to confer upon graduates and establish as an employer-understood employment qualification.<br>8. Perform high school outreach programs to assure a long-term supply of interested and qualified workers | **MCC Business & Technology Campus – lead**<br><br>Full Employment Council of Kansas City<br><br>Additional Partners include 13 manufacturing employers, regional K-12 school systems, other workforce investment organizations, and business and labor associations. | Initial partnership commitments were made at the time of grant application<br>Curriculum development began in November of 2005<br>Curriculum complete by end of June 2006<br>Key faculty positions filled before July 2006<br>Temporary facilities ready by July 2006.<br>Permanent manufacturing laboratory complete by September 2006<br>First Class begun in July 2006<br>First class placements complete in November of 2006<br>Second class begun in August of 2006 and completed before the end of the year.<br>First evening classes to begin in January 2007<br>Three new partners by the end of 2006 | WIRED: $302,950<br><br>Other (if applicable)<br><br>DOL CBJT grant of $1,970,252 million.<br><br>$1.3 million in leveraged cash and in-kind contributions from partners. | 350 trainee participants (increased by 50 based on receipt of WIRED funding)<br><br>260 trainees placed in manufacturing jobs<br><br>Improved initial earnings by participants vs. non-participant benchmark.<br><br>Improved job retention of participants compared to non-participant benchmark.<br><br>Steady expansion of manufacturing partnerships.<br><br>Sustainable program will continue beyond 3-year term of DOL CBJT grant.<br><br>Development and continuous improvement of MJRP curriculum.<br><br>All parties using WorkKeys assessment and profiling tools<br><br>System change at MCC producing improvement in practices and programs |

**Notes:** The key elements relevant to the expansion of capacity are the development of the curriculum, the partnership circle, the certification credential, the validation of the process through demonstrated success for both worker and employer and, of course, the self-sustained ongoing program.

## ONEKC WIRED INITIATIVES: GOAL 2
## CREATING INFRASTRUCTURE AND NEW PLATFORMS – NEW ECONOMIES

***Note:*** *The Goal 2 strategies outlined in the original OneKC WIRED proposal were reasonable projects; yet the OneKC WIRED Executive Committee (in consultation with USDOL/ETA and WIRED advanced technical assistance providers) recognized that they lack the transformational impact of other projects in the proposal. A newly formed task force (see below) will reevaluate this portion of our initiative and the updated Goal Sheet(s) will be added.*

The sectors of advanced manufacturing, biotechnology, and healthcare represent areas of high growth and opportunity in the KC region. New discoveries and innovations are key factors in the continuing vitality of these sectors. While such activities occur within universities, research institutes, and R&D divisions of private companies, the true value of such innovations is realized with their effective transfer out of those settings and toward a path of commercialization.

KC is fortunate to have a number of technology transfer/commercialization organizations located throughout the region and covering a number of industry sectors, including those targeted by OneKC WIRED. A key obstacle to regional transformation, however, is that many of these organizations provide similar services and do not collaborate effectively to the benefit of the region. In addition, entrepreneurs lack a single point of contact for assistance, and they are often frustrated when handed off repeatedly before landing in the correct office.

Utilizing the data collected and synthesized by Richard Seline and New Economy Strategies (on behalf of the Kansas City Life Sciences Institute and the Kansas Technology Enterprise Corporation), we have a potential roadmap for establishing a regional, integrated technology transfer system. While the allocation of WIRED funds within this goal area would initially focus on the targeted industry sectors of advanced manufacturing, biotechnology, and healthcare, the essential infrastructure developed under this initiative would support a broad range of technology transfer activities.

The Executive Committee has formed a task force to reevaluate the overall commercialization infrastructure alignment strategy and to determine where strategic WIRED investments would accelerate the transformation to a regional technology transfer network. The Technology Transfer Task Force will review results and recommendations from a number of existing regional studies, incorporating (where appropriate) frameworks, success factors, and best practices necessary for an effective regional technology transfer system. Based on their analysis, the task force will develop a set of recommendations identifying specific objectives and potential partners for a sustainable structure/model of a regional, multi-industry technology transfer system that serves as the technology transfer component of the OneKC WIRED initiative.

The results of the task force's activities will be reviewed by the technology assistance team and brought forward to Maria Flynn and others at USDOL for approval. In the interim, no funding will be disbursed to Missouri Enterprise or the National Institute for Strategic Technology Acquisition and Commercialization (NISTAC). Future funding to those organizations will be strictly dependent on their individual roles within the newly developed strategies.

The Animal Health Innovation Grants will proceed. This initiative represents a pilot project and has well-defined parameters, timelines, and outcomes. A similar program has demonstrated a 10:1 return in federal dollars received in comparison to the original investment. In addition, the Animal Health Innovation Grant program also will be used as a model for the evolving regional technology transfer effort.

## Goal 2: Creating Infrastructure and New Platforms – New Economies

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Animal Health Innovation/Tech Transfer Grants** | 1) Develop and issue request for proposals; 2) Grants submitted and administrative review performed; 3) Recruit proposal review team and convene review; 4) Make grant awards and set up grantee accounts; 5) Assure six- and 12-month reports submitted by grantees. | **Kansas City Area Life Sciences Institute – lead** | 1) Issue RFP 08/06; 2) Grant proposals submitted by 10/06; 3) Recruit reviewers and convene review process by 12/06; 4) Award grants and set up accounts by 02/06; 5) Monitor grantees success in securing additional funds from federal agencies - ongoing | WIRED: $150,000 in Yr 1<br><br>Other (if applicable): Bayer $50,000 in Yr 1 | 1) Foster/facilitate collaborations between research universities and private sector animal health companies; 2) Expedite movement of new discoveries from the laboratory to market.; 3) Quantitate increases in the number of animal health start-up companies emerging in the region. |

### Notes:

Annual grants and their progress are monitored in a master database. Grantees submit progress reports at six and twelve months post-award, describing project status and number of proposals submitted to external funding agencies. Any award granted is noted and included in an overall summary. The return on investment is calculated by dividing future funding by the amount of the KCALSI grant.

Sustainability Plan: WIRED funds will launch this effort and sustain it for the first three years. Upon demonstrating the return on investment and underscoring the ability to successfully move technologies out of laboratories and into companies for commercialization, we will have made the business case for supporting this program and solicit private sector/corporate funds to sustain the program. There is also an opportunity to negotiate a 0.5-1.0% royalty fee for successfully commercialized products to help sustain the program.

## ONEKC WIRED INITIATIVES: GOAL 3
## EXPANDING SKILL SETS OF THE CURRENT WORKFORCE – INCUMBENT WORKER TRAINING

The focus of this goal is to support those workers in the targeted industries for whom job expectations or individual circumstances have changed. For instance, training/retraining or "up-skilling" may be essential when:

- There is a requirement for continual updating of skills and knowledge in the rapidly changing industries such as bioscience. New equipment, procedures, and emerging technologies may be introduced through in-service training, expert systems, or Web-based instruction.
- The introduction of new products, and the elimination of current products, each affect the skill sets of incumbent workers. Preparation for the transition may be provided by internal resources, community colleges, universities, or vendors
- Older workers may choose to change jobs within an organization rather than retire, or they may be required to changed jobs due to physical limitations. Education and development opportunities within the organization provide support for transition and retention of valuable workers.

Financing for continuing education is a concern for employers, employees, and for education providers. Most tuition assistance programs are designed for managerial and professional employees, leaving low wage and/or lower skilled workers at a greater disadvantage. Lifelong Learning Accounts (LiLAs) provide one option by increasing the resources available for post-secondary education. LiLAs are savings accounts, similar to 401Ks, by which funds saved by the employee are matched by the employer, and in some cases, by a third party as well. The savings may be used for tuition and related course expenses The One KC WIRED project is one of a handful of initiatives that are making LiLAs available to a large regional population.

The initial strategies described in this goal will help develop prototypes for other industries, and for other populations.

**Goal 3: Expanding Skill Sets of Current Workforce – Incumbent Worker Training**

| Key Strategies | Activities | Responsible Parties/Participants | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Bioscience Career Training Program** | 1. The first year of the grant, develop, manage and deliver one live 1 or 2-day short course to 6 of 11 regional bioscience partner companies for 10 of their personnel (other 5 courses will be delivered 2nd and 3rd years);<br>2. Include one participant from each of other partner companies at each on-site;<br>3. Convene personnel from each company to consult with instructor/developer to determine specific components of the course;<br>4. Adapt select courses for online asynchronous delivery for KUCE portfolio. | **University of Kansas – lead**<br><br>Higuchi Biosciences Center—consulting partner<br><br>Bioscience Partner Companies:<br>• Bayer<br>• Boehringer Ingelheim<br>• Hill's Pet Nutrition<br>• Midwest Research Institute<br>• PRA<br>• ProPharma<br>• Quintiles<br>• SAFC-JRH<br>• Worldwide Clinical Research<br>• XenoTech<br>• Sigma Aldrich—St. Louis | 1. Determine 6 on-site course topics by 8/06<br>2. Recruit instructors by 1/07<br>3. By 1/07, have 6 courses scheduled for delivery between 9/06 and 7/07.<br>4. Convene course development meetings with company representatives and instructors and complete curriculum for 6 courses by 3/07<br>5. Deliver 6 on-site courses by 7/07<br>6. Adapt two of the courses for online delivery | WIRED: $123,000<br><br>Other (if applicable)<br><br>NSF grant participant support subsidy $12,000-36,000 | 1. Train up to 120 bioscience industry personnel through highly customized, short courses;<br>2. Add 6 new short courses to KUCE portfolio for ongoing delivery to bioscience industry;<br>3. Develop interaction among KUCE's industry partners<br>4. Expand KUCE online course offerings |

**Notes:** There is a requirement for continual updating of skills and knowledge in the rapidly changing bioscience industry. New equipment, procedures, and emerging technologies require a continual assessment and update of the skill sets of many workers. Incumbent worker training in this area may be delivered via in-service training, expert systems, or Web-based instruction.

**Goal 3: Expanding Skill Sets of Current Workforce – Incumbent Worker Training**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Lifelong Learning Accounts (LiLAs)** | Establish LiLA Program Office within OneKC WIRED office.<br><br>Establish multi-stakeholder team to advise on and assist with program design and implementation, as well as visibility and capacity building efforts, as appropriate<br><br>Develop program implementation plan, including roles and responsibilities for one-stops and financial services partner<br><br>Conduct employer and employee program recruitment and enrollment<br><br>Train educational and career advisors<br><br>Provide LiLAs and program support to up to 100 employees<br><br>Develop and implement policy initiative in support of LiLAs and conduct outreach to key policy leaders in Missouri and Kansas. | OneKC WIRED Project Director<br><br>OneKC LiLA Director (to be hired)<br><br>Regional Workforce Council / Local Workforce Investment Boards / Public Workforce System – lead<br><br>Financial Account Services Partner (TBD)<br><br>CAEL (TA provider) | September 2006-<br><br>Establish LiLA office; hire LiLA dedicated staff (subject to availability of grant funding)<br><br>August-September 2006—Begin discussions on state policy goals for 2007 legislative session in Missouri and Kansas<br><br>September 2006 – Finalize marketing strategies and materials<br><br>December 2006-Finalize program protocol and define roles and responsibilities for outreach and enrollment, financial management and advising services. Conduct training sessions for advisors and outreach staff. Finalize systems and processes for account management, financial management, reporting, and account services. Conduct outreach to key education and training providers.<br><br>December 2006 – Launch program outreach and enrollment to employers | WIRED: $166,350.00<br><br>Other:<br><br>Employer contributions<br><br>Possible private, third-party match<br><br>State funds (in Years 2 and 3 – especially for the underserved populations) | Fully operational LiLA pilot serving up to 100 participants and at least 5 employers.<br><br>Defined infrastructure to support the scaling up of the LiLA initiative in the regions and participating states.<br><br>Increased visibility of the LiLA model throughout the region as evidenced by media coverage and presentations<br><br>Action plan with strong stakeholder support to expand LiLAs on a potentially bi-state basis through an expanded pilot and/or legislation which would provide support such as a tax credit or state match for LiLA contributions |

**Goal 3: Expanding Skill Sets of Current Workforce – Incumbent Worker Training**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| | Work with Regional Workforce Council to 1) introduce concept of LiLAs to seven local WIBs; 2) provide links to businesses for recruitment; and provide a home (in LWIBs) for advisors | | enrollment to employers<br><br>December 2006—Undertake necessary outreach to policymakers, industry representatives, community colleges and legislative champions in preparation for 2007 legislative session<br><br>February 2007 – Launch program outreach and enrollment to employees<br><br>February 2007—June 2007 Continue constituency building and information sessions throughout 2007 legislative session<br><br>May 2007 - Achieve program enrollment goals; program fully operational | | |

**Notes:** Funds will need to be allocated for office space/expenses for LiLA Program staff. Initial recommendation is to house Program Director, Outreach Coordinator(s) and Account Manager in the OneKC WIRED Office. Career Advisors will be housed in One Stops – initially one each in Kansas and Missouri. DOL is reviewing whether WIRED funds can be used to support the educational activities of the participants through the LiLA accounts. The State of Maine will be using WIRED funds in the form of "scholarships," which are disbursed at the time of training. This approach effectively addresses the issues surrounding the use of WIRED/H1B funds for a third-party match, because they can be used for training purposes.

## ONEKC WIRED INITIATIVES: GOAL 4 DEVELOPING THE EDUCATIONAL CONTINUUM – THE WORKFORCE OF TOMORROW

There are a number of complementary projects that address key points along the K-20 educational continuum. Specific projects include:

- **Kansas City Science Initiative** – an experiential learning curriculum for K-6 science education
- **Project Lead the Way (PLTW)** – a pre-engineering component with specific focus on grades 9-12
- **Partnership for Regional Education Preparation (PREP-KC)** – an intermediary effort focused on grades 9-12 to improve math and science performance and enhance student knowledge of and access to careers in biotechnology, healthcare, and advanced manufacturing. ***Note:*** *PREP-KC works with the two major urban school districts, the Kansas City Missouri School District and the Kansas City Kansas School District, both of which have similar demographics.*
- **Johnson County Community College's (JCCC) Center of Excellence for Bioscience** – a program focused on raising awareness of career opportunities within the Biosciences among students in grades 7-12, displaced workers, and workers seeking career change.

The cooperative efforts of the leadership of the first three projects listed above will help facilitate the implementation of these seemingly separate, discrete components, in an integrated and coordinated manner. Both the Kansas City Science Initiative and Project Lead the Way have middle school components that are likely to be incorporated into the WIRED module later in the funding period. Similarly, Project Lead the Way and PREP-KC will work on developing career awareness and career training opportunities with private sector companies.

Taken as a whole, this series of projects prepares students in elementary grades to begin the critical thought process through the application of experiential learning. This approach subsequently provides a steady pool of candidates for further experiential-based learning opportunities within Project Lead the Way and PREP-KC. The latter program will build the pathways that will allow technically competent students in math/science to move into careers in the targeted sectors of advanced manufacturing, biotechnology, and healthcare. Activities supported through the JCCC program enhance and reinforce career awareness among those interested in the biosciences and provides a pathway for clients of the public workforce system to learn about high growth career opportunities.

Each project component also has developed a plan for long-term sustainability detailed in each of their detailed Year 1 plans.

## Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Urban Education Reform = Small Learning Communities with Career Themes** | *See grids below* | **Partnership for Regional Educational Preparation (PREP-KC) - lead** | See grids below: | WIRED: $500,000 (Materials and equipment will be purchased in Year 1, and used through Year 3 of WIRED.)<br><br>Other (if applicable)These WIRED resources are part of an annual $3Million plan, supported by private foundations, to accelerate connections to college & employment for urban HS students in KC. | See grids below for items and completion dates. Long-term outcomes (#'s of students completing HS w/post-sec. and employment plans and industry experiences) are still being developed. |

**Notes:** The plans described in the 2 grids below require on-going planning and integration with the work of 2 large urban school districts (Kansas City Kansas, and Kansas City Missouri) which together educate approx. 50,000 mostly low-income students in the bi-state city of Kansas City. PREP-KC has a good start on this relationship-building on both districts, but, as in any large, urban district, the effort will be on-going to protect the time and focus necessary to maximize success.

| **Strengthening Career Themes: industry specific equipment & materials** | |
|---|---|
| • Develop RFP and RFP process for SLCs to apply for funds for industry specific equipment & materials (in collaboration with the Kansas City Missouri School District | August – October 2006 |
| • Release RFP with a training/meeting describing the process | Oct./Nov. 2006 (and annually) |
| • Evaluate proposals and provide feedback (also make selection) | December/January (Annually) |
| • Purchase/secure requested materials/equipment | January 2007 (and annually) |
| • Progress report from SLCs regarding use of equipment/materials | May 2007 (and annually) |
| • Evaluation of process and revisions to RFP and monitoring procedures to be applied in the coming year | June 2007 (and annually) |

| **Strengthening Career Themes: 3 WIRED School-to-industry Liaisons** | |
|---|---|
| • Develop plan for identifying, employing, supporting and managing Liaisons, including Measures of Success | August – October 2006 |
| • Develop plan for Liaisons collaborating w/WIRED Internship Coordinators | Oct. 2006 |
| • Develop job-description and employment contracts for School-to-Industry Liaisons | Drafts completed: July, 2006. Final completed by Sept. 2006 |
| • In collaboration with KCK and KCMO HS's, develop plan (including time) for Liaisons to meet w/SLC College and Career Coordinators | October, 2006 |
| • Employ Liaisons | October, 2006 (or as soon as qualified candidates can be secured) |
| • Evaluate Liaisons' impact, and make revisions to job-performance-expectations for the coming year | June 2007 (and annually) |

**Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones* | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Pre-engineering (Kansas City Initiative)** | 1. Conduct education and outreach efforts for PLTW to regional school districts<br>2. Develop implementation plans with participating districts, which includes hiring, identifying and training teachers.<br>3. Establish an industry council and advisory committee to direct the project.<br>4. Establish grant guidelines for schools.<br>5. Identify at least five sites to host regional centers of excellence to partner with local districts in offering upper level PLTW courses.<br>6. Establish a teacher mentor and externship program.<br>7. Develop career pathways, including those for engineers, engineering technicians, etc. | **Project Lead the Way-KC – lead**<br><br>Metropolitan Community College<br><br>Regional School Districts<br><br>University of Missouri-Rolla<br><br>State of Missouri<br><br>State of Kansas | 1. Outreach and education – ongoing<br>2. Begin with 19 schools in the 2006-2007 school year and end with 40+ schools in the 2008-2009 school year.<br>3. Conduct counselor/administrator workshop in September 2007 and in subsequent years.<br>4. Expand the industry council in fall 2006 and hold quarterly meetings through 2009.<br>5. Make first grants available to schools in Fall 2006. Update grant guidelines each year as funds become available.<br>6. Establish a plan with school districts, area vocational technical centers and community colleges to create regional centers of excellence – ongoing through 2009.<br>7. Identify and train community college instructors to deliver PLTW curriculum. – Summer 2007. | WIRED: $ 540,000<br><br>Other:<br><br>Kauffman $1.2 million<br>Other sources: $800,000<br><br>Additional funds are available from federal, state and local school districts.<br><br>Additional funds to support University of Missouri-Rolla as a training facility | Marketing material available by fall 2006 for all districts<br><br>19 schools implementing PLTW in fall 2006<br><br>Train counselors and administrators in all participating districts.<br><br>Distribute funds to participating districts each year – first funds available in fall 2006 to reimburse training costs<br><br>Meet with school districts to plan for future needs. Upper level courses will be offered in three years in most districts. |

**Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones* | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **K-6th Grade Inquiry-based Science** | 1) Establish a supply of reusable, quality curriculum modules; 2) Provide professional development for K-6 teachers using curriculum modules; 3) Develop components of a materials support center; 4) Assess student improvement in math and science and program effectiveness; 5) Establish admin support for program and build community support | **Kansas City Area Life Sciences Institute – lead**<br><br>Kansas City MO School District<br><br>Bayer CropSciences | 1) 200 kits secured by 09/06<br>2) train 85 teachers by 09/06 and an additional 90 by 01/07<br>3) identify replenishment center & secure contract by 09/06<br>4) collect module pre/post tests by 01/07 and district assessments by 05/07<br>5) transfer program from Bayer to KCALSI and hire program manager by 08/06 | WIRED: $130,613 Yr 1<br><br>Other (where applicable): Bayer $50,000 Yr 1 | 1) Complete module purchases; 2) Send teachers and district resource personnel to ASSET training; Develop various components of modules; Conduct professional development for teachers; 3) Solicit proposal for module replenishment; Discuss warehouse space needs; Identify transportation solution; Distribute & refurbish modules; 4) Collect assessments and DAP data & analyze; 5) Transfer to KCALSI; Hire program manager & introduce to KCMSD administration; Select additional schools for program; Approach community organizations for funding; Attend National LASER K-8 Science Education Strategic Planning Institute; Update Bayer on progress; Identify education research partners |

**Notes:** The KCMO School District is currently willing to integrate this program throughout all of their classrooms. The challenge will be identifying additional resources to support accelerated program expansion, purchasing sufficient quantities of modules, and expanding capacity for providing teacher professional development. KCMSD is considering use of textbook adoption funds to support project. Expansion of this program to other school districts (e.g., in Kansas City, Kan.) will be explored in the dissemination phase.

**Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow**

***Note: JCCC has made several post-proposal changes to their plan, which will be reviewed and revised prior to contracting.***

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Center of Excellence for Bioscience** | 1. Offer Microbiology on-line<br>2. Develop on-line courses in Principles of Cell and Molecular Biology, Introduction to Biotechnology and Laboratory Safety<br>3. Purchase equipment for new biotechnology lab<br>4. Develop a credit course for "Handling and Care of Small Laboratory Animals"<br>5. Develop short course credit certificates in biotechnology and noncredit classes<br>6. Develop biotechnology simulation software<br>7. Design and procure Mobile Biotechnology Lab<br>8. Professional Development & Training | **Johnson County Community College – lead**<br>JCCC biotechnology faculty/ staff<br>JCCC biotechnology faculty/ staff and JCCC Purchasing Department<br>Work in cooperation w/ Metropolitan Community College District and/ or Stowers Institute for Medical Research (latter has agreed to be partner)<br>JCCC Biotechnology program will develop the short course certificate curricula. Noncredit short course curricula will be developed with<br>cooperation between JCCC Biotechnology program and JCCC Division of Continuing Education and Community Services and/ or University of Kansas Division of Continuing Education<br>Barrier – Identifying instructors for CE courses | 1. June 2006<br>2. Completed by spring 2007<br>3. Spring 2007<br>4. Fall 2007<br>5. Spring 2008<br>6. Spring 2008<br>7. Fall 2008<br>8. Ongoing | WIRED: $200,000.00<br>JCCC faculty reassigned time - completed<br>WIRED $228,000.00<br>WIRED $250,000.00<br>Other – funds for stipends for teacher training, funds for professional training for mobile lab<br>WIRED $100,000.00 | 1 and 2. Make courses available to students asynchronously and allow accessibility to introductory courses in biotechnology to students in out state areas.<br>Lab will be fully equipped with "state of the art" laboratory equipment necessary for teaching a quality biotechnology certificate/ degree program<br>Employees will handle and care for small laboratory animals according to state and federal regulatory guidelines<br>Credit or noncredit training in specific areas (i.e. credit certificates in FDA and OSHA regulations or Compliance, instrumentation, animal handling) as requested by biotechnology industry.<br>Simulation software will be available on CD/ internet/ JCCC biotechnology web-page for the purpose of providing educational |

**Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow**

***Note: JCCC has made several post-proposal changes to their plan, which will be reviewed and revised prior to contracting.***

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| | | & funding for these courses<br><br>JCCC faculty/ staff, JCCC Educational Technology Center and software developer/ vendor to be identified.<br><br>Barriers – identifying vendor/ designer to help in design and development of software.<br><br>JCCC biotechnology faculty and staff. Members of biotechnology industry<br><br>Pre-procurement Barriers – determine population to be served; identify schools interested in accessing this resource; identify number of students per class in each school and the number of minutes they have designated to mobile lab class; parking space for mobile lab at schools; set-up of mobile lab; training for driver of mobile lab; teachers for mobile lab; and training teachers at JCCC before mobile lab arrives<br><br>Use of student volunteers or students doing | | | resources for prospective students and students enrolled in JCCC biotechnology programs<br><br>Mobile Biotechnology lab will serve as educational resource for industrial on-site instrumentation training. Mobile Biotechnology lab will serve as a learning resource for students in elementary, middle school and high schools in the metropolitan Kansas City area and in Kansas.<br><br>Maintain currency in the latest biotechnology methods & technologies. |

**Goal 4: Developing the Educational Continuum – The Workforce of Tomorrow**

***Note: JCCC has made several post-proposal changes to their plan, which will be reviewed and revised prior to contracting.***

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| | | "research for credit" at JCCC or area colleges and universities<br><br>Post-procurement Barriers:<br><br>Fuel for vehicle and generator; insurance for vehicle; storage for vehicle; maintenance of vehicle; supplies; driver for large vehicle; satellite/ cellular/ wireless; travel costs for instructors & volunteers; graphics; office support including printing, websign design & maintenance and publications<br><br>JCCC biotechnology faculty & staff | | | |

**Notes:**

## ONEKC WIRED INITIATIVES: GOAL 5
## REGIONALISM –
## THINKING, ACTING, WORKING, AND GROWING AS ONEKC

The OneKC WIRED initiative is focused on an 18-county bi-state region defined by the "Think OneKC" regional economic development campaign. WIRED builds upon this transformative regional thinking and challenges key stakeholders to take steps beyond the notion of Think One KC … and urges them to **act**, **work** and **grow** as OneKC. The overarching goal is to integrate and build upon a collection of currently independent activities – leading to an unprecedented comprehensive system of economic development, workforce development, and education and training to meet the region's current and future needs.

**OneKC Regional Workforce Council**

One of the key elements of this transformation is the newly formed OneKC Regional Workforce Council. The Regional Workforce Council will encourage LWIBs to target *regional* workforce needs in these three industries to strengthen this regional economy – as opposed to the *artificial boundaries* of the seven LWIBs. The Council's membership includes:

- Seven representatives from targeted business and industry sectors *(Includes Chair of OneKC Regional Workforce Council)*
- Seven LWIB Chairs
- Two State-level Workforce Representatives (one each from MO & KS)
- Seven LWIB Directors (ex-officio)
- One Johnson County Community College administrator (ex officio)
- One Metropolitan Community College administrator (ex-officio)
- PREP KC Executive Director (ex-officio)

To date, the Council has met twice to discuss its role in creating a common brand for the public workforce system. Key areas of emphasis include:

- **Regional Workforce Asset Mapping** (including current activities – apart from WIRED – in the three targeted industry sectors)
- **Career Readiness Certificate Process Mapping** (for the creation and implementation of an single, bi-state certificate with the same standards and recognition)
- **Process Mapping for Approved Training Providers** (to help create common, bi-state standards for approved training providers)

There are four "pillars" that will provide a new, innovative framework for the region's public workforce solutions – some of which currently are not eligible for WIA formula funds. They include:

**Regional Training Accounts** (RTAs) to provide training in the three targeted industries. Work Supports are included in RTAs as well as Work-based Learning Connected to Classroom Instruction. *(see below)* RTAs will target three specific groups:

- Unemployed
- Underemployed, including incumbent workers in declining industries and underemployed in the three targeted industries of advanced manufacturing, biotechnology, and healthcare[3]
- Youth/emerging workers

[3] Incumbent workers in declining industries and underemployed in the three targeted industries currently are not eligible for WIA formula funds, but will be eligible to receive WIRED funds.

**Common Assessment Platform (**WorkKeys) focusing on the three areas of Reading for Information, Applied Math, and Locating Information. The results of this assessment will be reflected in a Career Readiness Certificate (CRC) that will have three levels (Gold, Silver, Bronze) of competency. The CRC will be portable and recognized by both states.

**Lifelong Learning Accounts** that promote worker, government, and employer involvement in "shared investment" model. We currently need to address funding streams to help low-wage, underemployed workers with their personal contributions to LILAs. We currently are considering two avenues of funding – monetary or voucher (seeking tax credits for both avenues). LiLAs, by their very nature, will be portable and can be used in both states.

**Work-based Learning Connected to Classroom Instruction** will be integrated as part of the educational/training program and coordinated through WIRED initiative. This will involved education and training institutions on both sides of Stateline. ***Note:*** *Such programs currently are not eligible for WIA formula funds, but will be eligible to receive WIRED funds.*

There are a number of initiatives that differentiate the public workforce solutions offered under OneKC WIRED from the status quo, including:

1. Work-based learning offered concurrently with occupational training
2. Solutions focused on the *regional demand* in the bi-state, 18-county area as opposed to the *artificial boundaries* of the seven LWIBs
3. Common assessment platform for basic workplace readiness across seven LWIBs in the 18-county region (includes a bi-state Career Readiness Certificate signed by both governors, and soft skills assessment with training and development)
4. Leveraged shared investment from businesses, individuals and government to support lifelong learning in critical skill shortages in three industry sectors (LiLAs)

Internships

For many young, an internship is more than just a summer job – it can be their first step toward discovering a meaningful career. Our goal is to assist area companies in developing internships and co-op programs that provide a practical learning experience for young adults – offering them an opportunity to work on meaningful projects and interact with professionals from various fields (and levels) of industry and business.

Companies understand that successful internship and co-op programs can be a valuable tool in their efforts to attract and recruit talented individuals. During a recent survey of area manufacturers, many small- to medium-sized companies expressed an interest in serving as a site for internship or co-op programs, yet they also have shared the need for assistance in developing and administering such programs.

OneKC WIRED has the unique opportunity to serve as a convener, or umbrella organization, for establishing and promoting internships and co-ops in the KC area. By leveraging the resources of our partners, we also are uniquely positioned to work with companies and schools to collectively promote manufacturing internships. This concerted effort could have the added effect of capturing the interest of a broader base of companies and candidates. It also could ultimately result in our region gaining the distinction of being a "destination of choice" for students seeking internships in manufacturing-related careers.

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **OneKC Regional Workforce Council** | 1. Appointment of members to the Council.<br>2. Organizational meeting for creation of by laws; elected officer positions; and annual meeting schedule.<br>3. Serve as a regional advisory body to recommend strategies to coordinate workforce initiatives beyond political jurisdictions.<br>4. Maximize resources and increase return on investment with WIRED dollars allotted to the 18 county/bi-state region.<br>5. Coordinate industry and business outreach services.<br>6. Develop regional responses to critical skill shortages.<br>7. Support portable basic workplace readiness credentials recognized by both states.<br>8. Appoint task force/subgroups to address specific activities, including development of a Career Readiness Certificate Process Map, Regional Asset Map, Process Map for Approved Training Providers, etc.<br>9. Establish career pathways for targeted industry sectors. | **OneKC WIRED Office – lead**<br><br>Local Workforce Investment Boards / Public Workforce System<br><br>OneKC Regional Workforce Council Members which includes: 7 reps from targeted business and industry sectors (includes Chair of OneKC Regional Workforce Council); 7 LWIB Chairs; 2 State-level Workforce Representatives (one each from MO & KS); 7 LWIB Directors (ex-officio); 1 Johnson County (KS) Community College administrator (ex officio); 1 Metropolitan Community College (MO) administrator (ex-officio); and PREP KC Executive Director (ex-officio). | TBD | WIRED: | Increase cost efficiencies and higher ROI on public workforce dollars through a regional collaboration.<br><br>Adoption of a common career readiness credential throughout the WIRED region.<br><br>Greater business use of the public workforce system services.<br><br>Process mapping of one-stop services.<br><br>Resource mapping of Industry and Business; as well as Youth<br><br>Improved employer satisfaction with public workforce system services.<br><br>Greater awareness of the public workforce system services.<br><br>Increased number of qualified workers available for jobs.<br><br>Career Readiness Certificate Process Map<br><br>Regional Asset Map<br><br>Process Map for Approved Training Providers |

**Notes:** The public workforce system within the OneKC WIRED project begins with the Regional Workforce Council driving strategic alliances that advance the 18 county region's economic vitality. This new regional Board will link regional workforce activities from both Kansas and Missouri's seven local workforce investment boards, businesses, and educators with economic development organizations in order to support a workforce system that provides quality employees for employers within the manufacturing, biotechnology

and health care industries and develops real career opportunities for job seekers. This new regional workforce system approach is intended to make it easy for businesses to make connections with qualified applicants and to access other vital and uniform workforce development services across both state lines. This also could prove very beneficial in public education and outreach efforts – especially those geared toward educating local elected officials and those related to the recruitment of eligible candidates for careers in the high-wage, high-demand areas. Funds will need to be allocated to provide staff and administrative support for this new Council.

The Regional Workforce Council will work with representatives at each of the local WIBs to package one menu of OneKC workforce solutions for employers and job seekers. This exercise of creating a common infrastructure in support of workforce and economic activities within the three identified sectors will identify some barriers the Council will need to address. One example anticipated is long standing local WIB policies which may not currently support new initiatives and/or waivers. This will require additional time and attention given to these local WIBs in educating and demonstrating the higher ROI of such new initiatives for the Region as a whole. Funds will need to be allocated for travel expense of Council Staff and members.

The Regional Council will work with education and industry leaders to ensure that lifelong learning accounts and incumbent worker training opportunities are complementary and meet the skill standards of employers. Several delivery and administering strategies will need to be considered and possibly piloted to ensure successes for these new programs. Funds will be allocated towards new program initiatives.

Developing comprehensive responses to critical labor shortages by convening industry and sector summits with the OneKC partners like Kansas City Area Life Sciences Institute, School Districts of Kansas City Missouri and Kansas, Alliance for Innovation in Manufacturing, KC Metropolitan Healthcare Council and others will provide for a demand driven regional product in meeting these yet to be identified needs. Funds will need to be allocated to fund three summits within the region.

The Regional Council will work closely with educational partners at all levels within the region to ensure strategies are developed and implemented to expand capacity and deliver employer-driven training curriculum and programs that ties work-related skills and job readiness preparation to address the gaps identified within the three industries. Funds will need to be allocated for curriculum development and delivery.

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

*Note: In addition to the traditional student populations (both secondary and post-secondary), this initiative will serve nontraditional placements, including underemployed incumbent workers, displaced and/or transitioning workers, older workers, etc.*

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Internship Program** | 1. Work with area businesses to:<br>• Identify available positions<br>• Develop and design an internship program toolkit<br>• Determine program value<br>• Assist in supervisor training<br>• Exist as a single liaison between business and interns<br>• Define competencies<br>• Create assessments for the internship program<br>2. Develop an opportunity portal that will contain:<br>• Intern position postings<br>• Resume libraries<br>• Career pathways and information<br>• Transportation availability<br>• Events calendar<br>• Video testimonials<br>• Work Keys assessments<br>• Automated matching<br>• Employer toolkits<br>• Assessment collection<br>• Training modules<br>3. Collaborate with schools to:<br>• Provide students with resume writing assistance<br>• Provide resume assistance to teachers<br>• Career pathways and information<br>• Career awareness<br>• Work expectations<br>• Soft skill training<br>4. Create an enrichment center (or umbrella | **OneKC WIRED Office – lead**<br><br>WIRED Industry Sector Leads<br><br>Partners<br><br>Industry and Trade Associations | Conduct initial screening for industry coordinators by 09/06<br><br>Contract with industry coordinators by 10/06<br><br>Conduct survey of best practices (by industry) by 12/06<br><br>Develop toolkit by 02/07 | WIRED: $<br><br>*Note: Will be broken out from the combined Office-Internship budget.*<br><br>Other:<br>In-kind contributions from businesses, including staff, time, etc. | Overarching: KC would become known as a destination of choice of internships and co-ops in advanced manufacturing, biotechnology, and healthcare<br><br>Internships seen and used as an effective recruitment tool<br><br>Number of internships created and completed<br><br>Number of interns placed within each specific industry sector<br><br>Customer satisfaction with interns, placement, and processes |

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

*Note: In addition to the traditional student populations (both secondary and post-secondary), this initiative will serve nontraditional placements, including underemployed incumbent workers, displaced and/or transitioning workers, older workers, etc.*

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| | program) for interns and co-ops that will include:<br>• Lunch & Learn sessions<br>• Awards program<br>• Career outings<br>• Social activities<br>• Alumni corps<br>5. Develop externships for secondary school teachers/instructors.<br>6. Explore the integration of registered apprenticeships into the internship/co-op program | | | | |

**Notes:** The three industry coordinators for the Internship Program will work closely with PREP-KC's industry-to-school liaisons, secondary schools, community colleges, and universities to develop the pipeline of talent linked to specific industry-related education and training programs.

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Regional, Multi-industry Skills Gap project** | 1. In cooperation with all OneKC WIRED Partners, conduct a regional, multi-industry (advanced manufacturing, biotechnology and healthcare) skills gap analysis in each of the three years of the OneKC WIRED initiative<br>2. Produce a "dashboard" or report* that regularly updates the region's skills gap issues – using it as a means of:<br>a. measuring progress<br>b. assessing changes in industry's needs<br>c. cataloging education and training programs – especially those that are specifically related to the three targeted industry sectors<br>d. highlighting progress in closing the gaps<br>e. identifying existing or newly created gaps<br>f. developing an action plan to close the gap(s)<br><br>*Note: The reports will be produced on an annual basis, with the possibility of being updated quarterly or semiannually. The reports will contain preliminary recommendations that will be considered by task force groups (comprised of key stakeholders), which will make final recommendations, including a specific action plan. | **Alliance for Innovation in Manufacturing-Kansas City (AIM-KC) – lead**<br><br>OneKC WIRED Office and Industry Coordinators<br><br>PREP-KC<br><br>WIRED Partners<br><br>Public Education and Outreach Team | 1. Hire staff (full-time coordinator and 0.5 FTE admin) to work with key stakeholder groups in addressing the primary skills gaps identified in the recently completed skills gap analysis focused specifically on manufacturing by 10/06.<br>2. Establish framework for producing skills gap report, including timeline by 12/06 | WIRED: $410,785<br><br>Other (if applicable) | Identification of gaps and the ability to close them<br><br>Flexibility of education and training providers (i.e., how fast can they meet the needs)<br><br>Satisfaction of employers<br><br>Note: Key Metrics will need to be develop consistent with industry needs and standards … and workforce-related measurements. |

**Notes:** Collaboration with three industry sectors is necessary to ensure we are meeting established standards for each industry and that we are using metrics consistent with industry's needs. In addition, we will need to work closely with the public workforce system and education and training providers to establish meaningful metrics and the methodology for collecting this information.

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **OneKC WIRED Office and Administration** | 1. Assist Partners in developing and monitoring strategic business plans (including timelines and deliverables) and agreements<br>2. Convene meetings of the Executive Committee, the Steering Committee, and the OneKC Regional Workforce Council<br>3. Serve as the primary contact for USDOL, including attendance at WIRED meetings and WIRED Academies<br>4. Identify and chronicle lessons learned and best practices AND suggest areas (when/where appropriate) for mid-course corrections. *Note: Areas identified would be submitted to MO DWD for submission to USDOL (and MARC if appropriate) for proposed grant modifications.*<br>5. Work closely with OneKC WIRED partners to develop and enhance synergies AND to catalyze transformative strategies<br>6. Serve as the chief spokesperson for the OneKC WIRED initiative (Project Director)<br>8. Supervise research and evaluation studies to identify progress made against outcomes and goals, and work in conjunction with USDOL-led evaluation team to share results of such studies<br>9. Direct sustainability efforts, including identification of public and private funding to continue and expand OneKC WIRED programs<br>10. Work with MARC (fiscal agent) and Key Partners to ensure timely reporting of USDOL required documentation, including coordinating and synthesizing data from all OneKC WIRED partners | **OneKC WIRED Office – lead**<br><br>Executive Committee<br><br>Steering Committee<br><br>MARC | RFP for Office Space by 09/06<br><br>Finalize subrecipient agreements by 09/06<br><br>Establish schedule for regular 1:1 visits with partners by 09/06<br><br>Work with USDOL/ETA, Missouri DWD, Kansas, MARC, and CAEL to establish a reporting tool that includes a calendar of reporting periods and a resource guide (examples, key contacts, etc.) for completing necessary reports by 10/06 | WIRED: $<br><br>*Note: Needs to be broken out from the combined Office-Internship budget*<br><br>Other:<br>Possible in-kind contribution(s) from the civic community | Standardize fiscal and programmatic reporting for all subrecipients<br><br>Work with States to provide necessary tools and reinforcement to subrecipients to ensure compliance with all reporting requirements<br><br>Satisfaction of Partners |

**Notes:** A key to our success in the area will be determined by our ability to work with subrecipients to assist them in identifying and developing synergies and transformative strategies that will enhance the individual effectiveness of partners and the overall effectiveness of the OneKC WIRED initiative.

**Goal 5: Regionalism – Thinking, Acting, Working, and Growing as OneKC**

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Financial Resources Needed | Desire Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Public Outreach and Education** | Work in conjunction with OneKC WIRED partners to develop a strategic Public Education and Outreach plan.<br><br>The goal of the Public Education and Outreach efforts will be to: 1) create an awareness about OneKC WIRED initiatives; 2) demonstrate the region's key assets as well as the synergistic relationships among partners within the economic development and workforce development communities, industry, and area educational institutions; and 3) identify key growth areas and highlight investments in advanced manufacturing, biotechnology, and healthcare that lead to high-skilled, high-demand, high-wage job opportunities.<br><br>Efforts also will be targeted to Economic Development partners to assist with their efforts to 1) share the OneKC WIRED story within the region; 2) attract and recruit other economic development agencies and their affiliates (private and public sector) to support WIRED initiatives; and 3) promote WIRED transformations as part of the region's overall economic development strategy. | **OneKC WIRED Office – lead**<br><br>OneKC WIRED Partners<br><br>Economic Development Agencies | 1. Meet with communications (or community relations) representatives from WIRED partners (and other key stakeholders) to establish a "virtual" communications team and a media advisory board by (TBD)<br>2. Design and develop a toolkit to be used in public presentations by OneKC WIRED staff, subrecipients, community partners, etc., by (TBD)<br>3. Design and develop framework and editorial calendar for both internal and external communications vehicles by (TBD)<br>4. Establish criteria for a OneKC WIRED Report by (TBD)<br>5. Meet with OneKC Regional Workforce Council members to help establish common branding, and education and outreach strategies by (TBD) | WIRED: $268,515<br><br>Other:<br>In-kind contributions and participation by OneKC WIRED partners | Increased awareness of OneKC WIRED initiatives among target audiences and the general public as measured by number of media impressions, Web site hits, etc.<br><br>Number of presentations per quarter, weighted in value by "quality of audience" criteria relative to WIRED<br><br>Develop "elevator speech" and related materials for use by WIRED partners<br><br>Recruitment of new business partners<br><br>Development of new business, and growth and retention of existing businesses<br><br>Inclusion in site-selection process/meetings |

**Notes:** Our goal is to work with all subrecipients to develop a continual, coordinated flow of information (via various communications tools and vehicles) that will enhance the effectiveness of individual partner initiatives and improve the overall success of our OneKC WIRED Initiative. This will enable us to: 1) help tell the OneKC WIRED story within the KC region; 2) attract and recruit other economic development agencies and their affiliates (e.g., business, industry, the public sector, etc.) to support OneKC WIRED initiatives; and 3) educate key audiences about the region's transformations as part of an overall economic and workforce development strategy. ***Note:*** *The KC region will work with other WIRED Regions to identify complementary initiatives and disseminate relative information to key stakeholder groups.*

# 7. North Star Alliance

**Goal #1: Create high quality, skilled jobs that support the competitiveness of the targeted industries, the income of Maine workers, and a return for the public investment**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Desired Outcome/Metrics |
|---|---|---|---|---|---|
| Goal #1 is the sum outcome from all other WIRED strategies and actions. | All | ongoing | | Mgnt. staff time & LMIS data management (tracking) | Increase in the number of new jobs (total and change) for targeted businesses and the cluster as a whole compared to state/US benchmarks<br>Increase in wage and salary earnings per worker<br>Jobs retained |

**Goal #2: Expand current markets and develop new ones so that the boat building, composites, and marine trades industries achieve global industry leadership**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Deliverable/Outcome |
|---|---|---|---|---|---|
| *Help businesses increase presence in existing markets and identify new opportunities* | | | | | |
| Direct market feasibility studies for boat building/composites | O&M pillar | 6-06 | TBA | TBA | Finished market feasibility studies, identification of new markets |
| Design marketing plans and supporting materials | Same as above | 6-06 | TBA | TBA | Finished marketing plan(s) for targeted industries<br>Increased recognition of the "Maine Built Boats" brand |
| Coordinate marketing activity of industry associations | O&M pillar, industry coordinator, industry associations | ongoing | | TBA | Superior allocation of marketing resources, expanded outreach, and elimination in redundancies |
| Coordination plan between DECD and other key partners (SBDC) to provide critical market development resources | O&M & capitalization pillars | TBA | | TBA | Same as above |
| Plan and execute Maine-based promotional and workforce recruitment events | O&M pillar & industry associations | TBA | | TBA | Positive responses to industry satisfaction inquiries<br>Build internal and external market networks<br>Greater connection between workers and business managers |
| Identify outside funding mechanisms for market development | O&M & capitalization pillars | ongoing | | TBA | Increase private sector advertising and opportunities to showcase products |

**Goal #3: Transform and build upon the capacity of the public system to nimbly and flexibly support competitive boat building, composites, and marine trade industries that are looking to expand capacity, create and/or improve their workforce, and/or take their technology to the next level**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Deliverable/Outcome |
|---|---|---|---|---|---|
| *Coordinate existing workforce & economic development delivery systems* | | | | | |
| Hire industry workforce/economic development liasons | Workforce pillar, LWIBs, industry | 8/06 | 10/06 | $800k WIRED | Position descriptions, personnel activity reports<br>Curriula cross-training for ED and workforce staff |
| Outreach and cross-training to existing ED/Workforce development field operatives (no wrong door) | Management, all pillars | TBA | | TBA WIRED funds (staff dev) | Outline of training profile, increased staff participation<br>Curriula cross-training for ED and workforce staff |
| Cross-membership of four pillar advisory boards | same as above | 5/06 | 6/06 | N/A | Pillar advisory board membership profiles |
| Greater use of Skills Transferability Analyses in business attraction/expansion efforts | Workforce pillar, DECD | TBA | | WIRED staff dev funds | |
| Expand EDA funded pilot "rapid response for business" model | Workforce pillar, MCBDP | | | same as above | |
| Leverage additional workforce monies through customized training targeted specific to employer needs | Workforce pillar, LWIBs | | | same as above | |
| *Establish an Industry R&D task force* | | | | | |
| Identify prospective business partners for University R&D | R&D pillar, Industry coordinator | ongoing | | $281k WIRED | New partnerships with existing companies<br>Increase in new products/markets evaluated |
| Promote commercialization of University research among existing businesses and new spin-offs | R&D Pillar, UMS, industry partners | ongoing | | see above | Marketing and business plans created as a result of R&D efforts<br>Increase in patent appilcations/prototypes<br>Number & employment of spin-off companies |
| Link R&D performing companies to economic development resources | R&D, capitalization, workforce pillars | ongoing | | $38k WIRED | Increased participation rates of R&D companies in state ED programs<br>Increase in university 'spin-offs' in targted sectors |

**Goal #4: Through advanced training opportunities build on the willingness, ability and skill sets of both the current and future workforce**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Deliverable/Outcome |
|---|---|---|---|---|---|
| *Design new & expanded curricula through MACS* | | | | | |
| Form ad-hoc committee to ID shared faculty needs | Workforce pillar, LWIBs, industry assoc | TBA | | Staff & committee time | |
| Identify where training delivery methods are viable and the specific providers | Workforce pillar, MCCS, LWIBs | 7/06 | TBA | see above | Inventory of existing resources |
| ID publicly funded, state of the art curricula | Workforce pillar | 8/06 | 12/06 | | Acquisition/development of targeted curricula |
| Train existing skilled employees to become adjunct instructors | Workforce pillar | TBA | | TBA | Rise in the number of faculty able to deliver hands-on worksite training<br>Expansion of training opportunities |
| Provide faculty and curriculum to deliver Marine Technologies/Boat Building training | Workforce pillar | TBA | | TBA | Improvement in scope and quality of course offerings<br>Increase in the number entering & completing training programs |
| *Expand access to Lifelong Learning Accounts* | | | | | |
| Business outreach & issuance of front-end NSAI match | Workforce pillar | 10/06 | TBA | $370k WIRED | Increased number of employers & employees within cluster using LILAs |
| Identify best practices from other LILA programs | Workforce pillar | TBA | | see above | |
| *Leverage existing workforce training resources and supplement with dedicated NSAI individual and business training accounts* | | | | | |
| Work with industry to identify training needs in consideration with implementation of new technologies/production processes | Workforce pillar, LWIBs, industry associations | 9/06 | ongoing | TBA | Report documenting industry training needs |
| Administer NSAI Training Funds | Workforce pillar | 10/06 | ongoing | $1.5 mil WIRED | Number attained degrees or certificates<br>Increase in the number entering & completing training programs<br>Increase number and rate of placements in targeted industry employment<br>Increased enrollment in post-education or certificate programs<br>Rise in hourly earnings compared to prevailing wages<br>Reduction in dollars per worker trained<br>Lower 'turnaround time' from entering training to employment |
| *Establish K-12 "Introduction to Industry Opportunities" program* | | | | | |
| Formation of a sub-pillar workgroup | Workforce pillar, ME Dept. of Education | TBA | | staff time | Marine trades K-12 action plan & pilot project |
| Develop a comprehensive K-12 program | same as above | TBA | | $85k WIRED | Increase in number of outreach efforts vs. status quo |
| Seek external funding to expand K-12 program | same as above | ongoing | | TBA | Value of additional funds received |
| *Reconfigure the apprenticeship model through combined OJT & classroom instruction* | | | | | |
| Organize a sub-group to develop action steps to market apprenticeship opportunities | | 9/06 | end | staff time | |
| Supplemental funding for OJT and apprenticeship programs | | 9/06 | end | $1.3 mil WIRED | Increase in private sector OJT's and placements<br>Rise in number/rate of apprenitices hired for permanent positions<br>Increase number of incumbent workers receiving credentials<br>Rise in number of trainees becoming registered apprentices<br>Increase in number of female trainees |
| Work with industry to plot pathways to job growth | | ongoing | | staff and industry volunteer time | Report documenting occupational pathways |
| *Support training for the future science and technology workforce* | | | | | |
| Award graduate & undergraduate assistantships | | 9/06 | end | $495k WIRED | Award eight graduate & undergraduate assistantships |
| Develop and implement curriculum to make future workforce more entrepreneurial and innovative | | 8/06 | ongoing | $176k WIRED | Innovation/entrepreneurship curriculum and workshops developed for university and community college students |

**Goal #5: Ensure that the economic development delivery model is sustainable and can be replicated for other targeted industries and regions**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Deliverable/Outcome |
|---|---|---|---|---|---|
| *Document transformation process* | | | | | |
| Monitor, evaluate and report on the collective impacts of all NSAI activities | Management, LMIS | ongoing | | Mgmt staff time, $140k WIRED to LMIS for analytical asstance | Increase in the number of new jobs (total and change) for targeted businesses and the cluster as a whole compared to state/US benchmarks<br>Increase in wage and salary earnings per worker<br>Jobs retained |
| Coordinate existing databases and information collection mechanisms | Management | on-going | | Mgmt staff time | |
| Progress reports to ETA, Steering Committee, & Governor | Management | on-going | | Mgmt staff time | Weekly activitty reports, Quarterly progress reports |
| *Establish an analytical framework to inform program planning and help direct the allocation of resources* | | | | | |
| Map the Maine boat-building/composites cluster, compare to other regions and national benchmarks | Management, LMIS | 8/06 | 2/07 | Mgmt staff time, WIRED to LMIS | Maine Boat Building and Advanced Composites Cluster report w/ recommendations, economic/workforce assessment |
| Conduct BVP for outreach and data collection | Mgmt., industry coordinator, BES, industry associations | 10/06 | 1/07 | Mgmt, LMIS, and BES staff time | BVP survey results report<br>Follow-up on BVP leads |
| Develop occupational & employment pathways for targeted sectors | Management, LMIS, workforce pillar | 11/07 | 4/07 | Mgmt staff time, WIRED to LMIS | Publication of pathways for 5 specific occupations in each of the main industry sectors |
| Network with other WIRED regions, identify innovative practices of other regions | All | ongoing | | Mgmt staff time | |
| *Communicate/promote program activities and services to industry and public* | | | | | |
| Hire industry coordinator | Management, Capitalization pillar | 7/06 | 7/06 | $250k WIRED | Press release announcment |
| Regional outreach meetings with industry (4 mtgs per year), three NSAI symposia | Management, MMTA | 8/06, 8/07, 8/08 symposia TBA | | $90k WIRED | Business attendance records at each of 4 meetings, leads |
| Develop NSAI website | Management, Market dev. pillar | 8/06 | 10/06 | $2.5k WIRED | |
| Press releases of project milestones | Management | ongoing | | Mgmt staff time | New clipping compilation by project 'historian' |
| Business site visitations/needs assessments | Management | ongoing | | Mgmt staff time | Ongoing 'log' of business contacts<br>Increased private sector participation in NSAI/non-NSAI programs |
| *Identify opportunities for additional/long-term finance of NSAI activities* | | | | | |
| Formation/1st meeting of leveraging sub-committee | Management, leveraging committee | 8/06 | 10/6 | staff time | Subcommittee reports and recommendations of availble resources |
| Identify existing and future public/private resources available to NSAI cluster | Leveraging committee | ongoing | | committee staff time | Increase in value of grants and contracts receieved and in the leveraging ratio |

**Goal #6: Catalyze innovation through research, development and workforce preparedness that will sustain and improve the global competitiveness of Maine's boatbuilding, composites and marine trades industry.**

| Strategies/Activities | Responsible Parties | Projected Start Date | Projected End Date | Resources Needed | Deliverable/Outcome |
|---|---|---|---|---|---|
| *Promote innovation, entrepreneurship, and the commercialization of new technologies* | | | | | |
| Leverage WIRED funds to succure capital, innovation, & technology grants | Capitalization pillar, MTI | 7/06 | end | $1.4 mil WIRED to leverage $2 million in MTI funding | Increase in number of MTI applications in targeted industries<br>Dollar value of awards granted/NSAI funds leveraged<br>Higher innovation rates as reported in MTI annual evaluation |
| Identify additional private (venture, angel, etc..) and public (SBIR, micro-loan) financing opportunities | Capitalization pillar, CEI | 8/06 | end | | Increase in new risk capital funding secured by Maine businesses<br>Greater participation rates in existing revolving loan programs |
| Increase business participation in existing economic development programs and finance opportunities | Capitalization & workforce pillars | TBA | | $450k WIRED | Greater number of cluster applicants in ED programs<br>Increase in the value of grant/awards by program participants |
| Entrepreneurial training to expand small business opportunities (Business 1st Model) | Capitalization & workforce pillars | TBA | | $250k WIRED | Increase in the number of participants in training programs<br>Lower failure rates of program participants |
| *Develop an industry-driven plan for composites R&D* | | | | | |
| Identification of near- and far-term market opportunities involving new composite technologies | O&M and R&D pillars | ongoing | | included in R&D task force funds | Greater commercialization of new technologies (patents, licenses) for companies working with AECW |
| Set research priorities and form collaborative research teams | R&D pillar | TB A | | $833k WIRED | |
| Identify resources to pursue near and far term research opportunities (MTI, NSF, EPSCOR, etc..) | R&D pillar, leveraging committee | ongoing | | see above | Greater participation of Maine businesses, and increase in dollar value of awards |

North Star Alliance will be using the following metrics to track the progress of each goal:

**Create high quality, skilled jobs that support the competitiveness of the targeted industries, the income of Maine workers, and a return for the public investment**

• Number of new jobs (total and change) for targeted businesses and the cluster as a whole, compared to state/US benchmarks
• New business starts in targeted industry cluster
• Increase in wage and salary earnings per worker
• Retained jobs

**Deepen current markets and expand into new ones so that the boat building, composites, and marine trades industries achieve global industry leadership**

• New market feasibility studies and marketing plans (deliverables)
• Attendance records at promotional events
• Positive responses to industry satisfaction inquiries
• Increased participation in international boat & composite tradeshows

**Transform and build upon the capacity of the public system to nimbly and flexibly support competitive boat building, composites, and marine trade industries that are looking to expand capacity, create and/or improve their workforce, and/or take their technology to a new level**

• Increase in number of targeted businesses participating in competitive state innovation award programs
• Dollar value of awards granted/North Star Alliance funds leveraged
• Amount of new risk capital funding
• Increased participation in federal/foundation innovation grant and award programs
• Increased Participation rates in available revolving loan programs (e.g. CEI)
• Number of participants in training programs
• New patents applications
• Number & employment of spin-off companies from University R&D
• New partnerships with existing or spin-off companies
• New products/markets evaluated
• New marketing and business plans created as a result of R&D efforts

**Through advanced training opportunities build on the willingness, ability and skill sets of both the current and future workforce**

• Targeted curricula developed/acquired
• Increase in the number of faculty capable of delivering worksite training
• Increased number of employers & employees within cluster using LILAs
• Number began educational/job training activities
• Number completed educational/job training activities
• Number attained degrees or certificates
• Number placed in targeted industry employment
• Number placed in post-education or certificate programs

• Number of K-12 outreach programs & attendance records
• Number of OJT's and placements in private sector
• Number of placements leading to permanent full-time positions
• Increase number of incumbent workers receiving credentials
• Trainees becoming registered apprentices
• Female trainees entering non-traditional occupations
• Graduate student fellowships funded through WIRED and Associated programs

**Ensure that the economic development delivery model is sustainable and can be replicated for other targeted industries and regions**
• Progress reports and supporting documentation
• Industry/sector analysis and survey reports
• Publication of occupational pathways
• Business attendance records at regional outreach meetings
• Development of a news clipping library
• Dollar value of outside grants and awards (sustainable finance)
• Leveraging ratio of WIRED to other public funds and contracts (sustainable finance)

The T3 Training will be evaluated on several measures:

- Number of students enrolled
- Number of students completing training
- Number of students certified to be trainers
- Number of students who go on to conduct trainings
- Number of courses offered by trainers
- Number of students trained by trainers

# 8. Mid-Michigan

**Goal #1: INNOVATION-***Reinventing our industrial base around innovation*—to seed economic activity in Mid-Michigan's future industries; accelerate growth in Mid-Michigan's entrepreneurial firms; and build strong networks.

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| ***1. Seed, promote, invest in, support new sectors/clusters*** | | | | | |
| Bio-economy (other than bio-fuels) | ▪ Support entrepreneurial initiatives<br>▪ Participate in business attraction | MSU | Detailed milestones will be made available in the quarterly performance reports | Bio-economy seminars to educate essential stakeholders on opportunities and challenges of the Mid-Michigan bio-economy | Intended Impact:<br>▪ Raise awareness of these industries and the opportunities they offer<br>▪ Attract/grow new firms |
| | ▪ Identify and promote bio-economy assets<br>▪ Connect firms, talent, resources | Mid-Michigan, Bio-economy Learning Community | | | Intended Impact:<br>▪ Raise awareness of industries<br>▪ Increase connections between providers in pipeline, firms, eco-development<br>▪ Accelerate "deals" |
| Alternative Energy | ▪ Identify and promote alternative energy assets<br>▪ Connect firms, talent, resources | Mid-Michigan, SVSU Entrepreneurship and Commercialization Center | | | Intended Impact:<br>▪ Help the region that brought the world the automobile be the one to bring the world the fuel to run the vehicles of the future.<br>▪ Accelerate "deals" |
| | Bio-fuel:<br>▪ Begin development of bio-refinery demonstration site<br>▪ Develop curriculum & multimedia materials | MSU | | | Intended Impact:<br>▪ Prepare talent for jobs in emerging bio-economy |
| | Fuel cells<br>▪ Launch science & math program (for teachers)<br>▪ Establish teaching laboratory<br>▪ Develop & launch summer program (for students)<br>▪ Develop Hybrid Technology Graduate Education Program<br>▪ Develop Commercialization Incubator | Kettering Hybrid Technology Initiative SVSU | | | Intended Impact:<br>▪ Prepare talent for jobs in emerging bio-fuel industries<br>▪ Grow new firms |
| Advanced MFG | ▪ Promote adv mfg approaches as firms commercialize | MSU Kettering SVSU | | | Intended Impact Increase the competitiveness of new |

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | IP | | | | firms in emerging bio industries |
| ***2. Develop new markets for existing high-potential firms*** | | | | | |
| Help firms expand existing markets (domestic & international) | ▪ Connect firms seeking to expand markets to each other and to potential customers via events, joint activities<br>▪ Provide consulting/ assistance to firms within and across sectors | SVSU<br>Mott, Delta, Lansing CCs<br>MSU<br>MMTC<br>Kettering<br>(and extended networks of all partners) | Detailed milestones are available by institution/project | | Intended Impact:<br>▪ Growth of existing firms<br>▪ Increased penetration of desired markets<br>▪ Broader, deeper business networks |
| Help firms apply existing technologies/ products/services in new sectors | ▪ Connect firms seeking to enter common markets to each other and to potential customers via events, joint activities<br>▪ Provide consulting/ assistance to firms within and across sectors | SVSU<br>Mott, Delta, Lansing CCs<br>MSU<br>MMTC<br>Kettering<br>(and extended networks of all partners) | | | Intended Impact:<br>▪ Growth of existing firms<br>▪ Increased penetration of desired markets<br>▪ Broader, deeper business networks |
| Promote innovation (process, product, service) to sustain existing business and create new markets and opportunities | ▪ Communicate effectively to firms, aspiring business owners, students, workers and communities—about the need and the achievements in the region<br>▪ Build innovation into education, workforce and business support services at all levels.<br>▪ Provide focused intervention and/or training to support business/industry adoption of advanced technology tools | Mid-Michigan, Learning Communities | | | Intended Impact:<br>▪ Increased awareness of the role/ importance of innovation<br>▪ Increased demand for services to help achieve it<br>▪ More innovation evident<br>▪ Companies sustain existing business and/or create new business 0pportunities<br>▪ Improve technological readiness by integrating appropriate technology to improve performance and profitability |
| ***3. Facilitate the launch of new businesses*** | | | | | |
| All industries, sectors, emphasis on high-potential firms | ▪ Accelerate technology transfer from academic to business environments | SVSU<br>MSU<br>Kettering<br>Colleges<br>Incubators | Detailed milestones are available by institution/project | | Intended Impact:<br>▪ Accelerated new business creation<br>▪ Aggregation of IP<br>▪ Increased innovation |
| | ▪ Promote, support new high-growth firms (e.g., managerial and technical support) | SVSU<br>MSU<br>Kettering<br>Colleges<br>Incubators | | | Intended Impact:<br>▪ More & better jobs<br>▪ Establishment of "anchor firms" in emerging industries |

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | ▪ Connect firms to talent, capital, expertise to support growth and innovation | SVSU<br>MSU<br>Kettering<br>Colleges<br>Incubators | | | Intended Impact:<br>▪ Deeper, broader networks<br>▪ Accelerated business growth |
| | ▪ Accelerate, support, celebrate entrepreneurship, new business creation in the region | Mid-Michigan, Entrepreneurship Learning community [w ISDs, MiTech, SBBEP & LCC emphasizing K-12] | | | Intended Impact:<br>▪ Increase awareness of presence of innovation in region<br>▪ Legitimize job-making through business ownership as a viable career option<br>▪ Lend prestige to entrepreneurial behavior |
| ***4. Build deep and broad networks across and within stakeholders groups (e.g., learning communities, supply chain and business development partnerships, venture networks, etc.)*** | | | | | |
| | ▪ Network | Mid-Michigan, Learning Communities | Detailed milestones are available by institution/project | Development of baseline measures | Intended Impact:<br>▪ Learning transfer<br>▪ Accelerated business development<br>▪ Increased innovation (people, firms, communities) |
| | ▪ Promote & support networking | Mid-Michigan, Learning Communities | | | Intended Impact:<br>▪ Learning transfer<br>▪ Accelerated business development<br>▪ Increased innovation (people, firms, communities) |

**Goal #2: TALENT-***Develop next-generation talent through learning*—including business-based learning opportunities for workers and students, increased region-wide training opportunities in key industries (current and emerging), and communication and engagement with people, firms, and communities about current and emerging opportunities in Mid-Michigan.

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| ***1. Cultivate talent among career advancers & changers*** | | | | | |
| Healthcare | ▪ Expand the Flint Healthcare Employment Opportunity (FHEO) program to include additional healthcare occupations, including those in alternative care environments or emphasizing new technologies | GFHC<br>LCC | Detailed milestones are available by institution/project | | Intended Impact:<br>▪ More diverse training for more people in healthcare occupations of all kinds<br>▪ Over 125 new trained Healthcare workers enter this growing field<br>▪ Over 32 nurses added per year to the workforce<br>▪ Addition of 30 Nurse Preceptors to health care institutions |

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | ▪ Launch a 3 year healthcare initiative aimed at accelerated prior degree nursing, add Respiratory Therapists to the fast track Nursing Program, upgrade k-12 health tech program | | | | ▪ Preparation of 24 students per year for CENA certification upon completion |
| | ▪ Disseminate effective practices based on the FHEO model throughout the region. | GFHC Mid-Michigan Healthcare learning community | | | Intended Impact:<br>▪ Launch new Healthcare initiatives in the region<br>▪ Accelerate their progress |
| | ▪ Replicate model or effective practices in other communities in the region | GFHC Mid-Michigan, Learning Communities | | | |
| Construction[4] (Building and Construction Trades Initiative, BCON) | ▪ Develop & launch curriculum to bring low-income adults into entry-level positions in the construction trades | BAMF HBALC MCC | | | Intended Impact:<br>▪ Over 100 WIA eligible individuals trained and placed in career-path construction jobs<br>▪ Effective practices transferable to other programs or other industries identified and shared |
| | ▪ Develop & launch a work experience program intended to attract young workers to the construction trade | BAMF HBALC MCC | | | Intended Impact:<br>▪ 45 individuals complete work experience and are offered follow-up that would help them enter the construction industry<br>▪ Effective practices transferable to other programs or other industries identified and shared |
| | ▪ Develop & launch curriculum intended to bring high school students into the construction trades | BAMF HBALC MCC | | | Intended Impact:<br>▪ 40 high-school students complete program are offered follow-up that would help them enter the construction industry<br>▪ Effective practices transferable to other programs or other industries identified and shared |
| | ▪ Develop &launch curriculum intended to support advanced training in finish carpentry | BAMF HBALC MCC | | | Intended Impact<br>▪ 30 individuals complete finish carpentry program<br>▪ Effective practices transferable to other programs or other industries identified and shared |
| | ▪ Develop and launch certificate program and concentration in surveying | BAMF HBALC MCC | | | Intended Impact<br>▪ 20 individuals complete program<br>▪ Effective practices transferable to other |

[4] Construction programs will emphasize new "green" technologies as well as traditional methods.

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | | | | | programs or other industries identified and shared |
| | ▪ Share resources, access, learning, practices and results within and across region | BAMF<br>HBALC<br>Mid-Michigan | | | Intended Impact:<br>▪ Learning and knowledge transfer among and across programs accelerated program development and improves/increase outcomes |
| Learning for Life "campaign" | ▪ Promote skills upgrading for all workers throughout life<br>▪ Promote business-ownership/ entrepreneurship as a valid, valued and viable job/ career path for Mid-Michigan career changers | Mid-Michigan & program partners<br>SVSU, SBTDC, LCC | | Baseline survey data | Intended Impact:<br>▪ An increased percentage of Mid-Michigan adults engaged in new formal learning<br>▪ A higher percentage of MI students and parents believe education should continue beyond high school |
| 2. Students | | | | | |
| Promote K-16 exposure, participation, connection to entrepreneur-ship | ▪ Support student enterprise through teaching, mentoring, doing (K-12) | ISDs<br>MiTech | | Development of baseline measures and inventory of regional resources | Intended Impact:<br>▪ Increased student interest in and exposure to entrepreneurship?<br>▪ Increased connection between work and learning among students?<br>▪ Number of students participating? |
| | ▪ Promote application/ commercialization of new technologies by college/university/ graduate students and researchers | SVSU<br>Mott, Delta, Lansing CCs<br>MSU<br>MMTC<br>Kettering<br>(and extended networks of all partners) | | | Intended Impact:<br>▪ Commercialization process accelerated<br>▪ New businesses established<br>▪ New networks developed<br>▪ Increased demand for e-ship content across institutions |
| | ▪ Communicate Encourage entrepreneurial behavior at every opportunity | All Mid-Michigan partners | | | Intended Impact:<br>▪ Increase in the percentage of individuals who value/recognize entrepreneurship skills<br>▪ Increase in the percentage of individuals launching new businesses<br>▪ Increase in the level of support these individuals feel in their communities |
| 3. "The Public" | | | | | |
| Encourage entrepreneursh ip skill development | ▪ Promote the value of skills upgrading, learning for life, continuous education | All Mid-Michigan partners, Entrepreneurshi p Learning Community | | | Intended Impact:<br>▪ Higher percentage of population recognizes/values entrepreneurship skills<br>▪ Higher proportion of population values learning for life. |

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | ▪ Promote business ownership/entre-preneurship as a valid, viable career path in Mid-Michigan | All Mid-Michigan partners | | | Intended Impact:<br>▪ A higher proportion of people think entrepreneurship is a prestigious career path |
| Engage the people and communities | ▪ Invite the public into the change process as often as possible | All Mid-Michigan partners | | | Intended Impact:<br>▪ Public is engaged in community change efforts |
| | ▪ Document and share information about innovation and change using diverse multi-media | All Mid-Michigan partners | | | Intended Impact:<br>▪ Change in innovative capacity on key indicators developed with TA providers |

**Goal #3: COLLABORATION-***Asset-building through connections and partnerships—* specifically, identifying and building key assets *in the region* and making them available and accessible *to the region;* influencing the way key institutions and organizations work within the region; and supporting and promoting learning and networking (at all levels) in the region.

| Key strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| ***1. Network and align economic development organizations with each other and with workforce and education*** | | | | | |
| Regional Assessment and Network Communication | ▪ Engage partners in regional approach &make it real<br>▪ Establish Learning Communities<br>▪ Shared reporting among partners<br>▪ Regular Regional Town Hall meetings<br>▪ Sharing of "Best Practices"<br>▪ Collaborative Events | Mid-Michigan & program partners | | | Intended Impact:<br>▪ Improved alignment of policy, investments<br>▪ Increased understanding of regionalism<br>▪ Improved recognition of regional assets<br>▪ Increased collaboration<br>▪ Increased Innovation<br>▪ Increased number of region-based tools, approaches, assets |
| ***2. Network and align educational organizations and institutions with each other and with workforce and economic development*** | | | | | |
| Regional Institutional Alignment | ▪ Engage partners in regional approach and make it real<br>▪ Establish Learning Communities<br>▪ Shared reporting among partners<br>▪ Regular Regional Town Hall meetings<br>▪ Sharing of "Best Practices" | Mid-Michigan & program partners, especially Intermediate School Districts (ISDs) | | | Intended Impact:<br>▪ Increased depth and breadth in school to business/industry community relationships<br>▪ Increased alignment in investments/outreach to industry, eco-development and workforce partners<br>▪ Improved recognition of value of regionalism<br>▪ Increased understanding of regional assets<br>▪ Increased innovation |

| | | | | | |
|---|---|---|---|---|---|
| | ▪ Collaborative Events | | | | |
| ***3. Network and align workforce development organizations with each other and with education and economic development*** | | | | | |
| Partner Collaboration | ▪ Engage partners in regional approach and make it real | All Mid-Michigan partners | | | Intended Impact:<br>▪ Improved alignment of policy, investments<br>▪ Increased understanding of regionalism<br>▪ Improved recognition of regional assets<br>▪ Increased collaboration<br>▪ Increased Innovation<br>▪ Increased number of region-based tools, approaches, assets |

# 9. West Michigan

## SECTION II: REGIONAL METRICS

*Instructions: This section should provide information on all education, training, economic development, employer, key innovations, and grant deliverable results each quarter, as described in your grant agreement. This data is very important as we track the success of grantees each quarter and compile cumulative information about all WIRED grantees. In preparation for your first report, the ETA Regional Team will assist you in setting up your performance template and work with you to determine measures.*

**WIRED West Michigan Performance Report Addendum**

See Attachment A

**Regional Metrics**

The following table is a summary of WIRED West Michigan involvement / interested of individuals as of June 30, 2007.

| Date | Policy Council | Advisory Council(s) | WIRED West Michigan Interested Parties |
|---|---|---|---|
| Current Qtr | 12 | 111 | 530 |
| 1st Qtr 2007 | 14 | 81 | 484 |

**Policy Council:** It is the review board for all Innovations that receive WIRED West Michigan funding.

**Advisory Council:** Each Innovation has an Advisory Council to insure that the voice of the customer is heard. Some people serve on multiple councils. This number represents the unique number of individuals participating on a council.

**Interested Parties:** Represents the total number of individuals in the database that have shown interest in WIRED West Michigan. This number includes Policy and Advisory Council members.

# 10. Montana

| ***Goal 1: Develop a world-class bio-products industry that catalyzes regional economic transformation from an agricultural commodity driven economy to a value added economy that supports regional prosperity in Eastern and Central Montana*** | | |
|---|---|---|
| ***Key Strategies*** | ***Desired Outcomes*** | ***Metrics*** |
| **Demonstrate viability of the bio-energy and bio-products industries** | Development of a comprehensive and dynamic market information system that will allow firms, growers, universities, state government and individual workers to make well-informed strategic choices | Existence of the clearinghouse; satisfaction with clearinghouse by users; number of users of market information |
| **Grants to business demonstration projects** | Increased number of bio-products firms in Montana, and increased profitability of the overall industry in Montana. | Number of Firms; Overall Industry Sales; Firm and Industry Profitability; New patents and products created |
| **Education and outreach within and outside of the region to growers and private investors** | Development of a group of well-trained growers who provide crops to the bio-products industry. Engagement of the Tribal nations in providing crops. Formation of an bio-products investor group. Increased private equity investment in Montana bio-product ventures | Number of Producers/Farmers; Acreage Dedicated to alternative crops; Profitability of Producers (vs. traditional crops); Yield/Acre, a group of investors (10-15) interested the bio-products industry |
| **Customized training and research and development efforts** | Creation of a corps of well-trained workers who are able to support the production and management of a growing Montana bio-products industry. Coordination between universities and the private sector to advance cutting edge research and development efforts | # of workers trained; Average wage (vs. regional average); population in the region; Tribal participants, # of coordinated R&D efforts |

| Goal 2: Develop a highly trained and stable/growing workforce to support bio-products and other value added agricultural products | | |
|---|---|---|
| ***Key Strategies*** | ***Desired Outcomes*** | ***Metrics*** |
| **Identify career pathways and job opportunities** | Creation of a detailed career pathway map that identifies all industry job opportunities and industry related job opportunities. | Existence of the career map; satisfaction with career map by users, # of user |
| **Business demonstration projects** | Increased number of bio-products firms in Montana and increased profitability of the overall industry in Montana. | Number of Firms; Overall Industry Sales; Firm and Industry Profitability; New patents and products created |
| **Entrepreneurial training** | The development of specific curriculum for every stage of education, yet integrated across education lines to better serve students as they advance. | Increased number of students enrolling in entrepreneurship, a clearing house for interested parties to access the information, increased entrepreneurial activity within the bio-product sector |
| **Jobs** | The creation of quality jobs that increase the standard of living and the median income of the region and to provide a pool of qualified employees for the bio-products industry. | Average wage (vs. regional average); # of jobs created, placement of trained individuals, population stabilization |

| ***Goal 3: Create an agile, integrated talent development system (workforce, education and economic development) that will prepare state residents to act quickly to take advantage of new economic opportunities and is responsive to business needs.*** | | |
|---|---|---|
| ***Key Strategies*** | ***Desired Outcomes*** | ***Metrics*** |
| **Create Regional Cluster Hubs** | Creation of multiple cluster hubs within the region offering valuable services, such as develop new curriculum using directed industry input, monitor cluster trends, create skill standards as needed, promote cluster related entrepreneurship, conduct global benchmarking, provide cluster information portals, and advance cooperation between all levels of education. | The number of cluster hubs created, the number of individuals utilizing the services offered, the collection and dissemination of data |
| **Develop a new state level system that engages education, economic development and workforce training** | Integration of the system changes to facilitate cooperation and communication amongst state agencies to better respond to the needs of industry and the workforce, enabling the State of Montana to remain on the cutting edge of workforce innovation. | Executive order for the implementation of innovative solutions created by multiple state agencies working together to address issues facing the private sector in Montana |
| **Research and development for future bio-products industry growth** | A comprehensive and ongoing analysis of the research and development trends in the bio-products industry and the integration of this information into the research and development efforts happening within Montana. | An ongoing analysis of the R&D efforts for the bio-products industry and increased R&D efforts from private industry and education institutions |
| **Resource mapping** | A comprehensive map of Montana's bio-products resources that can be used to attract business and private capital | A comprehensive resource map |

| ***Goal 4: Create an inclusive and sustainable regional identity and leadership structure that will promote innovation and ensure the long-term success of the transformation initiative.*** | | |
|---|---|---|
| ***Key Strategies*** | ***Desired Outcomes*** | ***Metrics*** |
| **Encourage participation of tribal nations through special incentives** | Tribal involvement in Montana's New Homestead act at multiple levels, curriculum development in K-12 and tribal colleges, increased entrepreneurship, grower participation, youth involvement | # of applications, curriculum adoption, entrepreneurial activity ( # of business ventures proposed) |
| **Specific outreach to tribal nations** | Tribal involvement in Montana's New Homestead act at multiple levels, curriculum development in K-12 and tribal colleges, increased entrepreneurship, grower participation, youth involvement | Communication and involvement of key tribal members (tribal council, elders, key business owners) Attendance at town hall events |
| **Creation of a leadership structure** | Creation of an Executive Order from the Governor's office declaring that all agencies continue to work in coordination to further the vision of the WIRED program, and a subsequent Memorandum of Agreement between the agencies detailing the manner in which they have worked in together and how they will continue on this path of cooperation and coordination. | The existence of an Executive Order and a Memorandum of Agreement detailing the coordinated effort of state agencies advance WIRED. |
| **Cluster Hub Development** | A network of Cluster Hubs devoted to supporting the bio-products industry in the region through training and information dissemination. | The existence of multiple Cluster Hub centers serving the WIRED region. |

# 11. Finger Lakes

The following 15 outcomes are the focus of the WIRED initiative in Finger Lakes:

1. Increase retention of 30-40 year old workers
2. Increase job growth relative to national average
3. Increase average wages relative to national average
4. Adoption of a regional identity resulting in collaborative networking and communication in support of regional economic strategies
5. Increase in employment, employment retention and earnings change for participants
6. 200 companies accessing training with 1,200 individuals trained
7. Involve 225 high school students in entrepreneurial activities
8. Involve 165 high school teachers in internship and entrepreneurial training
9. Train 450 Entrepreneurs and Innovators in high-growth sectors
10. Develop specialized cadre of 10 Technology "Business Starters".
11. Double business plan participation from 2005 contests.
12. Start 12 companies from orphan technologies
13. Support the development of four industry-led cluster associations that stimulate growth
14. Identify, assess and align region resources to support 30 high-risk companies
15. Measure improvement of business satisfaction with regional efforts from benchmark of 2004 Council on Competitiveness study

# 12. Piedmont Triad

**Goal #1: Project Governance and Administration:** Provide the governance, engagement and administrative support necessary for the successful implementation of the WIRED project.
**Strategy 1.1:** Create a platform through the Piedmont Triad Partnership (PTP) Board of Directors for effective project governance.

**Desired Outcome:** Effective project governance.
**Metrics:** High rankings at annual review of project by the WIRED Action Committee. Clean audit reports. Quarterly reports to US DOL approved.

**Strategy 1.2:** Provide the senior management leadership and support necessary to successfully implement the WIRED Project.
**Desired Outcome:** Management hired and fully operative.

**Metrics:** Annual performance review of WIRED management and staff.

**Strategy 1.3:** Maintain exceptional levels of communication with US DOL, NC Commission on Workforce Development and the WIRED regions.
**Desired Outcome:** Free-flow of 2-way information, support and guidance between the project sponsors (US DOL) and participants/stakeholders.
**Metrics:** Effective website. Regular, informative, widely distributed e-mails to, and meetings with, participants, stakeholders, etc. Evaluations (anonymous via surveymonkey) from participants at meetings.

**Goal #2: Leadership, Communication & Regional Integration**: Build visionary leadership capacity and the broad community engagement necessary to transform the Region's economy and sustain the transformation beyond the three-year WIRED Project..
**Strategy 2.1:** Fully engage and support collaboration among the key workforce training and development and economic development resources within the region.
**Desired Outcome:** Gain support and engagement of workforce and economic development professionals.
**Metrics:** # attendees (and repeat attendees) at facilitated sessions and positive evaluations from them.

**Strategy 2.2:** Conduct the WIRED Leadership Development Initiative utilizing Innovative "action learning" methods for senior leaders, individuals, and teams across the region.
**Desired Outcome:** Increased system wide capacity to collaborate through an effective LDI program.
**Metrics:** Benchmarking assessments - administered periodically to determine change/effectiveness at individual, team and system level. Dissemination of tools/techniques into wide range of organizations in region. In-depth examination of real life issues around regional collaboration that have proved useful to the WIRED project's participants. % retention of cohort members. % involvement of Advisory Board as mentors to cohorts. CCL/LDI "graduates" volunteer to stay involved after their cohort/Advisory Board experience.

**Strategy 2.3:** Establish an integrative leadership communication and public information campaign.
**Desired Outcomes:** Establish an effective public information campaign for the PTP WIRED Project. Creation and maintenance of a WIRED website. Designed materials as part of a comprehensive public information campaign. Effective Education Attainment campaign.
**Metrics:** Market research on WIRED recognition. # hits on website, analysis of downloaded material from the website and movement of visitors to website through its pages. Evaluation of participants in, and recipients of, the Education Attainment campaign. Engagement of regional stakeholders in WIRED meetings and subcommittees.

**Strategy 2.4:** Engage the Triad's leadership in sustaining the goals of WIRED beyond the three years of the grant.
**Desired Outcomes:** A team to take the WIRED initiative beyond 2009 is formed (partly selected, partly self-selected).
**Metrics:** WIRED success data and stories are documented. CCL/LDI "graduates" volunteer to stay involved after their cohort/Advisory Board experience. Funding sources are identified and a database of their contacts and information is updated regularly. Regular interchange of information among the 13 WIRED projects. Funding proposals established in communicable format.

**Goal #3: Economic Growth and Competitiveness:** Increase the capacity to create new, high-skill, high-wage jobs in targeted industry clusters through design and delivery of demand-driven services, and to strengthen the entrepreneurial and innovative culture across the entire 12-county Region.
**Strategy 3.1:** Establish a targeted industry cluster approach to create and sustain high-wage, high-skill jobs and to enhance industry competitiveness.
**Desired Outcome:** Creation of new, high-skill, high-wage jobs in the targeted industry clusters. Design and delivery of demand-driven services. Strengthened entrepreneurial and innovative culture across the entire 12-county region.
**Metrics:** Cluster director effectiveness evaluated by participants of the events they organize and facilitate. Comprehensive compilation of best practices. Action points from cluster roundtable meetings are communicated to other parts of the WIRED team. Plans developed and communicated for each cluster through a regular facilitated process. # new jobs in targeted clusters. # expansions in targeted clusters. # collaborations formed. # innovations derived from collaborations. Benchmark and survey perceptions of entrepreneurial/innovation culture in region.

**Strategy 3.2:** Provide leadership for the entrepreneurship, innovation and outreach related activities for the WIRED project.
**Desired Outcome:** Effective leadership in support of entrepreneurship and outreach activities.
**Metrics:** Evaluations of outreach activities conducted by third party contractor. Evaluations by participants in outreach and entrepreneurial programs. Employment of high-barrier populations - rural and minority.

**Strategy 3.3:** Integrate regional entrepreneurship development activities into WIRED project.
**Desired Outcome:** Improved integration of regional entrepreneurial activities through the WIRED project.

**Metrics:** Amount of risk capital (VC and Angel money in formal groups) based in the region. # spin-offs from companies. # IP referrals to attorneys or universities. # entrepreneurs accessing regional service providers. Coordination with rural entrepreneurial efforts of Rural Economic Development Center.

**Strategy 3.4:** Establish a Higher Education Innovation Council (HEIC) to enhance the research and development capacities of the region's colleges and universities and increase commercialization of technology and know-how from these institutions.
**Desired Outcome:** Enhanced innovation capacity at region's higher education institutions. Enhanced collaboration on research and development between region's higher education institutions. Increased innovation collaboration between industry clusters and higher education institutions.
**Metrics:** R&D activity. # inter-institutional collaborative research/innovation projects. # industry/academic collaborative research/innovation projects. # spin-offs. # patents and licenses.

**Strategy 3.5:** Assure that rural areas and other underserved populations of the region are fully engaged in, and benefit from, the WIRED Project.
**Desired Outcome:** Effective strategies that identify key activities that maximize the benefits of the WIRED project for rural areas and other underserved populations of the region
**Metrics:** # of county decision-makers involved and supportive (minutes of County Commissioner meetings). Comprehensive compilation of best practices. Collaboration with CCL LDI on the Cohort/Advisory Board activities and leverage of practical ideas from their "Active Learning" sessions. Collaboration with the 4 cluster groups (sharing of minutes - attendance at meetings/summits). Involvement through delivered services of other organizations (e.g. IES, Cooperative Extension and SBTDC) - # clients, evaluations of services by recipients, # events.

**Goal #4: Education and Workforce Investment**: Leverage all of the Region's educational and training resources to transform and create a best-in-class workforce training delivery system.
**Strategy 4.1:** Establish a transformational system of regional workforce training and development programs for delivery of demand-driven services.
**Desired Outcome:** By the end of the 3-year project, WIRED will have developed a highly efficient and effective workforce development model with proven results. The workforce development efforts will result in the creation of a large new pool of trained workers who will have become employed in the target industry clusters.
**Metrics:** Comprehensive compilation of best practices. Workforce systems summit evaluation by participants. Cooperation between the WFB that develops a common strategy for WIRED objectives. % and # attendance at WIRED meetings and committees. Developed and analyzed needs assessments at intervals over the 3-year project timeframe. Curricula developed by key partners (# courses delivered, # trainees, # certified/graduated). Employer and employee satisfaction surveys. Regional workforce development portal in operation - on time, within budget. Portal/website tracking, # hits, movement between pages. Traditional WIA 17 performance standards. # trained in clusters. *Other key traditional and transformation-based metrics as finalized by the Metrics and Workforce Integration Subcommittees.*

**Strategy 4.2:** Develop metrics for benchmarking workforce training and development activities and transformation.
**Desired Outcome:** Benchmarks that reflect national regional standards, and the practical needs of the cluster industries.
**Metrics:** Facilitated sessions of metrics subcommittee are evaluated as successful by participants. Outputs of metrics subcommittee are evaluated as practical, applicable and inclusive of both traditional and transformation-based measures by participants, target cluster industries and US DOL.

**Strategy 4.3:** Establish a K-12 School-to-Work Forum.
**Desired Outcome:** Improvement in the K-12 curricula's relevance to workplace needs. Improved regional education attainment levels
**Metrics:** Development of a needs assessment/gap analysis that sets a benchmark and allows change to be measured. Survey of 12-county school-to-work practices completed. Best practices generated from survey results and shared with counties and cluster groups. Effectiveness of a K-12 School-to-Work Forum - evaluation from teachers & employers.

# 13. Wall Street West

## Goal 1: Connectivity: Building the Infrastructure

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| **Build Fiber Network** | Identify Financial Resources | Governor's Office | Sept. – Nov. 2006 | US DOL Dept. of Commerce | Committed Funds by 11/15/06 |
| | Supplier Award & Contract Negotiation | • Ben Franklin Technology Partners / NEP<br>• Governor's Office | RFP to 25 Suppliers – complete May 2006<br>• Two finalists as of October 2006 | Support from Governor's Office | • Supplier Selection by Nov. 2006<br>Contract award within PA state commitment of funds |
| | Monitor Progress of Fiber Network Build-out | • Director of Outreach & Network Development<br>• Governor's Office Representative<br>• DCED Representative | • Weekly/Monthly/Quarterly Project Plan Review<br>• Escalation mechanism for deviation to plan | • Assignment of appropriate interface at Governor's Office<br>• DCED | Completion of fiber network by January – March 2008 |
| | Communication of Fiber Network Penetration | Director of Outreach & Network Development | Communicate details of Fiber Network penetration to Economic Development Organizations and Wall Street West Stakeholders in NE PA Region (Jan. 2007) | • Supplier<br>• Fiber Network Maps | Ongoing effective communication with Economic Development Organizations and stakeholders. |
| **Outreach** | Develop RFP for Outreach & Public Relations firms | • Director of Outreach & Network Development<br>• Industry & Community Engagement Committee | Sept. – Oct. 2006 | None | RFP to Outreach and Public Relations Firms by October 12, 2006 |
| | Select Outreach & Public Relations Firm | • Director of Outreach & Network Development<br>• Industry & Community Engagement Committee | November 1-15, 2006 | None | Select Outreach & Public Relations Firm by November 15, 2006 |
| | Wall Street West Strategic Targeting | • Director of Outreach & Network Development<br>• Executive Committee Team w/NY Financial background (identification in process) | October 2006<br>Identify Executive Team members by 10/20/06<br>• Evaluate most highly levered opportunities<br>• Formulate strategy & implementation direction for Outreach efforts | Support of selected Executive Committee Team members | Documented strategies & implementation direction for Outreach efforts by November 30, 2006 |
| | Financial Services Forum | • Director of Outreach & Network Development<br>• John Dearie | April 2007<br>• Enable forum discussion of Wall Street West initiative | None | April 2007<br>Forum discussion of Wall Street West initiative |
| | Leverage high profile corporate moves to Wall Street West | • Director of Outreach & Network Development | • Olympus America, Inc. from Long Island, NY to Bethlehem, PA – Aug. 2006<br>• Prudential<br>• Blue Cross of NEPA | Outreach PR firm | CEO interaction or positive Business Case for move to Wall Street West |
| | Exercise IBM Consulting Services | • Director of Outreach & Network Development | October – December 2006<br>• Grant access to NY financial clients | IBM Consultant(s) | Executive contacts & insights on company location issues & strategies |
| **Outreach (continued)** | Draw upon senior alumni from the 21 colleges & universities working in NY financial services sector | • Director of Outreach & Network Development<br>• Executive Committee members | Sept. 2006 – Jan. 2008<br>Access to executive levels in NY financial services sector. | None | Executive contacts & insights on location issues & strategies |

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| | Presentation and tour of Lehigh University Financial Services Lab | • Director of Outreach & Network Development<br>• Gerald Ephault<br>• Vito Gallo | October 2006<br>• Showcase $20M hands-on facility educating Lehigh students in the College of Business & Economics<br>• Actual Trading Room environment | Lehigh University Business College | • Create impetus for additional financial services labs and programs at other educational institutions<br>• Utilize resource as showcase for potential NY financial firms. |
| | Build relationships | • Wall Street West Team | • Utilize resources of the Commonwealth (i.e., Governor's Action Team)<br>• Draw upon U.S. DOL & other government agencies to provide visibility & access<br>• Leverage various Boards of Directors, senior business contacts, alumni, etc. | None | Foster additional executive financial services firms contacts |
| | | | **<u>Overall Metric</u>: Number of NY Financial Services firms that establish specific plans in 2007 and 2008 to locate facilities in the Wall Street West region.** | | |

## Goal 2: Creating the Talent Pool

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| *Appoint Project Director* | *Search Activities* | *Search Committee* | *9/15/06 Acceptance* | *Personnel Committee*<br>*Physical Facilities* | *Project Director in place*<br>*Part time: 10-12/31/06*<br>*Full time: January 07* |
| *Appoint Director of Workforce Initiatives* | *Search Activities* | *Search Committee* | *9/15/06* | *Personnel Committee* | *Start date: 10/2/06* |
| *Form the Human Capital Committee* | *Identify committee membership*<br>*Select a Chair* | *Director of WF Initiatives* | *10/31/06* | *Executive Committee* | *Human Capital Committee membership listing and meeting schedule* |
| *Determine the financial services industry competency requirements* | *Request Financial Services Competency model from DOL*<br>*Confirm competencies with existing financial services firms and a sample of potential new firms* | *Director of Workforce Initiatives*<br>*Human Capital Committee* | *11/30/06* | *Director and /or Consultant/TA*<br>*Contacts at existing and potential firms* | *DOL Model in house and posted on website* |
| *Compare financial service competencies with the current workforce capacity and educational programs* | *Inventory existing education and training programs*<br>*Assess current workforce capacity (comprehensive labor shed study)*<br>*Conduct a Gap Analysis* | *Human Capital Committee*<br>*Director of Workforce Initiatives* | *December 2006*<br>*June 2007* | *Director and /or Consultant/TA*<br>*Funding*<br>*Collaboration with education partners* | *Report identifying required assets, curriculum and programs* |
| *Develop and implement a comprehensive approach to close the gaps* | *Plan should include:*<br>*Submit for state grants to organize an Industry Partnership and offer incumbent worker training*<br>*Align education and training opportunities with industry needs*<br>*Provide retraining to dislocated workers*<br>*Develop career ladders/lattices*<br>*Develop dual enrollment programs*<br>*Develop internships for high school and college students*<br>*Provision for internship and employment opportunities website*<br>*Establishment of a comprehensive career development process rooted in lifelong learning* | *Human Capital Committee*<br>*Director of Workforce Initiatives*<br>*WIBs, Schools, Colleges* | *December 2006*<br>*Ongoing*<br>*December 2007* | *Education & Training Partners*<br>*Curriculum specialist*<br>*School-based facilities*<br>*Funding*<br>*Consultant - FT Advantage, NY Institute of Finance, other* | *Financial Services Industry Partnership in place*<br>*Incumbent worker training programs are being conducted*<br>*Increased availability of prospective employees possessing skills required by financial service firms* |

## Goal 2: Creating the Talent Pool (Continued)

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| ***Communicate findings of Gap Analysis and required actions throughout the region*** | ***Post on the WIRED website***<br>***Targeted media and PR activity*** | ***Directors***<br>***ICE Committee***<br>***Human Capital Committee*** | ***2007*** | ***Funding*** | ***Alignment of education & training programs with industry requirements*** |
| ***Continuous reassessment of company needs and regional attributes*** | ***Periodic update of Gap Analysis*** | ***Director of Workforce Initiatives***<br>***Human Capital Committee*** | ***Ongoing*** | ***Process and resources included in strategic workforce development system strategic plan*** | ***Demand Driven Programs*** |
| ***Brand NE PA as a financially literate region*** | ***Expand access to and utilization of Junior Achievement programs***<br>***Ensure access to Enterprise Village and Finance Park for all fifth and eighth grade students***<br>***Review and deploy relevant Wall Street West financial literacy initiative activities*** | ***Directors***<br>***ICE & Human Capital Committees*** | ***June 2007***<br>***Ongoing*** | ***Funding mechanism for school district participation in JA programs***<br>***Financial Literacy plan and support from Hillary Hunt*** | ***Change in internal & external perception of NE PA***<br>***Wall Street/Financial Services recognition as a destination of choice*** |

## Goal 3: Innovation Environment

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| ***Assess regional innovation infrastructure and culture*** | ***Identify key technology-based strengths-both physical and intellectual*** | ***Directors*** | ***June 2007*** | ***Project Director***<br>***Consultant***<br>***Funding*** | ***Sustainability at conclusion of grant period*** |
| ***Leverage existing and form new business/education partnerships*** | ***Integrate KIZ and STARS***<br>***Provide incentives to companies locating in KIZ*** | ***Wall Street West Team*** | ***Ongoing*** | ***Funding***<br>Quarterly Reports from existing innovation organizations - BFTP, NPTI, etc | ***-Growing critical mass of high-tech sectors in Wall Street West***<br>***- Greater retention of college graduates***<br>- Increases in numbers reported in quarterly reports |
| ***Establish a regional grant pool for financial services sector innovations*** | ***Identify budget amounts and distribution methodology for contributions*** | ***Project Director***<br>***Executive Committee*** | ***2007*** | ***Funding Commitment*** | ***-Inducement to financial services firms*** |
| ***Promote Centers of Excellence at regional colleges and universities*** | ***Identify appropriate Centers of Excellence at institutions*** | ***Project Director with Colleges and Universities***<br>***Human Capital and ICE***<br>***Committees*** | ***Ongoing*** | ***Public Relations*** | ***Increased enrollment*** |
| ***Increase investment in Wall Street West companies*** | ***-Capital for financial services startups***<br>***-Expand and upgrade technology assets*** | ***Project Director***<br>Director of Outreach | ***Ongoing*** | ***Funding:***<br>***Venture Capital Firms***<br>***Angel Investment Groups***<br>***Ben Franklin/NEP***<br>***Life Science Green House/CPA*** | ***Increase in expansion, retention and start up business*** |
| ***Provide easy access to all entrepreneurship services*** | ***Identify the various organizations and services***<br>**Write and implement a plan for enhanced coordination and communication of the range of services** | ***Directors***<br>**Ad hoc committee** | ***June 2007*** | ***Representatives from NEPA Alliance, GVTA, BFTP*** | ***Single source for access to entrepreneurship resources*** |

## Goal 4: Integrated and Sustainable Economic and Workforce Development System

| Key Strategies | Activities | Responsible Parties | Timeframes/ Milestones | Resources Needed | Desired Outcomes/ Metrics |
|---|---|---|---|---|---|
| Create a culture supportive of regionalism | • Conduct a regionalism conference<br>• Partner with media sources to perpetuate regionalism message<br>• Build on internal success stories such as Wall Street West, LVEDC, NPTI and others<br>• Provide leadership development opportunities for economic and workforce development agency personnel | Wall Street West Team | 2007 and ongoing | • Council on Competitiveness<br>• Media<br>• Funding | • 75% of economic development leadership attend<br>• Paradigm shift evidenced by changes in decision making, processes, and reduction in the number of economic and workforce development organizations decision media coverage |
| Develop a strategy to accelerate regional economic development planning and to streamline processes | • Map existing economic development agencies<br>• Compile and compare board member lists<br>• Identify current initiatives to streamline and/or reorganize economic development resources<br>• Convene "new economy" thought leaders from within the various organizations for strategic planning | Wall Street West Team | 2007 | • Consultant<br>• Funding | A sustainable, comprehensive regional economic development plan including timeline for implementation |
| ***Implement regional economic and workforce development plans for accelerated regional planning and streamlined processes*** | ***Steps above*** | ***Wall Street West Team*** | ***2008*** | • ***Governor and Legislative Support***<br>• Funding | Integrate Economic and Workforce Development Organizations |

*Wall Street West Team: All staff, committee and resource individuals
**Funding: Cost estimates are being developed and will be provided by 10/31/06

# Appendix E

# Social Network Analysis Data

## Table E.1: Types of Organizations in the Regional Social Networks

| Region | Econ. Dev. | Workforce | Industry | Research | Education | Other Govt. | Other |
|---|---|---|---|---|---|---|---|
| WAEM | 4.6% | 21.5% | 7.7% | 3.1% | 40% | 3.1% | 20% |
| California Corridor | 10.1% | 19.2% | 38.4% | 8.1% | 13.1% | 4% | 7.1% |
| Metro Denver | 15.3% | 6.8% | 33.9% | 11.9% | 22.0% | 5.1% | 5.1% |
| Northwest Florida | 13.8% | 16.1% | 41.4% | 3.4% | 12.6% | 2.3% | 10.3% |
| Kansas City | 17.1% | 11.8% | 9.2% | 0% | 39.5% | 1.3% | 21.1% |
| North Star Alliance | 12.3% | 28.8% | 34.2% | 2.7% | 9.6% | 8.2% | 4.1% |
| Mid-Michigan | 6.9% | 18.4% | 17.2% | 5.7% | 20.7% | 3.4% | 27.6% |
| West Michigan | 6.4% | 13.8% | 29.4% | 14.7% | 18.3% | 3.7% | 13.8% |
| Montana | 12.5% | 17.5% | 5% | 0% | 17.5% | 42.5% | 5% |
| Finger Lakes | 12.5% | 18.2% | 29.5% | 5.7% | 18.2% | 8% | 8% |
| Piedmont Triad | 17.7% | 7.3% | 20.2% | 4% | 31.5% | 2.4% | 16.9% |
| Wall Street West | 17.3% | 13.5% | 17.3% | 5.8% | 30.8% | 0% | 15.4% |
| **Across All Regions** | **12%** | **15.7%** | **24.9%** | **5.8%** | **22.4%** | **5.5%** | **13.5%** |

*Social network data not available from NCI

## Table E.2: Types of Organizations of Site Visit Respondents

| Region | Econ. Dev. | Workforce | Industry | Research | Education | Other Govt. | Other |
|---|---|---|---|---|---|---|---|
| WAEM | 4.4% | 23.1% | 12.1% | 0% | 26.4% | 0% | 34.1% |
| California Corridor | 19.4% | 21% | 32.3% | 8.1% | 11.3% | 0% | 8.1% |
| Metro Denver | 41.7% | 8.3% | 16.7% | 8.3% | 25% | 0% | 0% |
| Northwest Florida | 12.4% | 14.9% | 44.6% | 2.5% | 10.7% | 0% | 14.9% |
| Kansas City | 16.9% | 10.1% | 6.8% | 0% | 40.5% | 0% | 25.7% |
| North Star Alliance | 22.7% | 27.3% | 36.4% | 4.5% | 9.1% | 0% | 0% |
| Mid-Michigan | 8.5% | 18.6% | 11% | 9.3% | 32.2% | 2.5% | 17.8% |
| West Michigan | 3.2% | 9.7% | 25.8% | 16.1% | 25.8% | 0% | 19.4% |
| Montana | 10% | 20% | 0% | 0% | 30% | 40% | 0% |
| Finger Lakes | 17.5% | 16.7% | 36.7% | 4.2% | 13.3% | 7.5% | 4.2% |
| Piedmont Triad | 34.6% | 3.8% | 3.8% | 0% | 34.6% | 0% | 23.1% |
| Wall Street West | 7.7% | 23.1% | 23.1% | 15.4% | 23.1% | 0% | 7.7% |
| **Across All Regions** | **16.2%** | **15.2%** | **21.8%** | **5.7%** | **23.6%** | **2.9%** | **14.6%** |

*Social network data not available from NCI

## Table E.3: Organizational Roles of Collaborators in the Regional Social Networks

| Region | Leaders, Strategists, Visionaries, Decision-Makers | Implementers, Managers, Administrators | Day-to-Day Staff |
|---|---|---|---|
| WAEM | 44.6% | 33.8% | 21.5% |
| California Corridor | 59.6% | 35.4% | 4% |
| Metro Denver | 54.2% | 33.9% | 11.9% |
| Northwest Florida | 78.2% | 18.4% | 2.3% |
| Kansas City | 40.3% | 46.8% | 11.7% |
| North Star Alliance | 42.5% | 38.4% | 19.2% |
| Mid-Michigan | 37.9% | 51.7% | 10.3% |
| West Michigan | 53.2% | 30.3% | 16.5% |
| Montana | 42.5% | 47.5% | 10% |
| Finger Lakes | 52.3% | 39.8% | 8% |
| Piedmont Triad | 58.9% | 35.5% | 5.6% |
| Wall Street West | 32.7% | 51.9% | 15.4% |
| **Across All Regions** | **51.3%** | **37.7%** | **10.7%** |

*Social network data not available from NCI

## Table E.4: Organizational Roles of Site Visit Respondents

| Region | Leaders, Strategists, Visionaries, Decision-Makers | Implementers, Managers, Administrators | Day-to-Day Staff |
|---|---|---|---|
| WAEM | 37.4% | 44% | 18.7% |
| California Corridor | 60.5% | 31.5% | 8.1% |
| Metro Denver | 25% | 66.7% | 8.3% |
| Northwest Florida | 80% | 15.8% | 4.2% |
| Kansas City | 50% | 41.9% | 8.1% |
| North Star Alliance | 40.9% | 36.4% | 22.7% |
| Mid-Michigan | 34.7% | 56.8% | 8.5% |
| West Michigan | 51.6% | 38.7% | 9.7% |
| Montana | 50% | 30% | 20% |
| Finger Lakes | 55.8% | 44.2% | 0% |
| Piedmont Triad | 45.4% | 43.8% | 10.8% |
| Wall Street West | 7.7% | 84.6% | 7.7% |
| **Across All Regions** | **47.7%** | **42.3%** | **9.9%** |

*Social network data not available from NCI

## Table E.5: Frequency of Contact in the Regional Social Networks

| Region | 3+ Times/ Week | 1-2 Times/ Week | 2-3 Times/ Month | Monthly | Quarterly | Yearly | Average |
|---|---|---|---|---|---|---|---|
| WAEM | 7.7% | 15.4% | 29.7% | 26.4% | 20.9% | 0% | 2-3 times/ month |
| California Corridor | 6.4% | 24.2% | 29.8% | 29% | 9.7% | 0.8% | 2-3 times/ month |
| Metro Denver | 15% | 23.3% | 25% | 23.3% | 13.3% | 0% | 2-3 times/ month |
| Northwest Florida | 3.4% | 15.7% | 23.1% | 36.4% | 19.8% | 1.7% | Monthly |
| Kansas City | 4.5% | 23.6% | 27% | 31.1% | 9.5% | 1.4% | 2-3 times/ month |
| North Star Alliance | 22.7% | 30% | 27.3% | 10.9% | 9.1% | 0% | 1-2 times/ week |
| Mid-Michigan | .5% | 24.8% | 45% | 20.2% | 2.8% | .9% | 2-3 times/ month |
| West Michigan | 13.6% | 21.9% | 23.9% | 35.5% | 3.2% | 1.9% | 2-3 times/ month |
| Montana | 6% | 22% | 20% | 36% | 12% | 4% | 2-3 times/ month |
| Finger Lakes | 2.1% | 20.2% | 20.2% | 26.6% | 26.6% | 4.3% | Monthly |
| Piedmont Triad | 3.1% | 19.4% | 32.6% | 30.2% | 12.4% | 2.3% | 2-3 times/ month |
| Wall Street West | 3% | 15.4% | 21.5% | 41.5% | 13.8% | 4.6% | Monthly |
| **Across All Regions** | **8.2%** | **21.6%** | **27.7%** | **28.8%** | **12%** | **1.7%** | **2-3 times/ month** |

*Social network data not available from NCI

# Appendix F

# Data Book on Generation I WIRED Regions

- Table F.1: Workforce and Innovation Measures: Comparing Generation I WIRED Regions with Their States
- Table F.2: Post-Secondary Education Measures: Comparing Generation I WIRED Regions with Their States
- Table F.3: Demographic Measures: Comparing Generation I WIRED Regions with Their States
- Table F.4: NAICS Codes for Each Region's Customized Basket of Target Industries
- Table F.5: Generation I WIRED Evaluation's Definition of STEM Subjects

# Table F.1
# Workforce and Innovation Measures: Comparing Generation I WIRED Regions with Their States

| Measure | WAEM | | California Corridor | | Metro Denver | | Northwest Florida | | NCI | | Kansas City | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State | Region | % of State | Region | % of State | Region | % of State |
| **WORKFORCE** | | | | | | | | | | | | |
| **Labor Force Participation** | | | | | | | | | | | | |
| In Labor Force | 60% | 100% | 63% | 102% | 72% | 103% | 61% | 103% | 65% | 103% | 65% | 105% |
| Employed | 92% | 101% | 92% | 100% | 96% | 101% | 89% | 106% | 95% | 100% | 94% | 101% |
| Unemployed | 7% | 116% | 7% | 100% | 4% | 100% | 6% | 100% | 5% | 100% | 5% | 125% |
| Not In Labor Force | 41% | 103% | 38% | 100% | 28% | 107% | 39% | 105% | 35% | 106% | 35% | 106% |
| Employed Blue Collar Jobs | 48% | 107% | 37% | 100% | 33% | 109% | 40% | 103% | 51% | 111% | 42% | 105% |
| Employed White Collar Job | 52% | 106% | 63% | 100% | 67% | 103% | 60% | 102% | 49% | 111% | 58% | 103% |
| **Targeted Industries** | | | | | | | | | | | | |
| Average Annual Income | $38,416 | 100% | $92,454 | 101% | $96,785 | 99% | $41,179 | 89% | $43,688 | 109% | $41,913 | 109% |
| Number of Establishments | 1,510 | 26% | 34,665 | 70% | 845 | 75% | 6,895 | 8% | 288 | 11% | 1,739 | 22% |
| Number of Employees | 27,918 | 23% | 658,389 | 76% | 20,282 | 61% | 57,594 | 7% | 4,378 | 7% | 29,673 | 16% |
| **All Industries** | | | | | | | | | | | | |
| Average Annual Income | $30,448 | 93% | $48,231 | 101% | $51,132 | 108% | $31,853 | 84% | $35,483 | 97% | $39,791 | 108% |
| Number of Establishments | 20,529 | 26% | 839,058 | 68% | 111,457 | 65% | 35,306 | 6% | 10,680 | 7% | | |
| Number of Employees | 288,529 | 25% | 9,432,935 | 72% | 1,327,015 | 70% | 416,118 | 6% | 175,975 | 7% | 981,624 | 67% |
| **INNOVATION** | | | | | | | | | | | | |
| FY2005 SBIR New Starts | 3 | 21% | 821 | 88% | 224 | 90% | 5 | 4% | 17 | 33% | 8 | 43% |
| FY2005 Federally-Funded R&D New Starts | 111 | 12% | 4,320 | 76% | 1,016 | 85% | 179 | 16% | 233 | 37% | 172 | 47% |
| FY2006 Patent Applications | 78 | 20% | 30,815 | 85% | 3,153 | 84% | 148 | 3% | 425 | 16% | 757 | 71% |
| Number of Angel Networks | 0 | 0% | 8 | 38% | 2 | 100% | 0 | 0% | 0 | 0% | 1 | 50% |

**Table F.1 (continued)**

| Measure | North Star Alliance | | Mid-Michigan | | West Michigan | | Montana | | Finger Lakes | | Piedmont Triad | | Wall Street West | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State | Region | % of State | Region | % of State | Region | % of State | Region | % of State |
| **WORKFORCE** | | | | | | | | | | | | | | |
| **Labor Force Participation** | | | | | | | | | | | | | | |
| In Labor Force | 66% | 102% | 65% | 100% | 69% | 106% | 66% | 108% | 63% | 97% | 62% | 100% | 62% | 100% |
| Employed | 95% | 100% | 94 % | 100% | 96% | 102% | 94% | 101% | 92% | 99% | 95% | 101% | 95% | 101% |
| Unemployed | 5% | 100% | 6% | 100% | 5% | 83% | 6% | 86% | 8% | 133% | 5% | 83% | 5% | 83% |
| Not In Labor Force | 34% | 97% | 35% | 100% | 31% | 89% | 35% | 9% | 37% | 106% | 38% | 100% | 38% | 100% |
| Employed Blue Collar Jobs | 41% | 95% | 45% | 105% | 46% | 107% | 38% | 105% | 43% | 105% | 43% | 105% | 43% | 105% |
| Employed White Collar Job | 59% | 104% | 56% | 98% | 54% | 95% | 62% | 97% | 57% | 97% | 57% | 95% | 57% | 95% |
| **Targeted Industries** | | | | | | | | | | | | | | |
| Average Annual Income | $40,631 | 99% | $43,902 | 86% | $41,221 | 93% | * | * | $42,045 | 70% | $42,925 | 102% | $56,821 | 87% |
| Number of Establishments | 3,619 | 79% | 8,328 | 17% | 1,829 | 10% | * | * | 269 | 9% | 3,196 | 17% | 190 | 12% |
| Number of Employees | 33,381 | 76% | 82,909 | 10% | 55,083 | 12% | * | * | 6,767 | 6% | 87,804 | 16% | 3,665 | 12% |
| **All Industries** | | | | | | | | | | | | | | |
| Average Annual Income | $33,275 | 100% | $37,163 | 89% | $36,837 | 88% | 26,657 | 91% | $38,329 | 67% | $35,193 | 94% | $35,858 | 87% |
| Number of Establishments | 36,499 | 79% | 35,631 | 14% | 28,076 | 11% | 5,368 | 14% | 27,526 | 5% | 37,481 | 16% | 43,236 | 14% |
| Number of Employees | 424,916 | 85% | 517,587 | 14% | 527,524 | 15% | 41,139 | 11% | 457,043 | 65% | 628,144 | 19% | 684,749 | 14% |
| **INNOVATION** | | | | | | | | | | | | | | |
| FY2005 SBIR New Starts | 1 | 5% | 10 | 9% | 3 | 3% | 1 | 4% | 31 | 15% | 5 | 7% | 5 | 2% |
| FY2005 Federally-Funded R&D New Starts | 185 | 96% | 63 | 6% | 29 | 56% | 10 | 6% | 206 | 8% | 109 | 10% | 101 | 5% |
| FY2006 Patent Applications | 286 | 95% | 1,170 | 18% | 591 | 9% | 6 | 3% | 1,905 | 16% | 420 | 10% | 988 | 15% |
| Number of Angel Networks | 0 | 0% | 0 | 0% | 1 | 20% | 0 | 0% | 1 | 9% | 2 | 25% | 0 | 0% |

* Data not available on Montana's targeted industries

# Table F.2
# Post-Secondary Education Measures:
# Comparing Generation I WIRED Regions with Their States

| Measure | WAEM | | California Corridor | | Metro Denver | |
|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State |
| **Total 2005-6 Enrollment**: | | | | | | |
| Non-Degree Granting Institutions | 448 | 29% | 88,928 | 81% | 13,328 | 69% |
| 2-Yr Degree Granting Institutions | 43,065 | 39% | 1,611,039 | 72% | 86,845 | 61% |
| Baccalaureate-Granting Institutions | 2,230 | 24% | 55,454 | 86% | 36,134 | 73% |
| Post-Baccalaureate-Granting Institutions | 51,393 | 34% | 829,632 | 78% | 172,721 | 68% |
| **# Entering Students 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 10,354 | 36% | 303,260 | 73% | 15,245 | 63% |
| Baccalaureate-Granting Institutions | 685 | 39% | 12,356 | 86% | 7,612 | 67% |
| Post-Baccalaureate-Granting Institutions | 9,786 | 37% | 130,068 | 77% | 27,533 | 66% |
| **Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 3,318 | 20% | 59,891 | 68% | 4,906 | 61% |
| Baccalaureate-Granting Institutions | 299 | 24% | 8,388 | 90% | 3,948 | 65% |
| Post-Baccalaureate-Granting Institutions | 9,096 | 37% | 172,700 | 79% | 29,768 | 79% |
| **STEM Major Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 255 | 9% | 4,534 | 68% | 191 | 48% |
| Baccalaureate-Granting Institutions | 31 | 10% | 2,482 | 89% | 689 | 49% |
| Post-Baccalaureate-Granting Institutions | 1,539 | 45% | 34,947 | 83% | 6,215 | 79% |
| **Instructional Staff FTEs 2005-6:** | | | | | | |
| Non-Degree Granting Institutions | 15 | 25% | 2,201 | 83% | 340 | 79% |
| 2-Yr Degree Granting Institutions | 1,062 | 36% | 23,718 | 69% | 1,554 | 53% |
| Baccalaureate-Granting Institutions | 117 | 28% | 2,059 | 87% | 932 | 65% |
| Post-Baccalaureate-Granting Institutions | 2,329 | 33% | 46,616 | 76% | 10,663 | 88% |
| **New Faculty Hires 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 46 | 33% | 937 | 70% | 54 | 47% |
| Baccalaureate-Granting Institutions | 5 | 18% | 115 | 88% | 51 | 65% |
| Post-Baccalaureate-Granting Institutions | 197 | 44% | 1,831 | 82% | 639 | 88% |

**Table F.2 (continued)**

| Measure | Northwest Florida | | NCI | | Kansas City | |
|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State |
| **Total 2005-6 Enrollment**: | | | | | | |
| Non-Degree Granting Institutions | 5,087 | 6% | 480 | 10% | 7,300 | 91% |
| 2-Yr Degree Granting Institutions | 45,080 | 10% | 14,564 | 12% | 74,459 | 54% |
| Baccalaureate-Granting Institutions | 15,126 | 7% | 882 | 3% | 17,383 | 75% |
| Post-Baccalaureate-Granting Institutions | 70,585 | 12% | 48,858 | 14% | 129,459 | 54% |
| **# Entering Students 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 9,960 | 10% | 1,569 | 12% | 11,765 | 48% |
| Baccalaureate-Granting Institutions | 3,317 | 9% | 251 | 4% | 3,981 | 72% |
| Post-Baccalaureate-Granting Institutions | 12,552 | 14% | 10,016 | 16% | 16,884 | 52% |
| **Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 4,225 | 11% | 704 | 9% | 4,110 | 47% |
| Baccalaureate-Granting Institutions | 1,762 | 7% | 203 | 6% | 2,295 | 69% |
| Post-Baccalaureate-Granting Institutions | 13,627 | 13% | 9,583 | 17% | 18,118 | 47% |
| **STEM Major Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 118 | 6% | 129 | 12% | 334 | 56% |
| Baccalaureate-Granting Institutions | 33 | 1% | 43 | 6% | 254 | 37% |
| Post-Baccalaureate-Granting Institutions | 1,746 | 13% | 3,832 | 40% | 2,262 | 45% |
| **Instructional Staff FTEs 2005-6:** | | | | | | |
| Non-Degree Granting Institutions | 250 | 7% | 33 | 19% | 408 | 74% |
| 2-Yr Degree Granting Institutions | 1,004 | 12% | 289 | 12% | 1,599 | 51% |
| Baccalaureate-Granting Institutions | 284 | 5% | 92 | 8% | 636 | 68% |
| Post-Baccalaureate-Granting Institutions | 2,922 | 12% | 2,526 | 17% | 5,816 | 49% |
| **New Faculty Hires 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 37 | 12% | 6 | 6% | 61 | 44% |
| Baccalaureate-Granting Institutions | 19 | 10% | 11 | 17% | 37 | 65% |
| Post-Baccalaureate-Granting Institutions | 169 | 12% | 225 | 23% | 390 | 55% |

**Table F.2 (continued)**

| Measure | North Star Alliance | | Mid-Michigan | | West Michigan | | Montana | |
|---|---|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State | Region | % of State |
| **Total 2005-6 Enrollment**: | | | | | | | | |
| Non-Degree Granting Institutions | 1,754 | 100% | 2194 | 11% | 2,835 | 14% | 0 | 0% |
| 2-Yr Degree Granting Institutions | 15,633 | 80% | 65271 | 19% | 29,084 | 8% | 5,921 | 37% |
| Baccalaureate-Granting Institutions | 16,108 | 71% | 11605 | 23% | 8,849 | 18% | 0 | 0% |
| Post-Baccalaureate-Granting Institutions | 44,212 | 100% | 92021 | 21% | 58,454 | 13% | 1,786 | 4% |
| **# Entering Students 2005-6:** | | | | | | | | |
| 2-Yr Degree Granting Institutions | 4,357 | 82% | 5850 | 16% | 4,692 | 13% | 828 | 27% |
| Baccalaureate-Granting Institutions | 2,524 | 63% | 3263 | 25% | 2,543 | 19% | 0 | 0 |
| Post-Baccalaureate-Granting Institutions | 6,297 | 100% | 14554 | 21% | 8,592 | 12% | 355 | 4% |
| **Completions 2005-6:** | | | | | | | | |
| 2-Yr Degree Granting Institutions | 1,486 | 80% | 3421 | 18% | 1,963 | 10% | 451 | 37% |
| Baccalaureate-Granting Institutions | 2,082 | 68% | 1098 | 19% | 1,322 | 23% | 0 | 0% |
| Post-Baccalaureate-Granting Institutions | 5,919 | 100% | 17213 | 22% | 8,498 | 11% | 320 | 5% |
| **STEM Major Completions 2005-6:** | | | | | | | | |
| 2-Yr Degree Granting Institutions | 184 | 83% | 298 | 13% | 325 | 14% | 50 | 30% |
| Baccalaureate-Granting Institutions | 507 | 92% | 196 | 24% | 180 | 22% | 0 | 0% |
| Post-Baccalaureate-Granting Institutions | 922 | 100% | 2914 | 20% | 951 | 7% | 41 | 3% |
| **Instructional Staff FTEs 2005-6:** | | | | | | | | |
| Non-Degree Granting Institutions | 79 | 100% | 71 | 16% | 68 | 15% | 0 | 0% |
| 2-Yr Degree Granting Institutions | 520 | 84% | 1417 | 23% | 568 | 9% | 168 | 44% |
| Baccalaureate-Granting Institutions | 797 | 75% | 235 | 14% | 398 | 25% | 0 | 0% |
| Post-Baccalaureate-Granting Institutions | 1,824 | 100% | 3829 | 20% | 1,905 | 10% | 81 | 4% |
| **New Faculty Hires 2005-6:** | | | | | | | | |
| 2-Yr Degree Granting Institutions | 17 | 85% | 22 | 23% | 9 | 9% | 18 | 72% |
| Baccalaureate-Granting Institutions | 62 | 87% | 2 | 3% | 19 | 25% | 0 | 0% |
| Post-Baccalaureate-Granting Institutions | 75 | 100% | 149 | 14% | 133 | 13% | 7 | 7% |

**Table F.2 (continued)**

| Measure | Finger Lakes | | Piedmont Triad | | Wall Street West | |
|---|---|---|---|---|---|---|
| | Region | % of State | Region | % of State | Region | % of State |
| **Total 2005-6 Enrollment**: | | | | | | |
| Non-Degree Granting Institutions | 1,149 | 3% | 1,187 | 19% | 2,493 | 9% |
| 2-Yr Degree Granting Institutions | 49,811 | 11% | 44,025 | 15% | 45,574 | 19% |
| Baccalaureate-Granting Institutions | 0 | 0% | 4,025 | 14% | 7,549 | 10% |
| Post-Baccalaureate-Granting Institutions | 57,276 | 6% | 59,314 | 19% | 75,685 | 13% |
| **# Entering Students 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 9,002 | 10% | 12,092 | 19% | 9,773 | 20% |
| Baccalaureate-Granting Institutions | 0 | 0% | 1,197 | 14% | 1,715 | 9% |
| Post-Baccalaureate-Granting Institutions | 9,440 | 6% | 12,037 | 21% | 14,056 | 14% |
| **Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 4,369 | 10% | 2,654 | 15% | 3,702 | 17% |
| Baccalaureate-Granting Institutions | 0 | 0% | 583 | 12% | 1,406 | 12% |
| Post-Baccalaureate-Granting Institutions | 12,646 | 7% | 9,540 | 18% | 12,478 | 11% |
| **STEM Major Completions 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 315 | 9% | 314 | 16% | 491 | 14% |
| Baccalaureate-Granting Institutions | 0 | 0% | 134 | 24% | 380 | 13% |
| Post-Baccalaureate-Granting Institutions | 2,679 | 11% | 1,177 | 12% | 1,873 | 10% |
| **Instructional Staff FTEs 2005-6:** | | | | | | |
| Non-Degree Granting Institutions | 40 | 3% | 26 | 13% | 123 | 8% |
| 2-Yr Degree Granting Institutions | 898 | 8% | 2,189 | 19% | 1,040 | 17% |
| Baccalaureate-Granting Institutions | 0 | 0% | 220 | 14% | 519 | 13% |
| Post-Baccalaureate-Granting Institutions | 4,578 | 8% | 3,576 | 20% | 3,277 | 9% |
| **New Faculty Hires 2005-6:** | | | | | | |
| 2-Yr Degree Granting Institutions | 24 | 8% | 56 | 9% | 18 | 8% |
| Baccalaureate-Granting Institutions | 0 | 0% | 20 | 13% | 20 | 7% |
| Post-Baccalaureate-Granting Institutions | 269 | 7% | 318 | 23% | 177 | 10% |

**Source: U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS)**

# Table F.3
# Demographic Measures: Comparing Generation I WIRED Regions with Their States

| Measure | WAEM | | California Corridor | | Metro Denver | | Northwest Florida | | NCI | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Region | State | Region | State | Region | State | Region | State | Region | State |
| **Total Population** | 2,844,658 | 4,447,100 | 24,278,841 | 33,871,648 | 2,833,000 | 4,301,261 | 1,222,492 | 15,982,378 | 535,700 | 6,080,485 |
| **Population Density**[a] | 59.7 | 86.1 | 415.6 | 214.2 | 253.3 | 41.3 | 105.9 | 281.8 | 95.5 | 168.0 |
| **Male** | 48% | 48% | 50% | 50% | 50% | 50% | 49.8% | 48.8% | 49.9% | 49.1% |
| **Race/Ethnicity** | | | | | | | | | | |
| White | 61% | 71% | 57% | 60% | 82% | 83% | 76% | 78% | 93% | 88% |
| Black | 36% | 26% | 7% | 7% | 4% | 4% | 19% | 15% | 2% | 8% |
| American Indian | 0.4% | 0.5% | 1% | 1% | 1% | 1% | 1% | 0.3% | 0.4% | 0.3% |
| Asian or Pacific Islander | 1% | 1% | 12% | 11% | 3% | 2% | 2% | 2% | 2% | 1% |
| Other/Multiple Race | 1% | 1% | 23% | 22% | 11% | 10% | 3% | 5% | 3% | 3% |
| *Hispanic Ethnicity*[b] | *1%* | *1%* | *36%* | *32%* | *18%* | *17%* | *3%* | *17%* | *4%* | *4%* |
| **Age** | | | | | | | | | | |
| *Median Age* | *33.8* | *35.9* | *32.7* | *33.3* | *33.8* | *34.4* | *35.5* | *38.7* | *34.4* | *35.2* |
| 15 to 19 | 8% | 7% | 7% | 7% | 7% | 7% | 8% | 6% | 8% | 8% |
| 20 to 24 | 8% | 7% | 7% | 7% | 7% | 7% | 88% | 6% | 9% | 7% |
| 25 to 34 | 13% | 14% | 16% | 15% | 16% | 15% | 14% | 13% | 13% | 14% |
| 35 to 44 | 15% | 15% | 16% | 16% | 17% | 17% | 16% | 16% | 15% | 16% |
| 45 to 54 | 13% | 14% | 12% | 13% | 14% | 14% | 13% | 13% | 13% | 13% |
| 55 to 64 | 9% | 9% | 8% | 8% | 8% | 8% | 9% | 10% | 9% | 9% |
| 65 and older | 12% | 13% | 10% | 11% | 9% | 10% | 12% | 18% | 13% | 12% |
| **Income** | | | | | | | | | | |
| Average for Household | $42,315 | $45,923 | $66,144 | $65,628 | $65,707 | $61,437 | $47,539 | $53,504 | $49,145 | $52,229 |
| Median for Household | $31,489 | $34,250 | $48,179 | $47,692 | $51,119 | $47,338 | $36,425 | $38,924 | $40,733 | $41,771 |
| **Education Levelc** | | | | | | | | | | |
| Less than HS Diploma | 27% | 25% | 24% | 23% | 13% | 13% | 18% | 20% | 16% | 18% |
| High School Graduate | 29% | 30 % | 20% | 20% | 22% | 23% | 28% | 29% | 42% | 37% |
| Some College, No Degree | 30% | 21% | 22% | 23% | 23% | 24% | 23% | 22% | 19% | 20% |
| Advanced Degree | 23% | 24% | 34% | 34% | 42% | 40% | 31% | 29% | 23% | 25% |

[a] Population density is population per square mile

[b] Hispanics may be of any race, so also are included in applicable race categories.

[c] Education level for population age 25 and older

**Table F.3 (continued)**

| Measure | Kansas City | | North Star Alliance | | Mid-Michigan | | West Michigan | | Finger Lakes | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Region | State | Region | State | Region | State | Region | State | Region | State |
| **Total Population** | 5,595,211 | 2,688,418 | 1,742,373 | 9,938,444 | 1,254,661 | 9,938,444 | 1,199,588 | 18,976,457 | 1,199,588 | 18,976,457 |
| **Population Density**[a] | 80.3 | 32.7 | 203.6 | 170.9 | 259.4 | 170.9 | 248.6 | 390.2 | 248.6 | 390.2 |
| **Male** | 49% | 49% | 49% | 49% | 50% | 49% | 49% | 48% | 49% | 48% |
| **Race/Ethnicity** | | | | | | | | | | |
| White | 85% | 86% | 97% | 97% | 86% | 80% | 87% | 80% | 85% | 68% |
| Black | 11% | 6% | 1% | 1% | 10% | 14% | 7% | 14% | 10% | 16% |
| American Indian | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 0.3% | 0.4% |
| Asian or Pacific Islander | 1% | 2% | 1% | 1% | 1% | 2% | 1% | 2% | 2% | 6% |
| Other/Multiple Race | 2% | 6% | 1% | 1% | 3% | 3% | 5% | 3% | 3% | 10% |
| *Hispanic Ethnicity*[b] | *2%* | *7%* | *1%* | *1%* | *4%* | *3%* | *6%* | *3%* | *4%* | *15%* |
| **Age** | | | | | | | | | | |
| *Median Age* | *36.1* | *35.2* | *38.4* | *38.6* | *35.4* | *35.5* | *33.5* | *35.5* | *36.4* | *35.9* |
| 15 to 19 | 8% | 8% | 7% | 7% | 8% | 7% | 8% | 7% | 7% | 7% |
| 20 to 24 | 7% | 7% | 6% | 6% | 7% | 7% | 7% | 7% | 6% | 7% |
| 25 to 34 | 13% | 13% | 13% | 12% | 13% | 14% | 14% | 14% | 13% | 15% |
| 35 to 44 | 16% | 16% | 17% | 17% | 16% | 16% | 16% | 16% | 17% | 16% |
| 45 to 54 | 13% | 13. % | 15% | 15% | 14% | 14% | 13% | 14% | 14% | 14% |
| 55 to 64 | 9% | 8% | 10% | 10% | 9% | 9% | 8% | 9% | 9% | 9% |
| 65 and older | 14% | 13% | 14% | 14% | 12% | 12% | 11% | 12% | 13% | 13% |
| **Income** | | | | | | | | | | |
| Average for Household | $49,956 | $52,080 | $49,179 | $47,383 | $55,210 | $57,400 | $55,681 | $57,400 | $54,745 | $61,856 |
| Median for Household | $38,114 | $40,687 | $38,750 | $37,368 | $44,114 | $44,702 | $45,694 | $44,702 | $43,488 | $43,642 |
| **Education Levelc** | | | | | | | | | | |
| Less than HS Diploma | 19% | 14% | 14% | 15% | 15% | 17% | 16% | 17% | 16% | 21% |
| High School Graduate | 30% | 30% | 35% | 36% | 33% | 31% | 32% | 31% | 30% | 28% |
| Some College, No Degree | 22% | 25% | 19% | 19% | 24% | 23% | 23% | 23% | 18% | 17% |
| Advanced Degree | 27% | 32% | 32% | 30% | 28% | 29% | 29% | 29% | 36% | 35% |

[a] Population density is population per square mile

[b] Hispanics may be of any race, so also are included in applicable race categories.

[c] Education level for population age 25 and older

**Table F.3 (continued)**

| Measure | Montana | | Piedmont Triad | | Wall Street West | |
|---|---|---|---|---|---|---|
| | Region | State | Region | State | Region | State |
| **Total Population** | 179,639 | 902,195 | 1,464,979 | 8,049,313 | 1,776,855 | 12,281,054 |
| **Population Density**[a] | 2.1 | 6.1 | 245.7 | 162.9 | 336.3 | 271.1 |
| **Male** | 50% | 50% | 48% | 49% | 49% | 48% |
| **Race/Ethnicity** | | | | | | |
| White | 78% | 91% | 75% | 72% | 92% | 85% |
| Black | 0.1% | 0.3% | 20% | 22% | 3% | 10% |
| American Indian | 19% | 6% | 0.4% | 1% | 0.2% | 0.2% |
| Asian or Pacific Islander | 0.3% | 1% | 1% | 2% | 1.1% | 2% |
| Other/Multiple Race | 2% | 2% | 4% | 4% | 4% | 3% |
| *Hispanic Ethnicity*[b] | *1%* | *2%* | *5%* | *5%* | *6%* | *3%* |
| **Age** | | | | | | |
| *Median Age* | *38.1* | *37.5* | *36.3* | *35.3* | *38.9* | *38.0* |
| 15 to 19 | 9% | 8% | 7% | 7% | 7% | 7% |
| 20 to 24 | 5% | 7% | 7% | 7% | 6% | 6% |
| 25 to 34 | 10% | 11% | 15% | 15% | 12% | 13% |
| 35 to 44 | 15% | 16% | 16% | 16% | 16% | 16% |
| 45 to 54 | 14% | 15% | 14% | 14% | 14% | 14% |
| 55 to 64 | 9% | 9% | 9% | 9% | 9% | 9% |
| 65 and older | 15% | 13% | 13% | 12% | 17% | 16% |
| **Income** | | | | | | |
| Average for Household | $36,887 | $42,471 | $50,926 | $52,682 | $50,926 | $52,682 |
| Median for Household | $29,448 | $33,195 | $40,571 | $40,115 | $40,571 | $40,115 |
| **Education Levelc** | | | | | | |
| Less than HS Diploma | 17% | 13% | 23% | 22% | 19% | 18% |
| High School Graduate | 33% | 31% | 30% | 29% | 39% | 38% |
| Some College, No Degree | 25% | 26% | 20% | 21% | 16% | 16% |
| Advanced Degree | 25% | 30% | 27% | 29% | 26% | 28% |

[a] Population density is population per square mile

[b] Hispanics may be of any race, so also are included in applicable race categories.

[c] Education level for population age 25 and older

**Source: Workforce Innovation and Technical Solutions (WITS)**

# Table F.4
# NAICS Codes for Each Region's Customized Basket of Target Industries

| Region | Industries or Clusters Targeted | NAICS Codes | NAICS Industry Label |
|---|---|---|---|
| **WAEM** | Warehousing | 493 | Warehousing and Storage |
| | Tourism | 5615 | Travel Arrangement and Reservation Services |
| | Health care | 621 | Ambulatory Health Care Services |
| | | 622 | Hospitals |
| | | 623 | Nursing and Residential Care Facilities |
| **California Corridor** | Aerospace | 236220 | Commercial and Institutional Building Construction |
| | | 3251 | Basic Chemical Manufacturing |
| | | 332721 | Precision Turned Product Manufacturing |
| | | 332813 | Electroplating, Plating, Polishing, Anodizing, and Coloring |
| | | 3329 | Other Fabricated Metal Product Manufacturing |
| | | 333314 | Optical Instrument and Lens Manufacturing |
| | | 333514 | Special Die and Tool, Die Set, Jig, and Fixture Manufacturing |
| | | 33392 | Material Handling Equipment Manufacturing |
| | | 334111 | Electronic Computer Manufacturing |
| | | 33429 | Other Communications Equipment Manufacturing |
| | | 3345 | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing |
| | | 3359 | Other Electrical Equipment and Component Manufacturing |
| | | 48811 | Airport Operations |
| | | 5174 | Satellite Telecommunications |
| | | 5182 | Data Processing, Hosting, and Related Services |
| | | 54133 | Engineering Services |
| | | 54136 | Geophysical Surveying and Mapping Services |
| | | 54138 | Testing Laboratories |
| | | 5414 | Specialized Design Services |
| | | 5415 | Computer Systems Design and Related Services |
| | | 541614 | Process, Physical Distribution, and Logistics Consulting Services |
| | | 5417 | Scientific Research and Development Services |
| | | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| | | 611512 | Flight Training |
| | | 927 | Space Research and Technology |
| **Metro Denver** | Software development | 5112 | Software Publishers |
| | Aerospace | 3364 | Aerospace Product and Parts Manufacturing |
| | Life Sciences | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| **Northwest Florida** | Aerospace and defense | 3364 | Aerospace Product and Parts Manufacturing |
| | | 336992 | Military Armored Vehicle, Tank, and Tank Component Manufacturing |
| | Life science | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| | Information technology | 5415 | Computer Systems Design and Related Services |
| | | 518 | Internet Service Providers, Web Search Portals, and Data Processing Services |
| | Electronics engineering | 54133 | Engineering Services |

| Region | Industries or Clusters Targeted | NAICS Codes | NAICS Industry Label |
|---|---|---|---|
| | Construction | 23 | Construction |
| **NCI** | Advanced Manufacturing | ??? | No target or regional stronghold industries specified in implementation plan |
| | Advanced Materials | 333295 | Semiconductor Machinery Manufacturing |
| | | 325211 | Plastics Material and Resin Manufacturing |
| | Agribusiness | 3253 | Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing |
| | | 111 | Crop Production |
| | | 112 | Animal Production |
| | | 33311 | Agricultural Implement Manufacturing |
| | Food Manufacturing | 311 | Food Manufacturing |
| **Kansas City** | Biotechnology | 3254 | Pharmaceutical and Medicine Manufacturing |
| | | 5417 | Scientific Research and Development Services |
| | Advanced manufacturing | ??? | No target or regional stronghold industries specified in implementation plan |
| | Health care | 621 | Ambulatory Health Care Services |
| | | 622 | Hospitals |
| | | 623 | Nursing and Residential Care Facilities |
| | Animal Health | 541940 | Veterinary Services |
| | | 453910 | Pet and Pet Supplies Stores |
| **North Star Alliance** | Boat/marine-related service/repair/ support | 3366 | Ship and Boat Building |
| | Advanced composite materials building products | 3261 | Plastics Products Manufacturing |
| | | 321219 | Reconstituted Wood Product Manufacturing |
| | | 325211 | Plastics Material and Resin Manufacturing |
| | | 32613 | Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing |
| | | 325991 | Custom Compounding of Purchased Resins |
| | | 3336 | Engine, Turbine, and Power Transmission Equipment Manufacturing |
| | Ballistic armor | 336992 | Military Armored Vehicle, Tank, and Tank Component Manufacturing |
| | Sporting goods | 33992 | Sporting and Athletic Goods Manufacturing |
| **Mid-Michigan** | Automotive suppliers | 3363 | Motor Vehicle Parts Manufacturing |
| | Alternative fuels | 22111 | Electric Power Generation |
| | | 11112 | Oilseed (except Soybean) Farming |
| | | 31122 | Wet Corn Milling |
| | | 325221 | Cellulosic Organic Fiber Manufacturing |
| | National Security | 92811 | National Security |
| | Bio-economy | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| | | 54138 | Testing Laboratories |
| | Health care | 621 | Ambulatory Health Care Services |
| | | 622 | Hospitals |
| | | 623 | Nursing and Residential Care Facilities |
| | Construction industry | 23 | Construction |
| **West Michigan** | Life sciences | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| | Advanced manufacturing technologies | ??? | No target or regional stronghold industries specified in implementation plan |
| | Health care | 621 | Ambulatory Health Care Services |
| | | 622 | Hospitals |
| | | 623 | Nursing and Residential Care Facilities |

| Region | Industries or Clusters Targeted | NAICS Codes | NAICS Industry Label |
|---|---|---|---|
| **Montana** | Bio-lubricant and bio-product manufacturing | 3112 | Grain and Oilseed Milling |
| | | 31122 | Starch and Vegetable Fats and Oils Manufacturing |
| | | 311223 | Other Oilseed Processing |
| | | 311225 | Fats and Oils Refining and Blending |
| | | 11111 | Soybean Farming |
| | | 11112 | Oilseed (except Soybean) Farming |
| | | 32519 | Other Basic Organic Chemical Manufacturing |
| **Finger Lakes** | Alternative Energy | 22111 | Electric Power Generation |
| | Bio/Life Science | 54171 | Research and Development in the Physical, Engineering, and Life Sciences |
| | Food & Ag | 311 | Food Manufacturing |
| | | 3253 | Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing |
| | | 33311 | Agricultural Implement Manufacturing |
| | Optics/Imaging | 333314 | Optical Instrument and Lens Manufacturing |
| | | 333315 | Photographic and Photocopying Equipment Manufacturing |
| | | 325992 | Photographic Film, Paper, Plate, and Chemical Manufacturing |
| | | 33461 | Magnetic and Optical Recording Media Manufacturing |
| **Piedmont Triad** | Advanced Manufacturing | 3254 | Pharmaceutical and Medicine Manufacturing |
| | | 3344 | Semiconductor and Other Electronic Component Manufacturing |
| | | 3261 | Plastics Products Manufacturing |
| | | 325 | Chemical Manufacturing |
| | | 311 | Food Manufacturing |
| | | 336 | Transportation Equipment Manufacturing |
| | Creative Enterprises and the Arts | 711130 | Musical Groups and Artists |
| | | 611610 | Fine Arts Schools |
| | | 711190 | Other Performing Arts Companies |
| | | 711510 | Independent Artists, Writers, and Performers |
| | | 32311 | Printing |
| | | 54143 | Graphic Design Services |
| | Logistics/Distribution | 541614 | Process, Physical Distribution, and Logistics Consulting Services |
| | Health care | 621 | Ambulatory Health Care Services |
| | | 622 | Hospitals |
| | | 623 | Nursing and Residential Care Facilities |
| **Wall Street West** | Connectivity infrastructure | 5182 | Data Processing, Hosting, and Related Services |
| | | 517110 | Wired Telecommunications Carriers |
| | | 522320 | Financial Transactions Processing, Reserve, and Clearinghouse Activities |

***Source: NAICS Industry Codes, U.S. Census Bureau***

# Table F.5
# Generation I WIRED Evaluation's Definition of STEM Subjects
# (Science, Technology, Engineering, and Mathematics)

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| **01-Agriculture, agriculture operations, and related sciences.** | | | |
| ***01.00-Agriculture, General*** | | | |
| 01.0905-Dairy Science | | | X |
| 01.0906-Livestock Management | | | |
| 01.0907-Poultry Science | | | X |
| **03-Natural resources and conservation.** | | | |
| ***03.01-Natural Resources Conservation and Research*** | X | X | |
| 03.0101-Natural Resources/Conservation, General | X | X | |
| 03.0103-Environmental Studies | X | X | |
| 03.0104-Environmental Science | X | X | |
| 03.0199-Natural Resources Conservation and Research, Other | X | X | |
| ***03.02-Natural Resources Management and Policy*** | X | | |
| 03.0201-Natural Resources Management and Policy | X | | |
| 03.0204-Natural Resource Economics | X | | |
| 03.0205-Water, Wetlands, and Marine Resources Management | X | | |
| 03.0206-Land Use Planning and Management/Development | X | | |
| 03.0299-Natural Resources Management and Policy, Other | X | | |
| ***03.03-Fishing and Fisheries Sciences and Management*** | X | | |
| ***03.05-Forestry*** | X | | X |
| 03.0501-Forestry, General | X | | X |
| 03.0502-Forest Sciences and Biology | X | | X |
| 03.0506-Forest Management/Forest Resources Management | X | | X |
| 03.0508-Urban Forestry | X | | X |
| 03.0509-Wood Science and Wood Products/Pulp and Paper Technology | X | | X |
| 03.0510-Forest Resources Production and Management | X | | X |
| 03.0511-Forest Technology/Technician | X | | X |
| 03.0599-Forestry, Other | X | | X |
| ***03.06-Wildlife and Wildlands Science and Management*** | | | X |
| **11-Computer and information sciences and support services.** | X | | |
| ***11.01-Computer and Information Sciences, General*** | X | X | |
| 11.0101-Computer and Information Sciences, General | X | X | |
| 11.0102-Artificial Intelligence and Robotics | X | X | |
| 11.0103-Information Technology | X | X | |
| 11.0199-Computer and Information Sciences, Other | X | X | |
| ***11.02-Computer Programming*** | X | | X |
| 11.0201-Computer Programming/Programmer, General | X | | X |
| 11.0202-Computer Programming, Specific Applications | X | | X |
| 11.0203-Computer Programming, Vendor/Product Certification | X | | X |
| 11.0299-Computer Programming, Other | X | | X |
| ***11.03-Data Processing*** | X | | X |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| 11.0301-Data Processing and Data Processing Technology/Technician | X | | X |
| ***11.04-Information Science/Studies*** | X | X | |
| ***11.05-Computer Systems Analysis*** | X | | |
| ***11.06-Data Entry/Microcomputer Applications*** | | | |
| ***11.07-Computer Science*** | X | X | |
| ***11.08-Computer Software and Media Applications*** | X | | |
| 11.0801-Web Page, Digital/Multimedia and Information Resources Design | X | | |
| 11.0802-Data Modeling/Warehousing and Database Administration | X | | |
| 11.0803-Computer Graphics | X | | |
| 11.0899-Computer Software and Media Applications, Other | X | | |
| ***11.09-Computer Systems Networking and Telecommunications*** | X | | |
| ***11.10-Computer/Information Technology Administration and Management*** | X | | |
| 11.1001-System Administration/Administrator | X | | |
| 11.1002-System, Networking, and LAN/WAN Management/Manager | X | | |
| 11.1003-Computer and Information Systems Security | X | | |
| 11.1004-Web/Multimedia Management and Webmaster | X | | |
| 11.1099-Computer/Info Tech Services Administration & Management, Other | X | | |
| ***11.99-Computer and Information Sciences and Support Services, Other.*** | X | | |
| **14-Engineering.** | X | X | |
| ***14.01-Engineering, General*** | X | X | |
| ***14.02-Aerospace, Aeronautical and Astronautical Engineering*** | X | X | X |
| ***14.03-Agricultural/Biological Engineering and Bioengineering*** | X | X | |
| ***14.04-Architectural Engineering*** | X | X | X |
| ***14.05-Biomedical/Medical Engineering*** | X | X | |
| ***14.06-Ceramic Sciences and Engineering*** | X | X | |
| ***14.07-Chemical Engineering*** | X | X | X |
| ***14.08-Civil Engineering*** | X | X | X |
| 14.0801-Civil Engineering, General | X | X | X |
| 14.0802-Geotechnical Engineering | X | X | X |
| 14.0803-Structural Engineering | X | X | X |
| 14.0804-Transportation and Highway Engineering | X | X | X |
| 14.0805-Water Resources Engineering | X | X | X |
| 14.0899-Civil Engineering, Other | X | X | X |
| ***14.09-Computer Engineering, General*** | X | X | |
| 14.0901-Computer Engineering, General | X | X | |
| 14.0903-Computer Software Engineering | X | X | |
| 14.0999-Computer Engineering, Other | X | X | |
| ***14.10-Electrical, Electronics and Communications Engineering*** | X | X | X |
| ***14.11-Engineering Mechanics*** | X | X | |
| ***14.12-Engineering Physics*** | X | X | |
| ***14.13-Engineering Science*** | X | X | |
| ***14.14-Environmental/Environmental Health Engineering*** | X | X | |
| ***14.18-Materials Engineering*** | X | X | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| ***14.19-Mechanical Engineering*** | X | X | |
| ***14.20-Metallurgical Engineering*** | X | X | |
| ***14.21-Mining and Mineral Engineering*** | X | X | |
| ***14.22-Naval Architecture and Marine Engineering*** | X | X | |
| ***14.23-Nuclear Engineering*** | X | X | X |
| ***14.24-Ocean Engineering*** | X | X | |
| ***14.25-Petroleum Engineering*** | X | X | |
| ***14.27-Systems Engineering*** | X | X | |
| ***14.28-Textile Sciences and Engineering*** | X | X | |
| ***14.31-Materials Science*** | X | X | |
| ***14.32-Polymer/Plastics Engineering*** | X | X | |
| ***14.33-Construction Engineering*** | X | X | |
| ***14.34-Forest Engineering*** | X | X | |
| ***14.35-Industrial Engineering*** | X | X | |
| ***14.36-Manufacturing Engineering*** | X | X | |
| ***14.37-Operations Research*** | X | X | |
| ***14.38-Surveying Engineering*** | X | X | |
| ***14.39-Geological/Geophysical Engineering*** | X | X | |
| ***14.99-Engineering, Other*** | X | X | |
| **15-Engineering technologies/technicians.** | X | X | |
| ***15.00-Engineering Technology, General*** | X | X | |
| ***15.01-Architectural Engineering Technologies/Technicians*** | X | X | |
| ***15.02-Civil Engineering Technologies/Technicians*** | X | X | |
| ***15.03-Electrical Engineering Technologies/Technicians*** | X | X | |
| 15.0303-Electrical/Electronic/Communications Engr Technology/Technician | X | X | |
| 15.0304-Laser and Optical Technology/Technician | X | X | |
| 15.0305-Telecommunications Technology/Technician | X | X | |
| 15.0399-Electrical/Electronic Engineering Technologies/Technicians, Other | X | X | |
| ***15.04-Electromechanical Instrumentation and Maintenance Technologies/Technicians*** | X | X | |
| 15.0401-Biomedical Technology/Technician | X | X | |
| 15.0403-Electromechanical Technology/Electromechanical Engineering Tech | X | X | |
| 15.0404-Instrumentation Technology/Technician | X | X | |
| 15.0405-Robotics Technology/Technician | X | X | |
| 15.0499-Electromechanical Instrumentation/Maintenance Techs, Other | X | X | |
| ***15.05-Environmental Control Technologies/Technicians*** | X | X | |
| 15.0501-Heating/AC/Refrigeration Technology/Technician | X | X | |
| 15.0503-Energy Management and Systems Technology/Technician | X | X | |
| 15.0505-Solar Energy Technology/Technician | X | X | X |
| 15.0506-Water Quality & Wastewater Treatment Mgmt & Recycling Tech | X | X | |
| 15.0507-Environmental Engineering Technology/Environmental Technology | X | X | |
| 15.0508-Hazardous Materials Management and Waste | X | X | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| Technology/Technician | | | |
| 15.0599-Environmental Control Technologies/Technicians, Other | X | X | |
| ***15.06-Industrial Production Technologies/Technicians*** | X | X | |
| 15.0607-Plastics Engineering Technology/Technician | X | X | |
| 15.0611-Metallurgical Technology/Technician | X | X | |
| 15.0612-Industrial Technology/Technician | X | X | |
| 15.0613-Manufacturing Technology/Technician | X | X | |
| 15.0699-Industrial Production Technologies/Technicians, Other | X | X | |
| ***15.07-Quality Control and Safety Technologies/Technicians*** | X | X | |
| 15.0701-Occupational Safety and Health Technology/Technician | X | X | |
| 15.0702-Quality Control Technology/Technician | X | X | |
| 15.0703-Industrial Safety Technology/Technician | X | X | |
| 15.0704-Hazardous Materials Information Systems Technology/Technician | X | X | |
| 15.0799-Quality Control and Safety Technologies/Technicians, Other | X | X | |
| ***15.08-Mechanical Engineering Related Technologies/Technicians*** | X | X | |
| 15.0801-Aeronautical/Aerospace Engineering Technology/Technician | X | X | |
| 15.0803-Automotive Engineering Technology/Technician | X | X | X |
| 15.0805-Mechanical Engineering/Mechanical Technology/Technician | X | X | |
| 15.0899-Mechanical Engineering Related Technologies/Technicians, Other | X | X | |
| ***15.09-Mining and Petroleum Technologies/Technicians*** | X | X | |
| 15.0901-Mining Technology/Technician | X | X | |
| 15.0903-Petroleum Technology/Technician | X | X | |
| 15.0999-Mining and Petroleum Technologies/Technicians, Other | X | X | |
| ***15.10-Construction Engineering Technologies*** | X | X | |
| ***15.11-Engineering-Related Technologies*** | X | X | |
| 15.1102-Surveying Technology/Surveying | X | X | |
| 15.1103-Hydraulics and Fluid Power Technology/Technician | X | X | |
| 15.1199-Engineering-Related Technologies, Other | X | X | |
| ***15.12-Computer Engineering Technologies/Technicians*** | X | X | |
| 15.1201-Computer Engineering Technology/Technician | X | X | |
| 15.1202-Computer Technology/Computer Systems Technology | X | X | |
| 15.1203-Computer Hardware Technology/Technician | X | X | |
| 15.1204-Computer Software Technology/Technician | X | X | |
| 15.1299-Computer Engineering Technologies/Technicians, Other | X | X | |
| ***15.13-Drafting/Design Engineering Technologies/Technicians*** | X | X | |
| 15.1301-Drafting and Design Technology/Technician, General | X | X | |
| 15.1302-CAD/CADD Drafting and/or Design Technology/Technician | X | X | |
| 15.1303-Architectural Drafting and Architectural CAD/CADD | X | X | |
| 15.1304-Civil Drafting and Civil Engineering CAD/CADD | X | X | |
| 15.1305-Electrical/Electronics Drafting and Electrical/Elect CAD/CADD | X | X | |
| 15.1306-Mechanical Drafting and Mechanical Drafting CAD/CADD | X | X | |
| 15.1399-Drafting/Design Engineering Technologies/Technicians, Other | X | X | |
| ***15.14-Nuclear Engineering Technologies/Technicians*** | X | X | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| ***15.15-Engineering-Related Fields*** | X | X | |
| 15.1501-Engineering/Industrial Management | X | X | |
| ***15.99-Engineering Technologies/Technicians, Other*** | X | X | |
| **26-Biological and biomedical sciences.** | X | X | |
| ***26.01-Biology, General*** | X | X | |
| 26.0101-Biology/Biological Sciences, General | X | X | |
| 26.0102-Biomedical Sciences, General | X | X | |
| ***26.02-Biochemistry, Biophysics and Molecular Biology*** | X | X | |
| 26.0202-Biochemistry | X | X | |
| 26.0203-Biophysics | X | X | |
| 26.0204-Molecular Biology | X | X | |
| 26.0205-Molecular Biochemistry | X | X | |
| 26.0206-Molecular Biophysics | X | X | |
| 26.0207-Structural Biology | X | X | |
| 26.0209-Radiation Biology/Radiobiology | X | X | |
| 26.0210-Biochemistry/Biophysics and Molecular Biology | X | X | |
| 26.0299-Biochemistry, Biophysics and Molecular Biology, Other | X | X | |
| ***26.03-Botany/Plant Biology*** | X | X | X |
| 26.0301-Botany/Plant Biology | X | X | X |
| 26.0305-Plant Pathology/Phytopathology | X | X | X |
| 26.0307-Plant Physiology | X | X | X |
| 26.0308-Plant Molecular Biology | X | X | X |
| 26.0399-Botany/Plant Biology, Other | X | X | X |
| ***26.04-Cell/Cellular Biology and Anatomical Sciences*** | X | X | |
| 26.0401-Cell/Cellular Biology and Histology | X | X | |
| 26.0403-Anatomy | X | X | |
| 26.0404-Developmental Biology and Embryology | X | X | |
| 26.0405-Neuroanatomy | X | X | |
| 26.0406-Cell/Cellular and Molecular Biology | X | X | |
| 26.0407-Cell Biology and Anatomy | X | X | |
| 26.0499-Cell/Cellular Biology and Anatomical Sciences, Other | X | X | |
| ***26.05-Microbiological Sciences and Immunology*** | X | X | |
| 26.0502-Microbiology, General | X | X | |
| 26.0503-Medical Microbiology and Bacteriology | X | X | |
| 26.0504-Virology | X | X | |
| 26.0505-Parasitology | X | X | |
| 26.0507-Immunology | X | X | |
| 26.0599-Microbiological Sciences and Immunology, Other | X | X | |
| ***26.07-Zoology/Animal Biology*** | X | X | X |
| 26.0701-Zoology/Animal Biology | X | X | X |
| 26.0702-Entomology | X | X | X |
| 26.0707-Animal Physiology | X | X | X |
| 26.0708-Animal Behavior and Ethology | X | X | X |
| 26.0709-Wildlife Biology | X | X | X |
| 26.0799-Zoology/Animal Biology, Other | X | X | X |
| ***26.08-Genetics*** | X | X | |
| 26.0801-Genetics, General | X | X | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| 26.0802-Molecular Genetics | X | X | |
| 26.0804-Animal Genetics | X | X | |
| 26.0805-Plant Genetics | X | X | |
| 26.0806-Human/Medical Genetics | X | X | |
| 26.0899-Genetics, Other | X | X | |
| ***26.09-Physiology, Pathology and Related Sciences*** | X | X | |
| 26.0901-Physiology, General | X | X | |
| 26.0902-Molecular Physiology | X | X | |
| 26.0903-Cell Physiology | X | X | |
| 26.0904-Endocrinology | X | X | |
| 26.0905-Reproductive Biology | X | X | |
| 26.0906-Neurobiology and Neurophysiology | X | X | |
| 26.0907-Cardiovascular Science | X | X | |
| 26.0908-Exercise Physiology | X | X | |
| 26.0909-Vision Science/Physiological Optics | X | X | |
| 26.0910-Pathology/Experimental Pathology | X | X | |
| 26.0911-Oncology and Cancer Biology | X | X | |
| 26.0999-Physiology, Pathology, and Related Sciences, Other | X | X | |
| ***26.10-Pharmacology and Toxicology*** | X | X | |
| 26.1001-Pharmacology | X | X | |
| 26.1002-Molecular Pharmacology | X | X | |
| 26.1003-Neuropharmacology | X | X | |
| 26.1004-Toxicology | X | X | |
| 26.1005-Molecular Toxicology | X | X | |
| 26.1006-Environmental Toxicology | X | X | |
| 26.1007-Pharmacology and Toxicology | X | X | |
| ***26.11-Biomathematics and Bioinformatics*** | X | X | |
| 26.1101-Biometry/Biometrics | X | X | |
| 26.1102-Biostatistics | X | X | |
| 26.1103-Bioinformatics | X | X | |
| 26.1199-Biomathematics and Bioinformatics, Other | X | X | |
| ***26.12-Biotechnology*** | X | X | |
| ***26.13-Ecology, Evolution, Systematics and Population Biology*** | X | X | |
| 26.1301-Ecology | X | X | |
| 26.1302-Marine Biology and Biological Oceanography | X | X | |
| 26.1303-Evolutionary Biology | X | X | |
| 26.1304-Aquatic Biology/Limnology | X | X | |
| 26.1305-Environmental Biology | X | X | |
| 26.1306-Population Biology | X | X | |
| 26.1307-Conservation Biology | X | X | |
| 26.1309-Epidemiology | X | X | |
| 26.1399-Ecology, Evolution, Systematics and Population Biology, Other | X | X | |
| ***26.99-Biological and Biomedical Sciences, Other*** | X | X | |
| **27-Mathematics and statistics.** | X | X | |
| ***27.01-Mathematics*** | X | X | |
| 27.0101-Mathematics, General | X | X | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| 27.0199-Mathematics, Other | X | X | |
| ***27.03-Applied Mathematics*** | X | X | X |
| 27.0301-Applied Mathematics | X | X | X |
| 27.0303-Computational Mathematics | X | X | X |
| 27.0399-Applied Mathematics, Other | X | X | X |
| ***27.05-Statistics*** | X | X | |
| 27.0501-Statistics, General | X | X | |
| 27.0502-Mathematical Statistics and Probability | X | X | X |
| 27.0599-Statistics, Other | X | X | |
| ***27.99-Mathematics and Statistics, Other*** | X | X | |
| **29-Military technologies.** | X | X | |
| ***29.01-Military Technologies*** | X | X | |
| **30-Multi/interdisciplinary studies.** | | | |
| ***30.01-Biological and Physical Sciences*** | X | X | |
| ***30.05-Peace Studies and Conflict Resolution*** | | | |
| ***30.06-Systems Science and Theory*** | X | X | |
| ***30.08-Mathematics and Computer Science*** | X | X | |
| ***30.10-Biopsychology*** | X | X | |
| ***30.11-Gerontology*** | X | X | |
| ***30.15-Science, Technology and Society*** | X | X | |
| ***30.16-Accounting and Computer Science*** | X | X | |
| ***30.17-Behavioral Sciences*** | X | | |
| ***30.18-Natural Sciences*** | X | X | |
| ***30.19-Nutrition Sciences*** | X | X | |
| ***30.24-Neuroscience*** | X | X | |
| ***30.25-Cognitive Science*** | X | X | |
| ***30.99-Multi/Interdisciplinary Studies, Other*** | | | |
| **40-Physical sciences.** | X | X | X |
| **41-Science technologies/technicians.** | X | X | |
| **42-Psychology.** | | | |
| ***42.01-Psychology, General*** | | | |
| 42.0101-Psychology, General | | | |
| ***42.02-Clinical Psychology*** | X | | X |
| ***42.03-Cognitive Psychology and Psycholinguistics*** | X | | |
| ***42.04-Community Psychology*** | | | |
| ***42.06-Counseling Psychology*** | | | |
| ***42.07-Developmental and Child Psychology*** | | | |
| ***42.08-Experimental Psychology*** | X | | |
| ***42.09-Industrial and Organizational Psychology*** | | | |
| ***42.10-Personality Psychology*** | | | |
| ***42.11-Physiological Psychology/Psychobiology*** | | | |
| ***42.16-Social Psychology*** | | | X |
| ***42.17-School Psychology*** | | | |
| ***42.18-Educational Psychology*** | | | |
| ***42.19-Psychometrics and Quantitative Psychology*** | X | | |
| ***42.20-Clinical Child Psychology*** | X | | |

| CIP code - 2000 Classification | WIRED | CFAT | GAO |
|---|---|---|---|
| ***42.21-Environmental Psychology*** | | | |
| ***42.23-Health Psychology*** | | | |
| ***42.24-Psychopharmacology*** | X | | |
| ***42.25-Family Psychology*** | | | |
| ***42.26-Forensic Psychology*** | | | |
| ***42.99-Psychology, Other*** | | | |
| **45-Social sciences.** | | | |
| ***45.01-Social Sciences, General*** | | | |
| ***45.02-Anthropology*** | | | |
| 45.0201-Anthropology | | | |
| 45.0202-Physical Anthropology | | | |
| 45.0299-Anthropology, Other | | | |
| ***45.03-Archeology*** | | | |
| ***45.04-Criminology*** | | | |
| ***45.05-Demography and Population Studies*** | | | |
| ***45.06-Economics*** | | | |
| 45.0601-Economics, General | | | |
| 45.0602-Applied Economics | X | | |
| 45.0603-Econometrics and Quantitative Economics | X | | |
| 45.0604-Development Economics and International Development | | | |
| 45.0605-International Economics | | | |
| 45.0699-Economics, Other | | | |
| ***45.07-Geography and Cartography*** | ***x*** | | |
| ***45.09-International Relations and Affairs*** | | | |
| ***45.10-Political Science and Government*** | | | X |
| 45.1001-Political Science and Government, General | | | X |
| 45.1002-American Government and Politics (United States) | | | X |
| 45.1099-Political Science and Government, Other | | | X |
| ***45.11-Sociology*** | | | X |

Sources:
CFAT: Carnegie Foundation - Mapping of CIP codes to disciplinary domains file (http://www.carnegiefoundation.org/classifications/index.asp?key=809)
GAO: US Government of Accountability Office report GAO-06-114: Federal Science, Technology, Engineering, and Mathematics Programs and Related Trends (2005), estimated from table on p.6 (http://www.gao.gov/new.items/d06114.pdf)
WIRED: choices made for WIRED project

# Appendix G

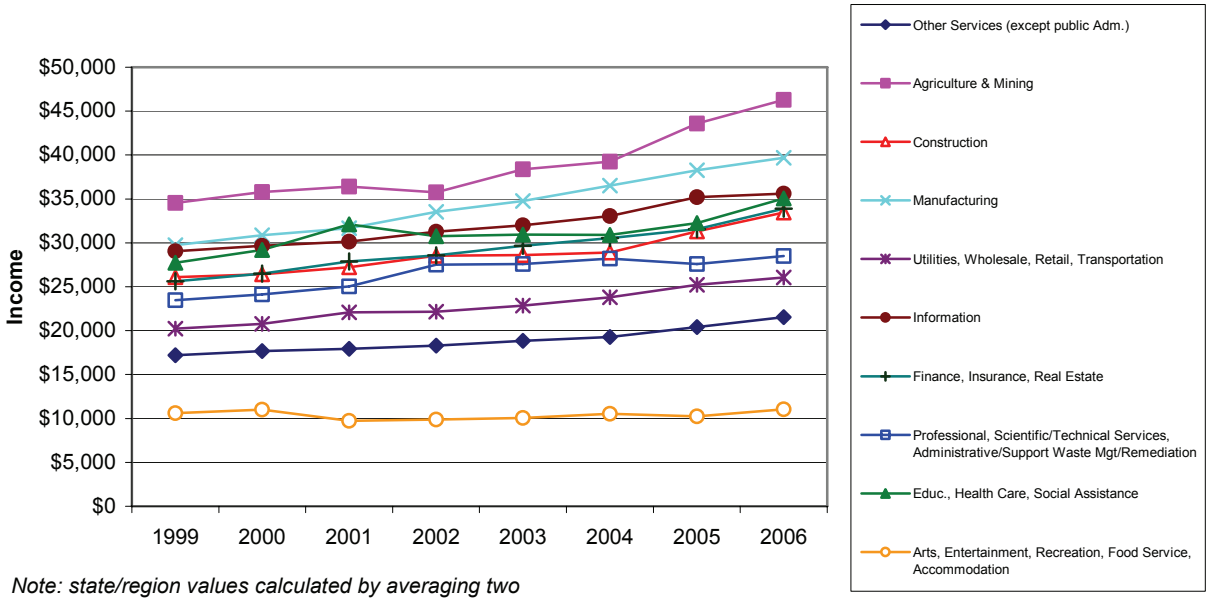
# Trends in Workforce & Innovation Measures for Generation I WIRED Regions

## Measures of Success

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

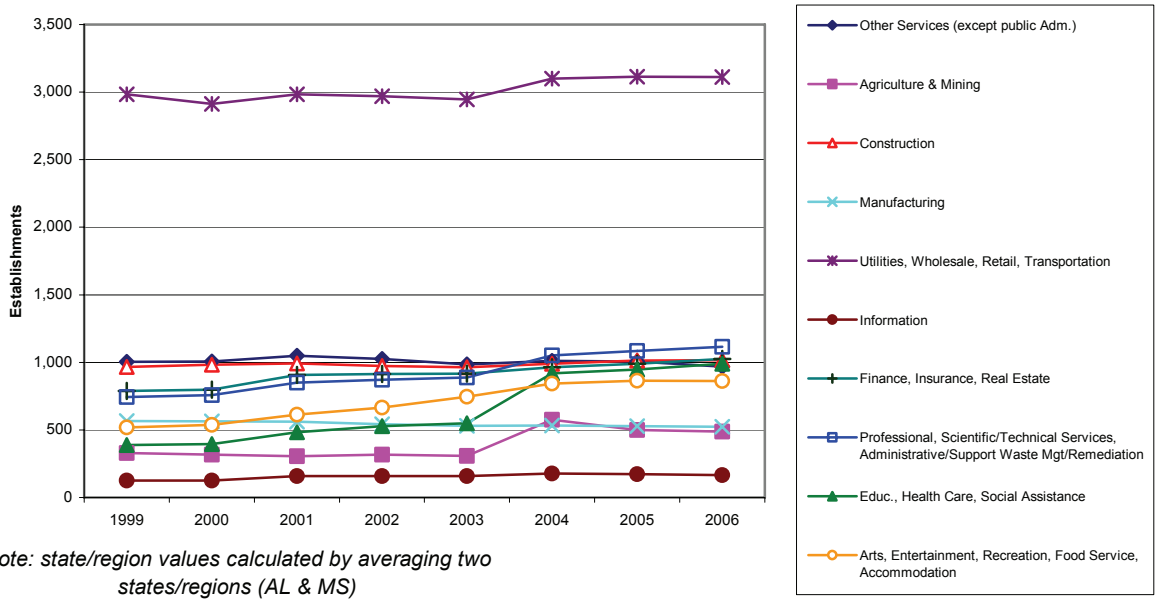
# WAEM

## Figure G1
## Average Annual Income in Region by Industry *
## WAEM




*Note: state/region values calculated by averaging two states/regions (AL & MS)*

## Figure G2
## Average Number of Establishments in Region by Industry*
## WAEM

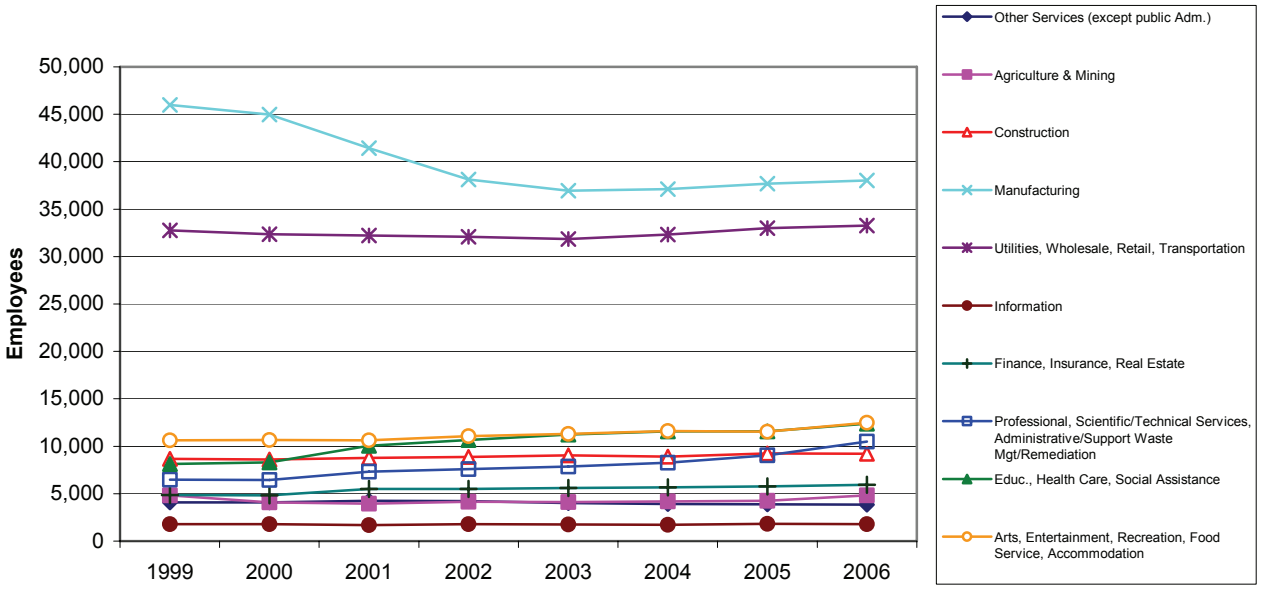



*Note: state/region values calculated by averaging two states/regions (AL & MS)*

*Source: Quarterly Census of Employment and Wages

## Figure G3
## Average Employment in Region by Industry*

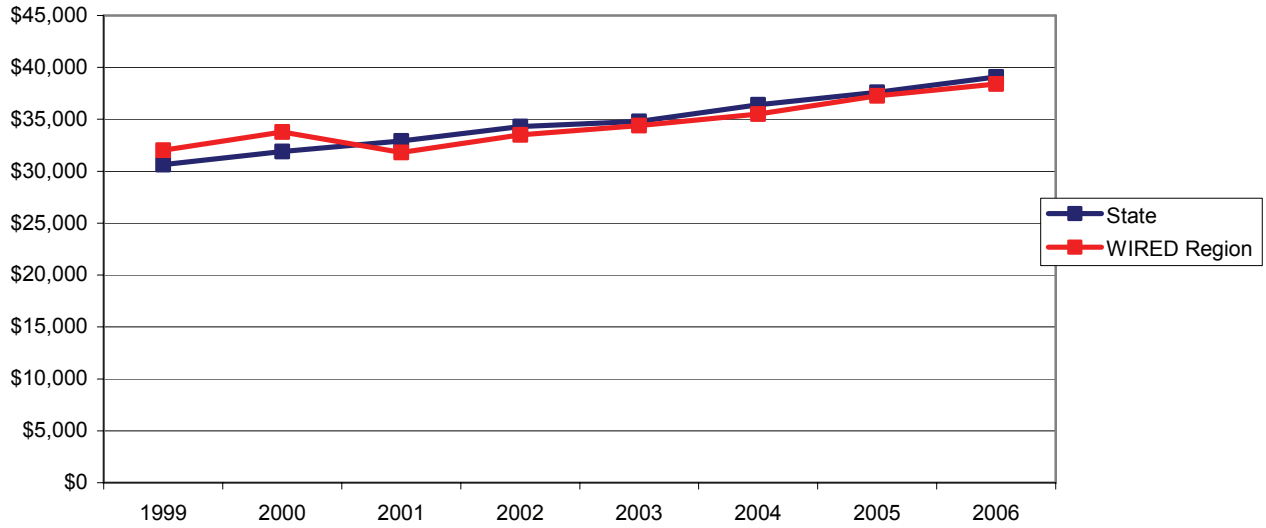
### WAEM




*Note: state/region values calculated by averaging two states/regions (AL & MS)*

## Figure G4
## Average Income for Group of Targeted Industries, Region vs. State*

### WAEM

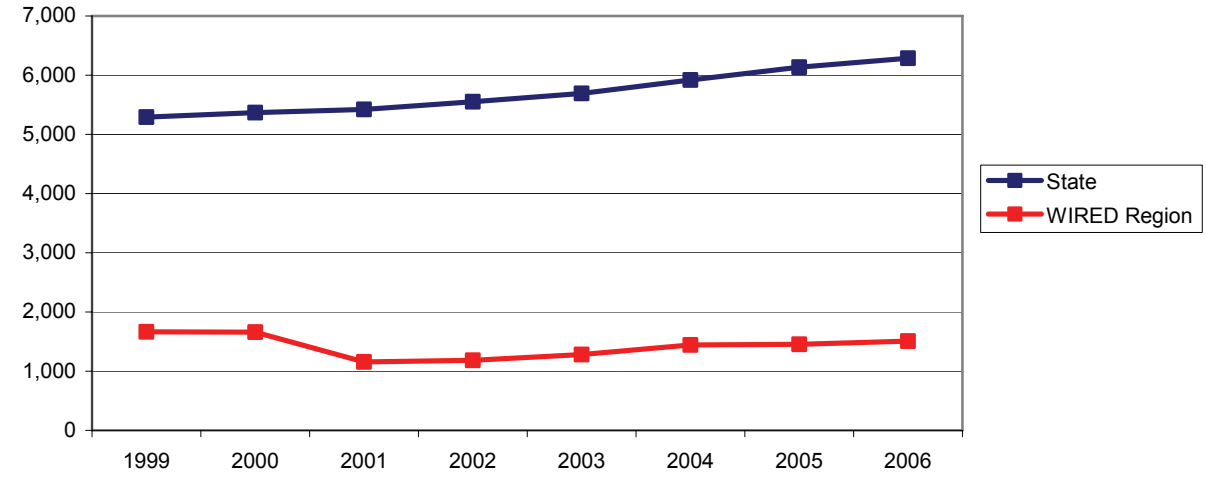



*Note: state/region values calculated by averaging two states/regions (AL & MS)*

*Source: Quarterly Census of Employment and Wages

**Figure G5**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

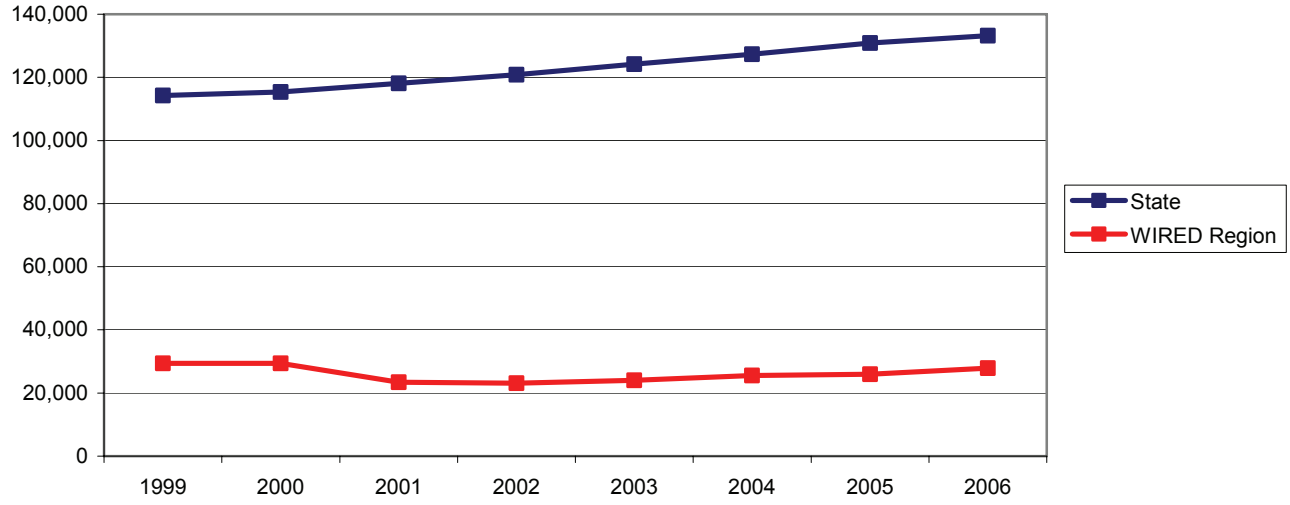
**WAEM**




*Note: state/region values calculated by averaging two states/regions (AL & MS)*

**Figure G6**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**WAEM**

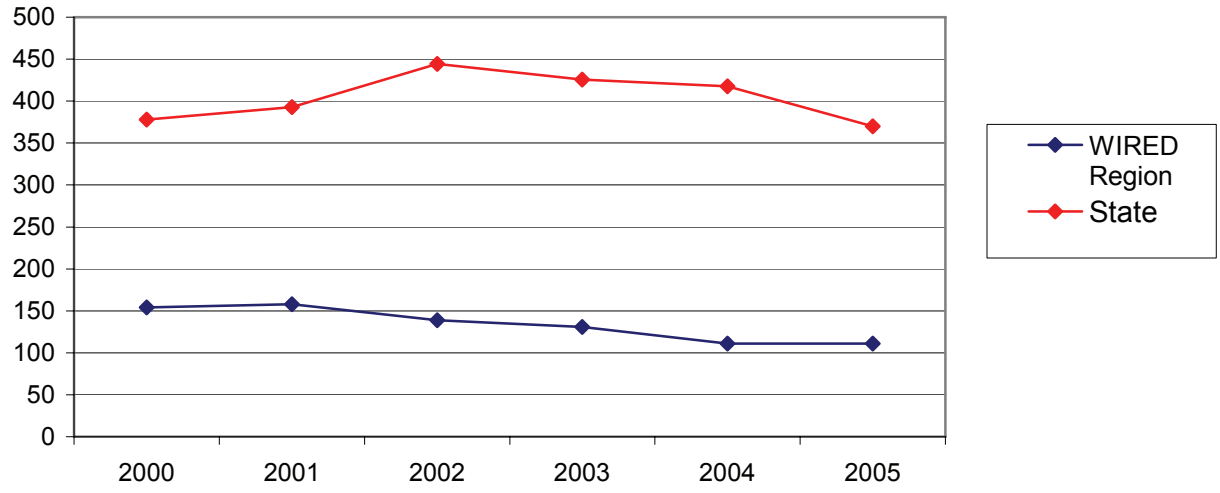



*Note: state/region values calculated by averaging two states/regions (AL & MS)*

*Source: Quarterly Census of Employment and Wages

**Figure G7**
**Number of New Starts of Federally-Funded R&D Projects***

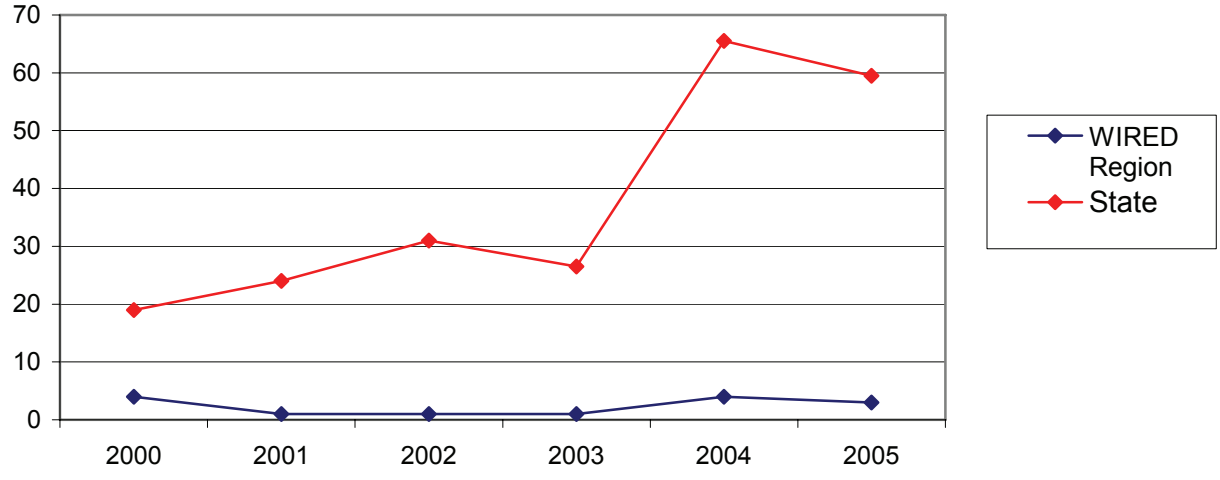
**WAEM**




*Note: state/region values calculated by averaging two states/regions (AL & MS)*

**Figure G8**
**Number of New Starts of SBIR Grants***

**WAEM**



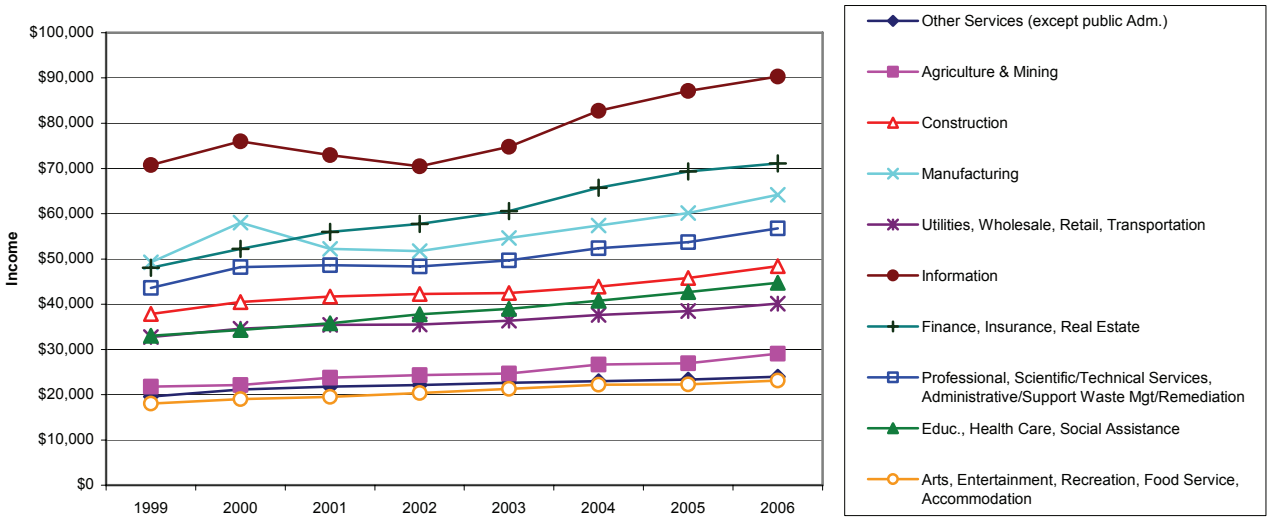

*Note: state/region values calculated by averaging two states/regions (AL & MS)*

*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# California Corridor

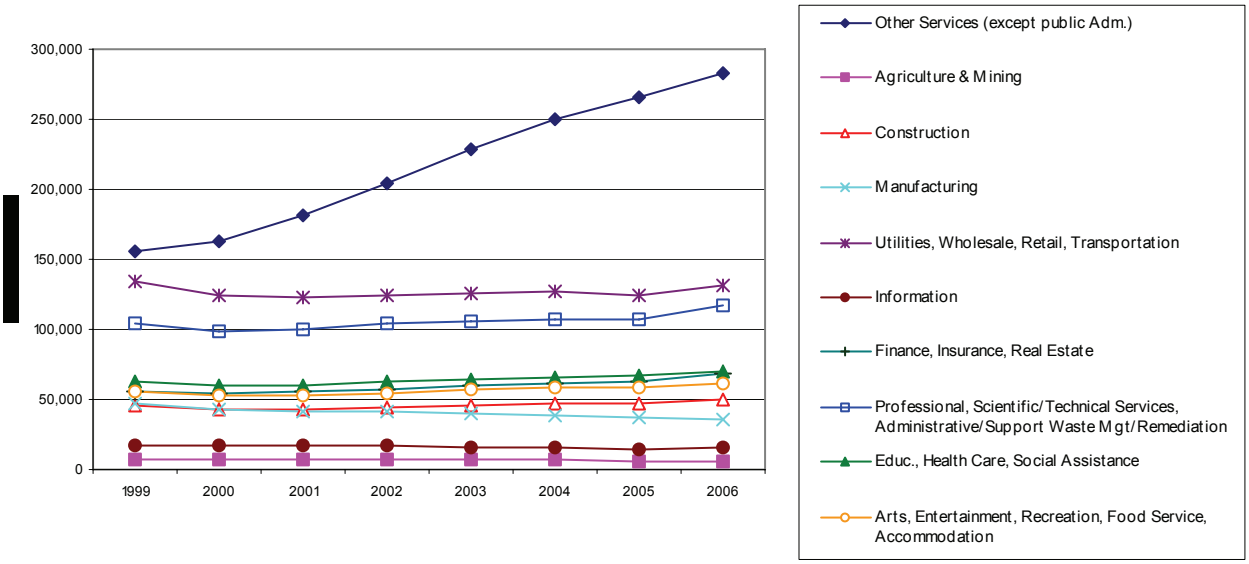
## Figure G9
## Average Annual Income in Region by Industry*

## California Corridor



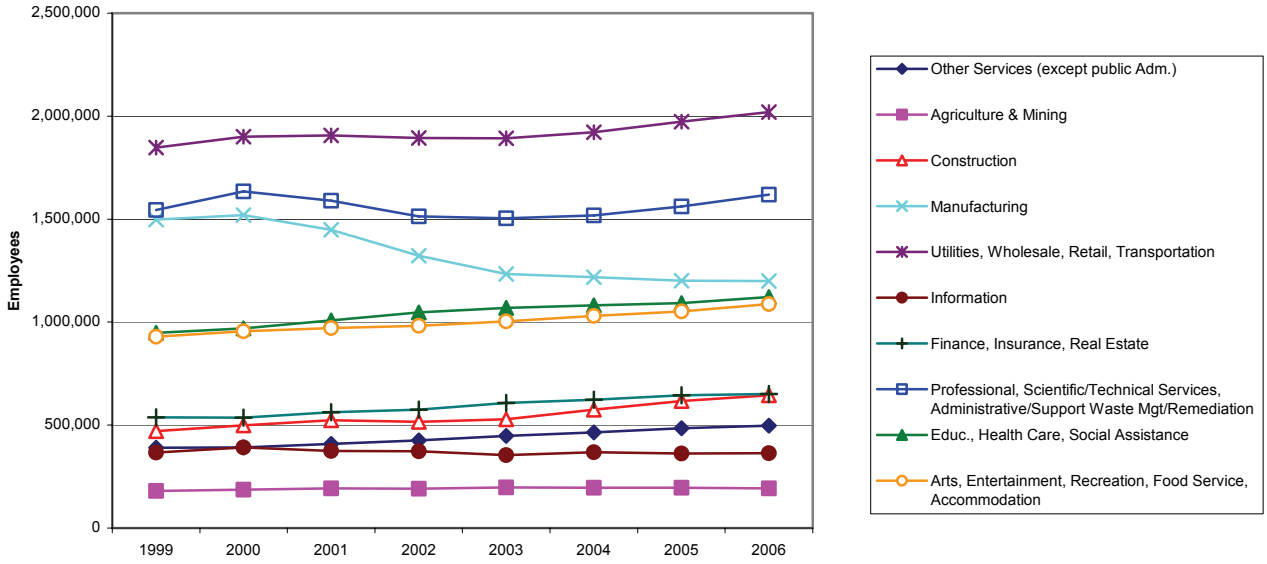

## Figure G10
## Number of Establishments in Region by Industry*

## California Corridor

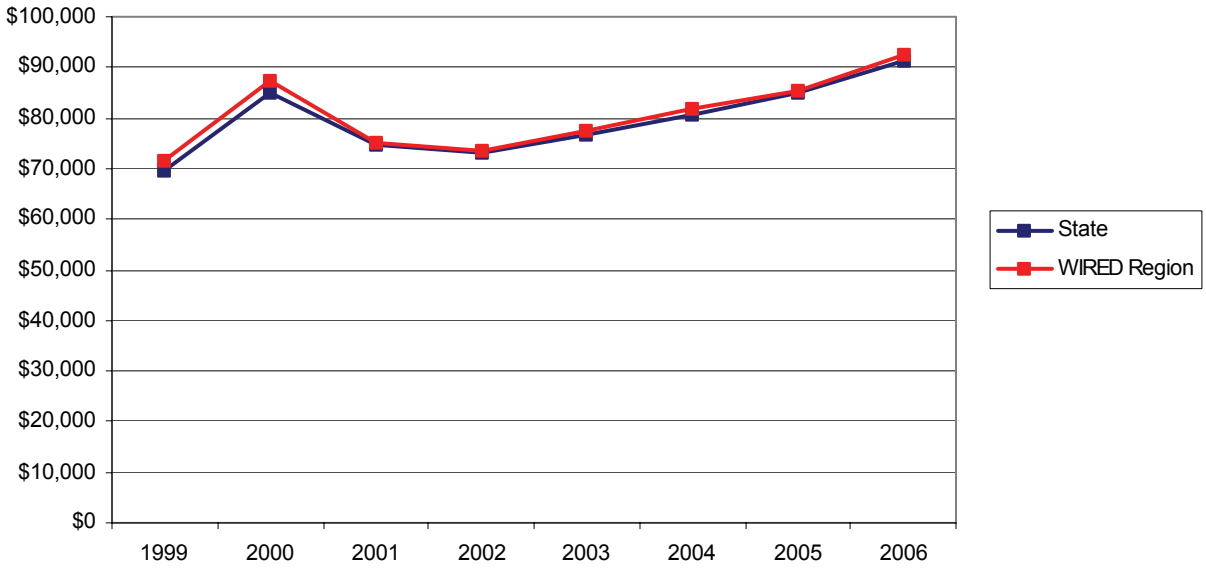



*Source: Quarterly Census of Employment and Wages

## Figure G11
## Average Employment in Region by Industry*
## California Corridor




## Figure G12
## Average Income for Group of Targeted Industries, Region vs. State*
## California Corridor




*Source: Quarterly Census of Employment and Wages

**Figure G13**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**California Corridor**

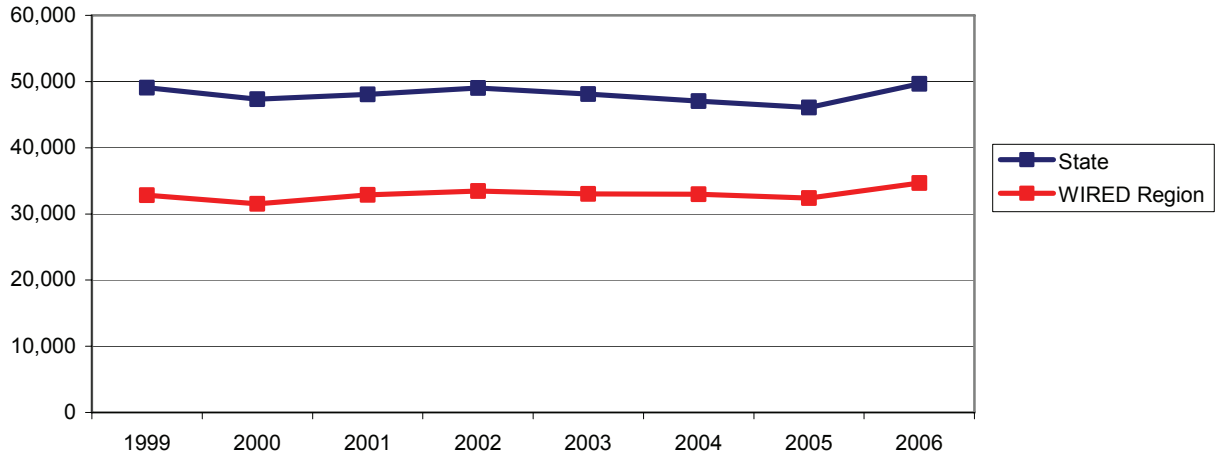
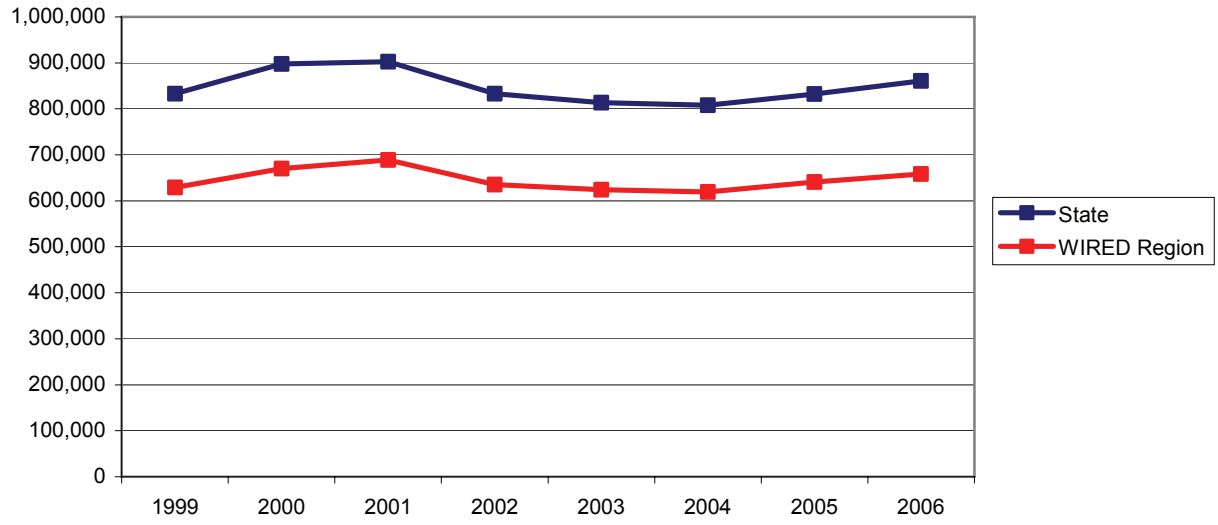



**Figure G14**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**California Corridor**




*Source: Quarterly Census of Employment and Wages

**Figure G15**
**Number of New Starts of Federally-Funded R&D Projects***

**California Corridor**

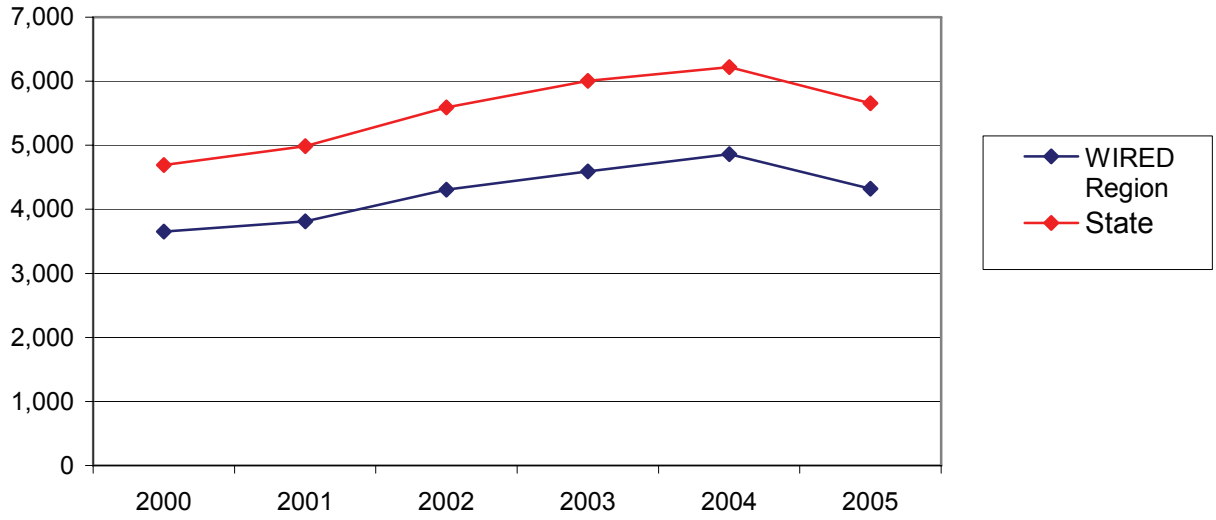
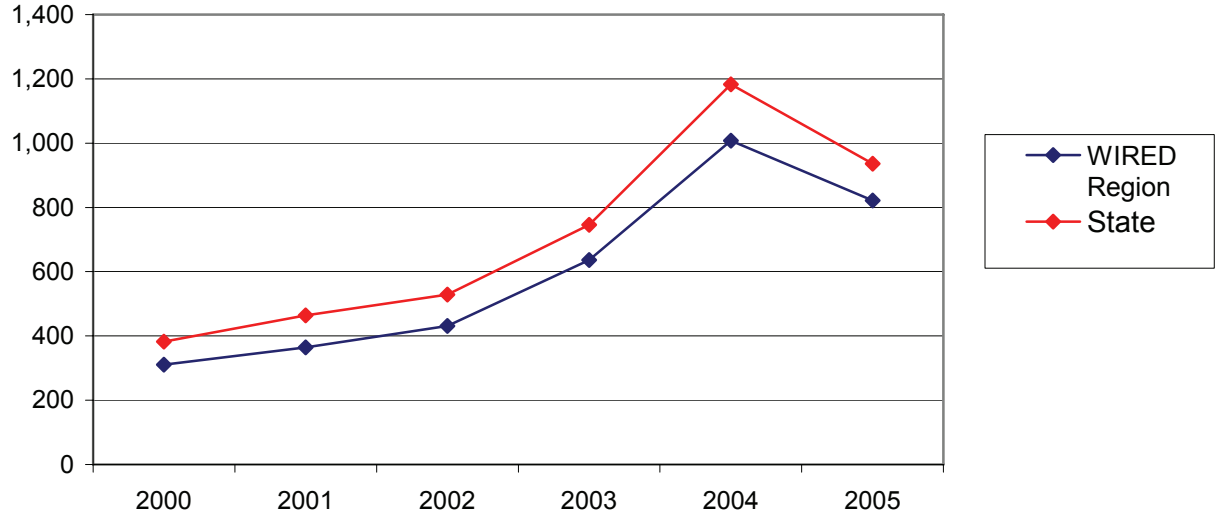



**Figure G16**
**Number of New Starts of SBIR Grants***

**California Corridor**

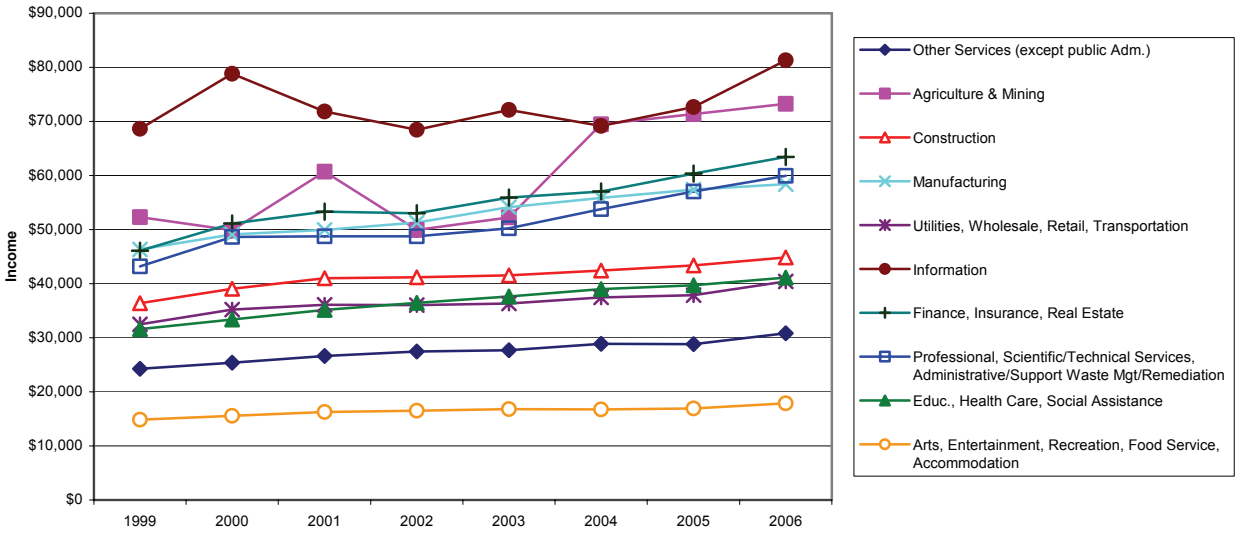



*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Metro Denver

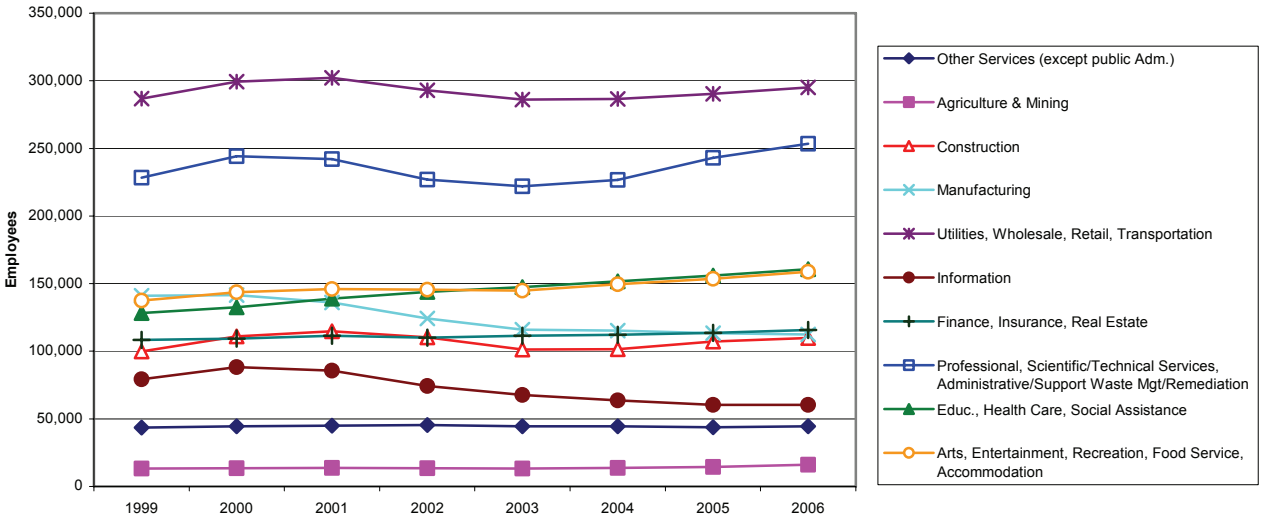
## Figure G17
## Average Annual Income in Region by Industry*

## Metro Denver



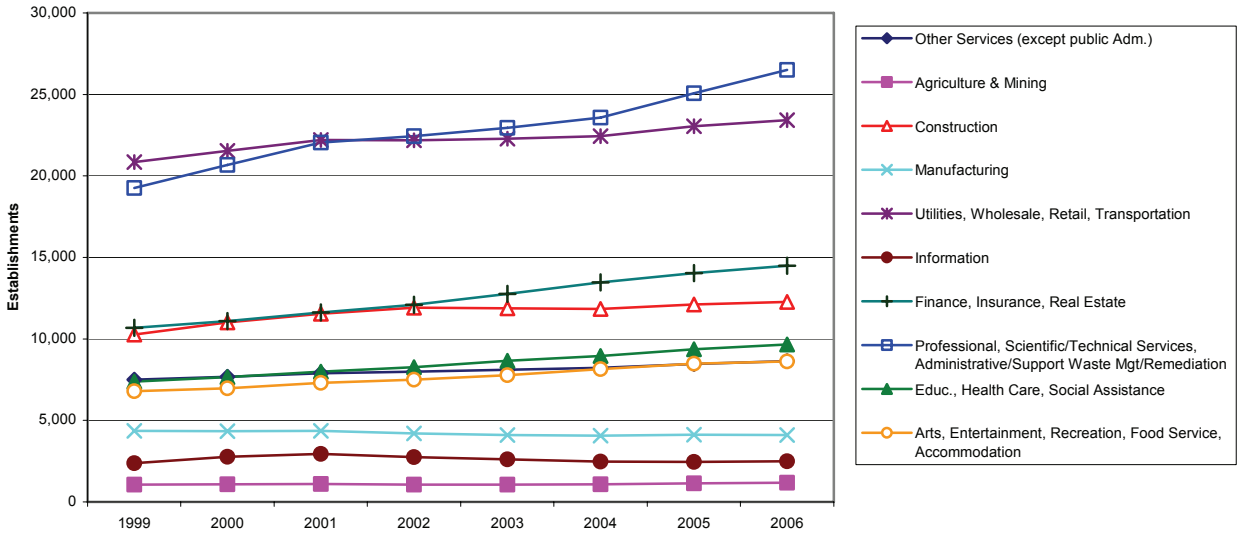

## Figure G18
## Number of Establishments in Region by Industry*

## Metro Denver

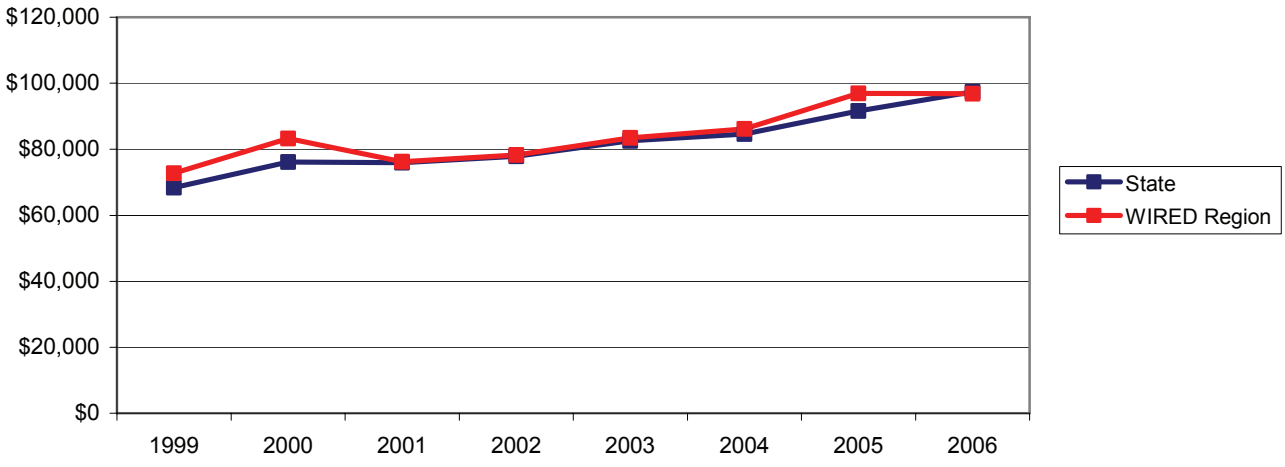



*Source: Quarterly Census of Employment and Wages

## Figure G19
## Average Employment in Region by Industry*
## Metro Denver




## Figure G20
## Average Income for Group of Targeted Industries, Region vs. State*
## Metro Denver




*Source: Quarterly Census of Employment and Wages

**Figure G21**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Metro Denver**

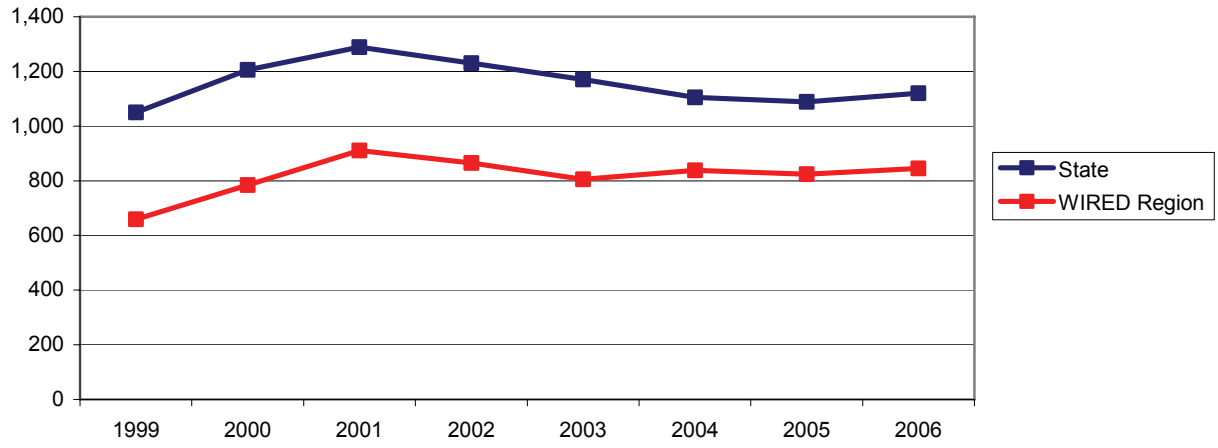
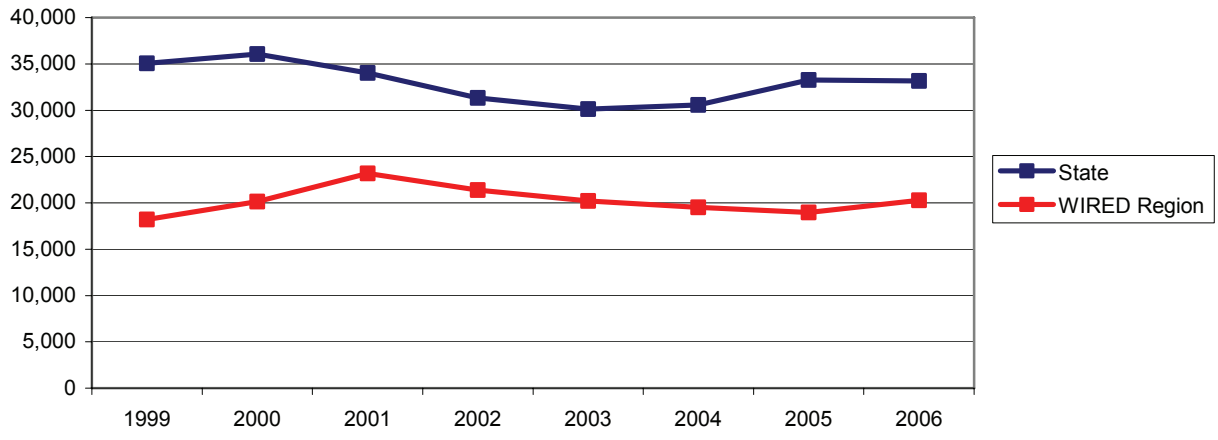



**Figure G22**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Metro Denver**




*Source: Quarterly Census of Employment and Wages

**Figure G23**
**Number of New Starts of Federally-Funded R&D Projects***

**Metro Denver**

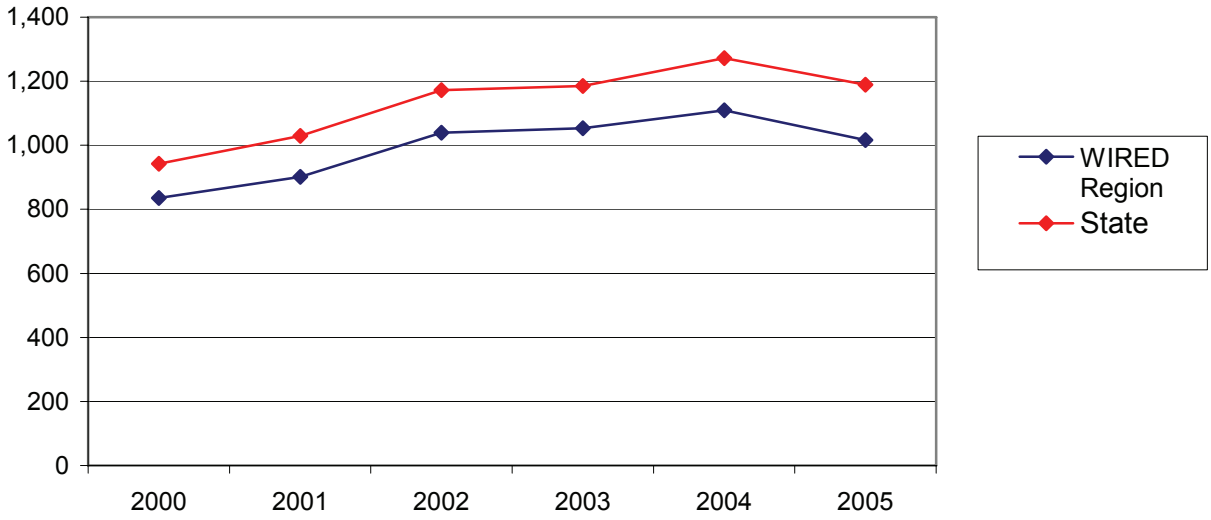
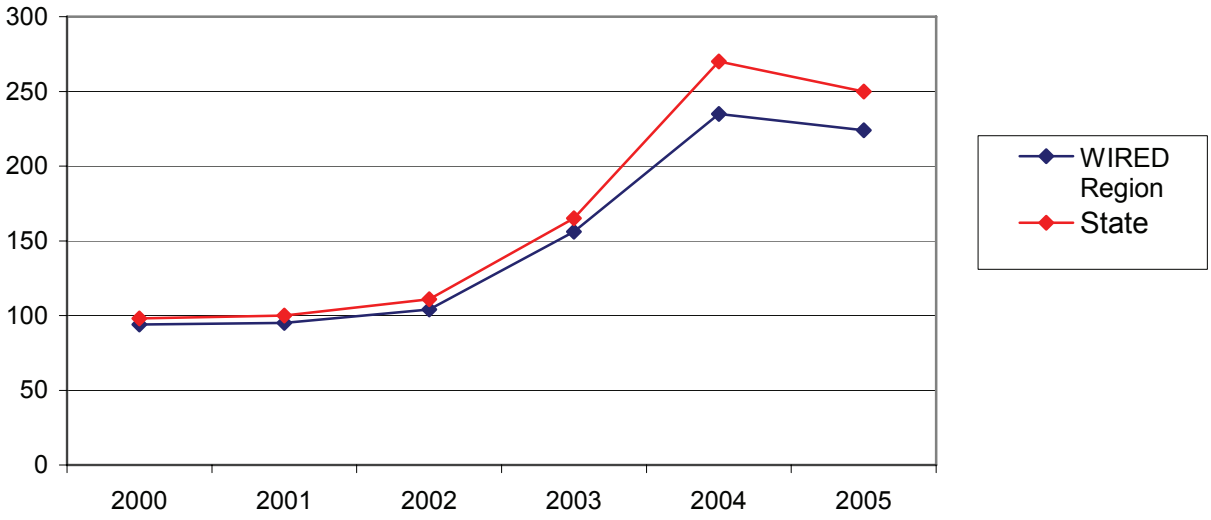



**Figure G24**
**Number of New Starts of SBIR Grants***

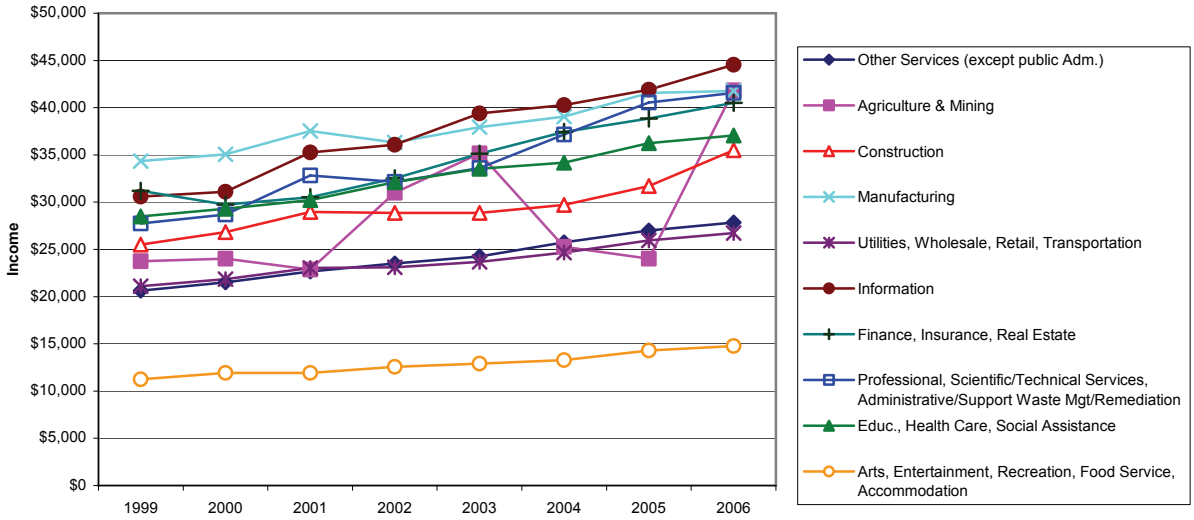
**Metro Denver**



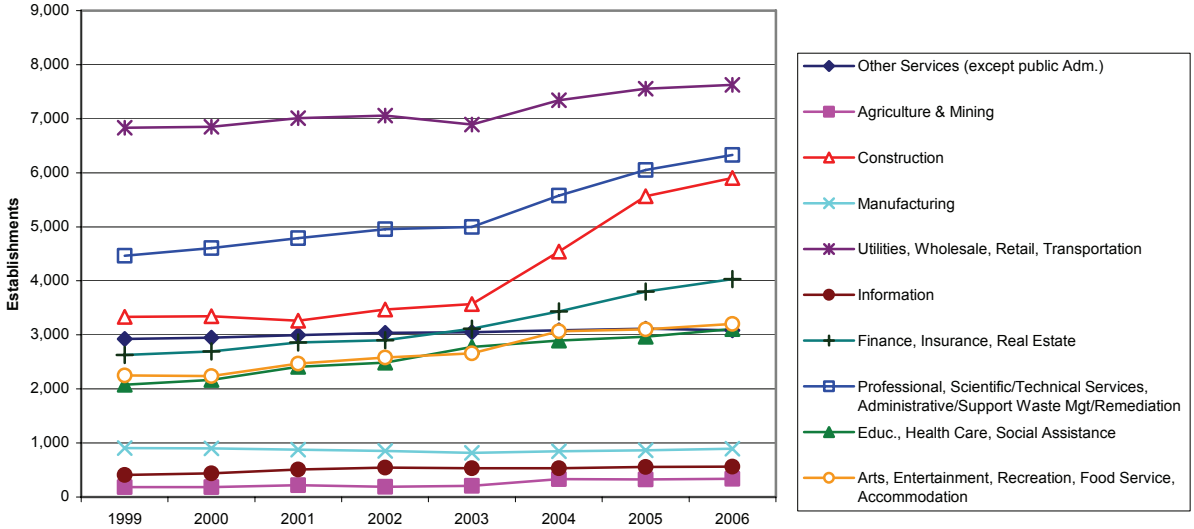

*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Northwest Florida

## Figure G25
## Average Annual Income in Region by Industry*
## Northwest Florida

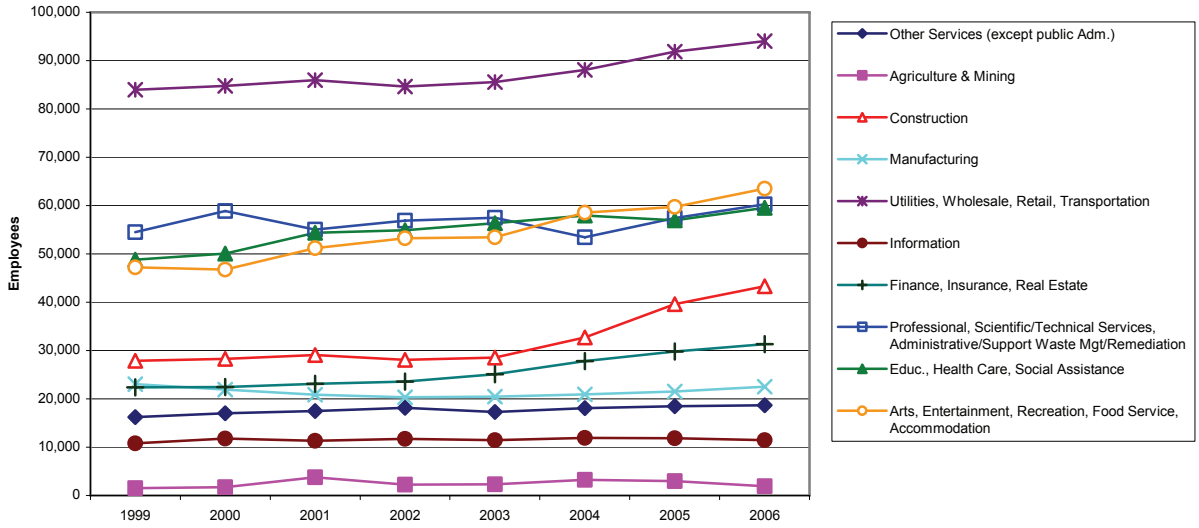



## Figure G26
## Number of Establishments in Region by Industry*
## Northwest Florida

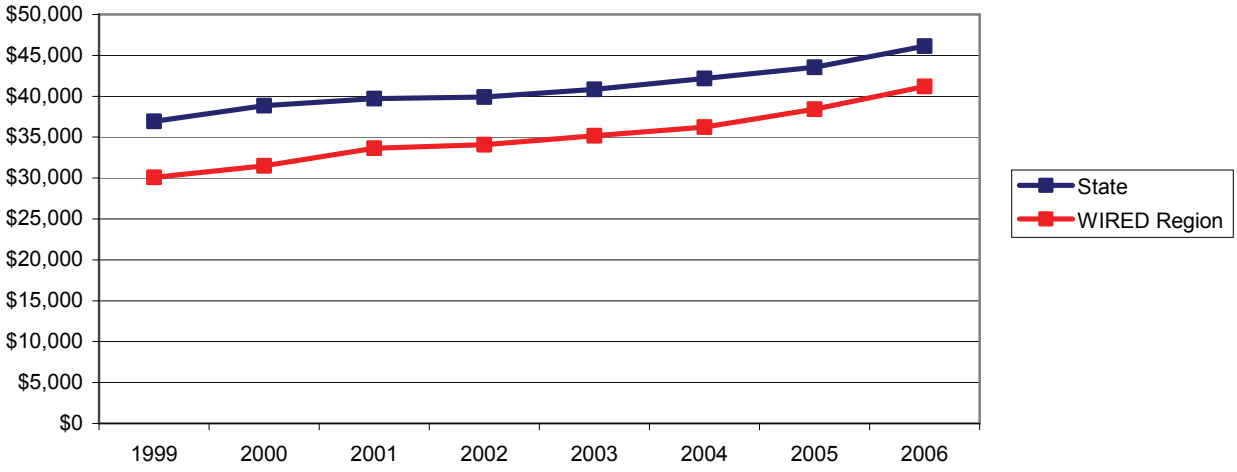



*Source: Quarterly Census of Employment and Wages

## Figure G27
## Average Employment in Region by Industry*
## Northwest Florida




## Figure G28
## Average Income for Group of Targeted Industries, Region vs. State*
## Northwest Florida




*Source: Quarterly Census of Employment and Wages

**Figure G29**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Northwest Florida**

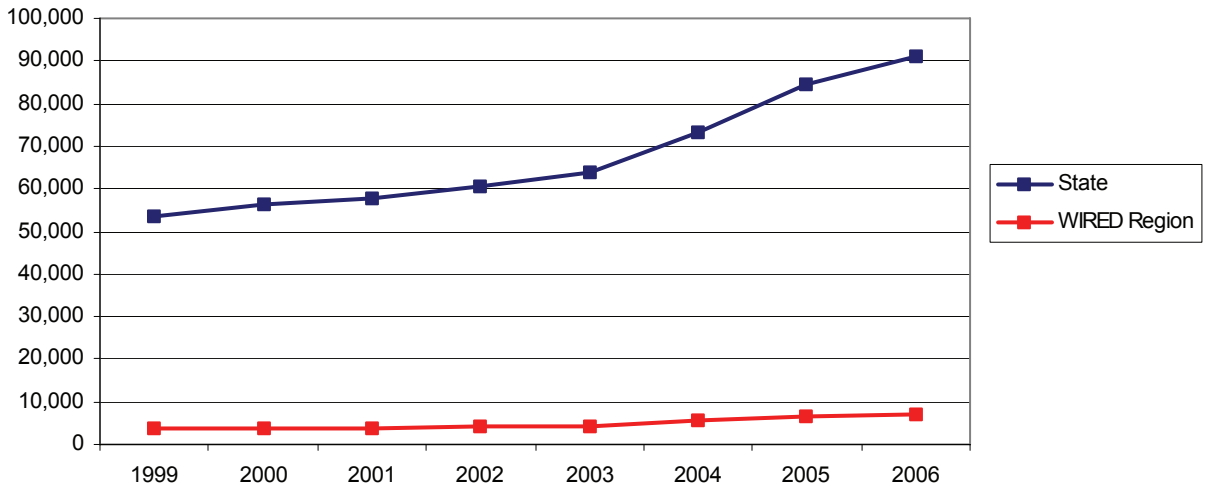
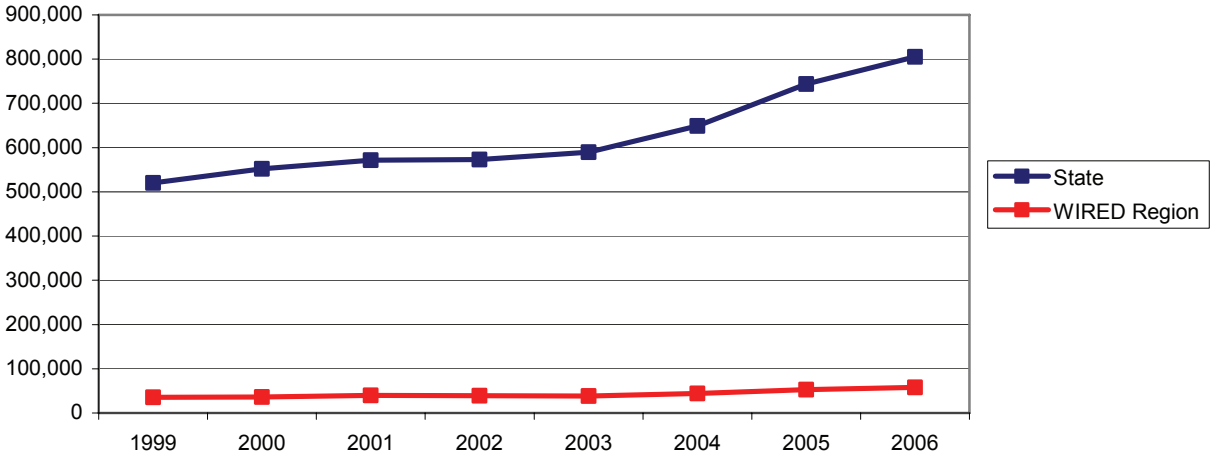



**Figure G30**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Northwest Florida**




*Source: Quarterly Census of Employment and Wages

**Figure G31**
**Number of New Starts of Federally-Funded R&D Projects***

**Northwest Florida**

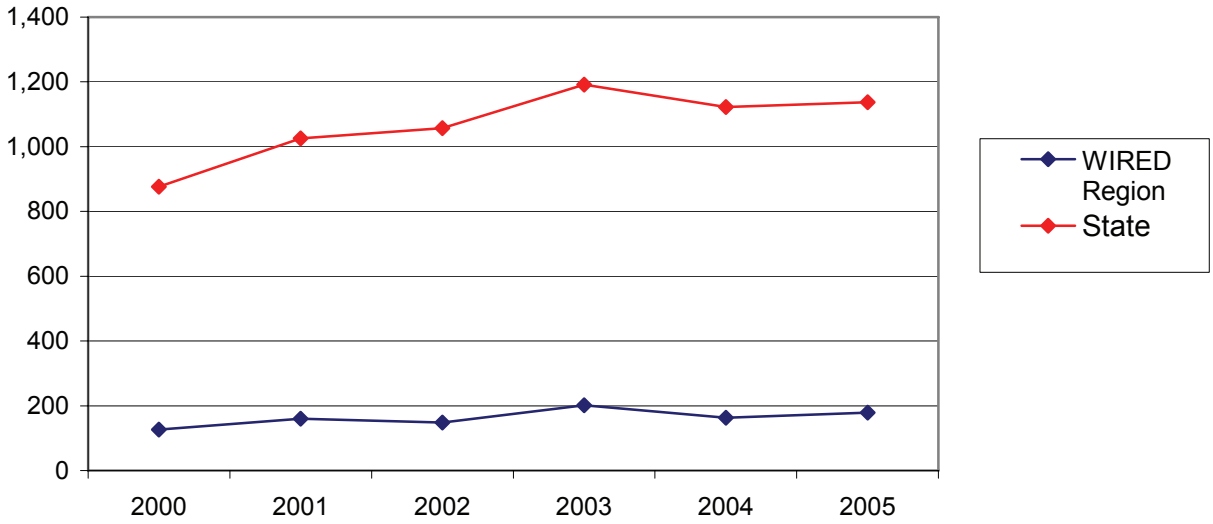
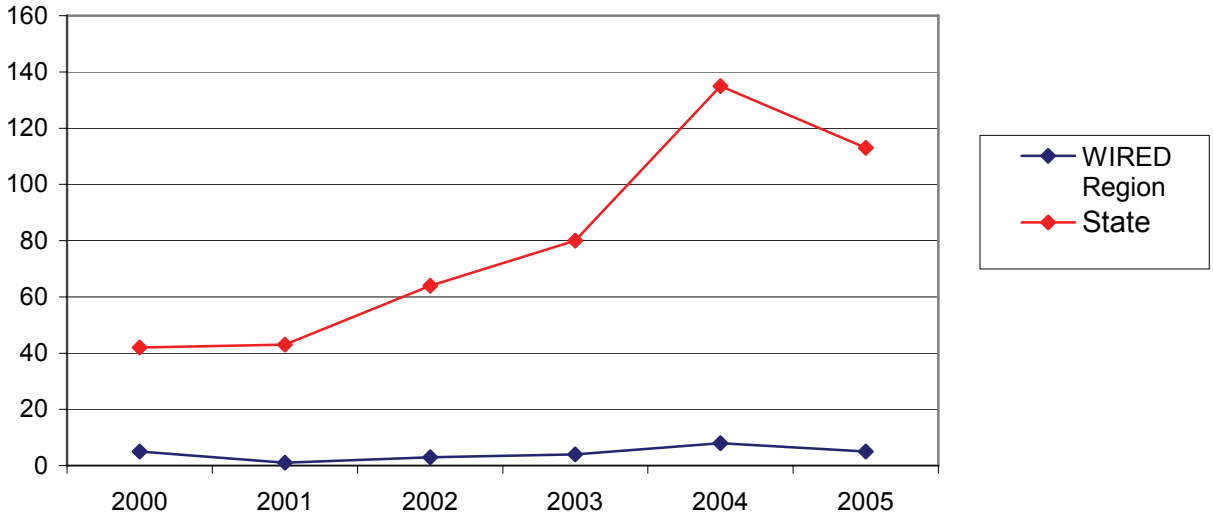



**Figure G32**
**Number of New Starts of SBIR Grants***

**Northwest Florida**

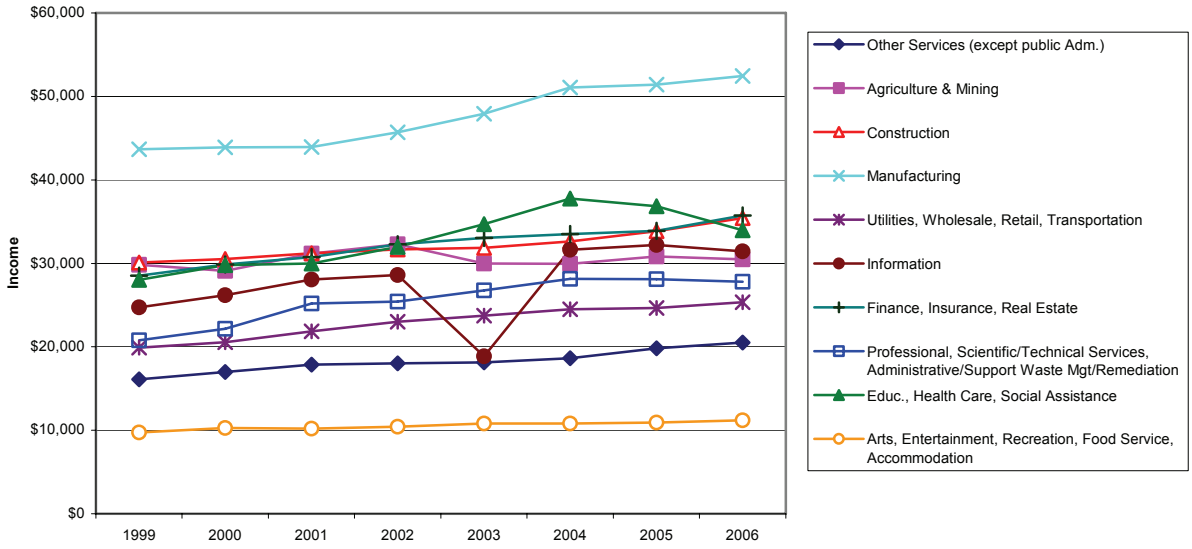



*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# NCI

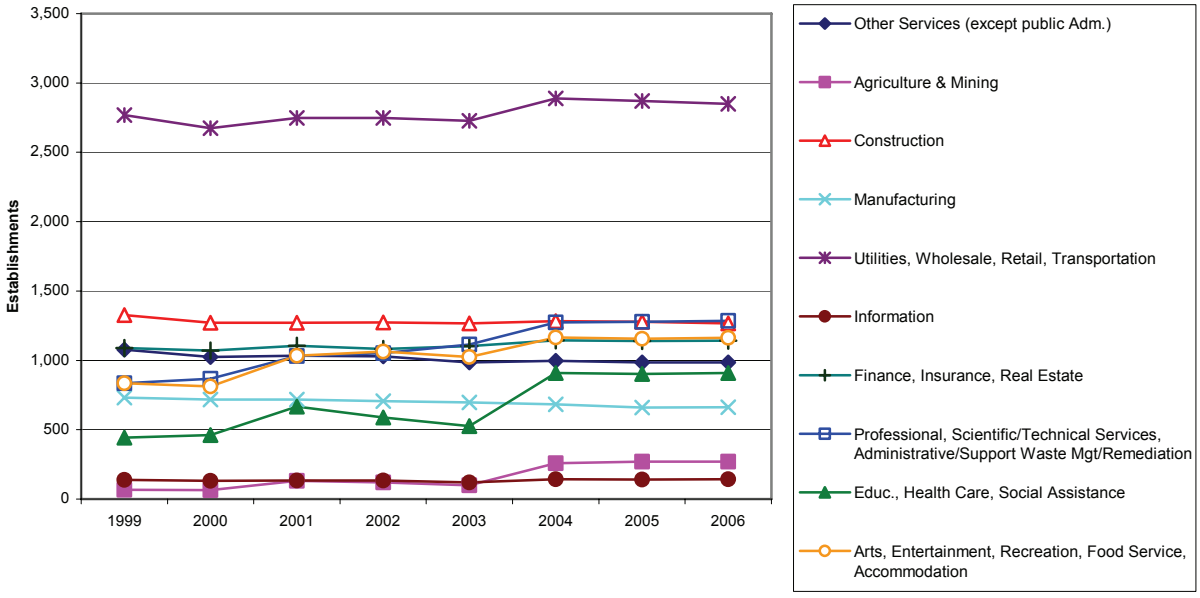
## Figure G33
## Average Annual Income in Region by Industry*

## NCI




## Figure G34
## Number of Establishments in Region by Industry*

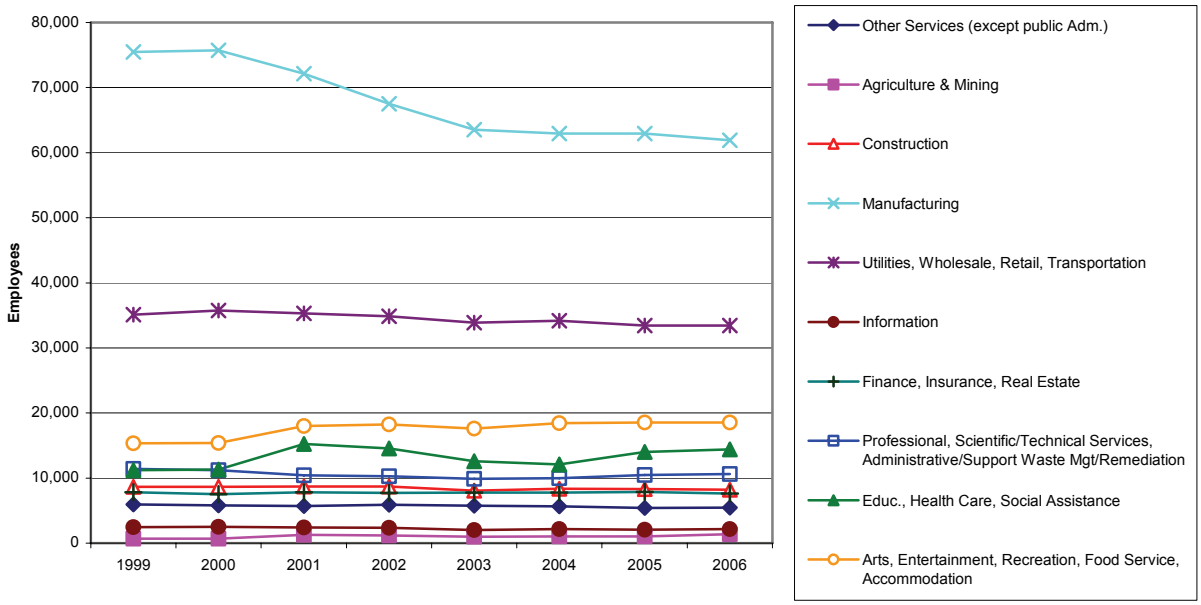
## NCI




*Source: Quarterly Census of Employment and Wages

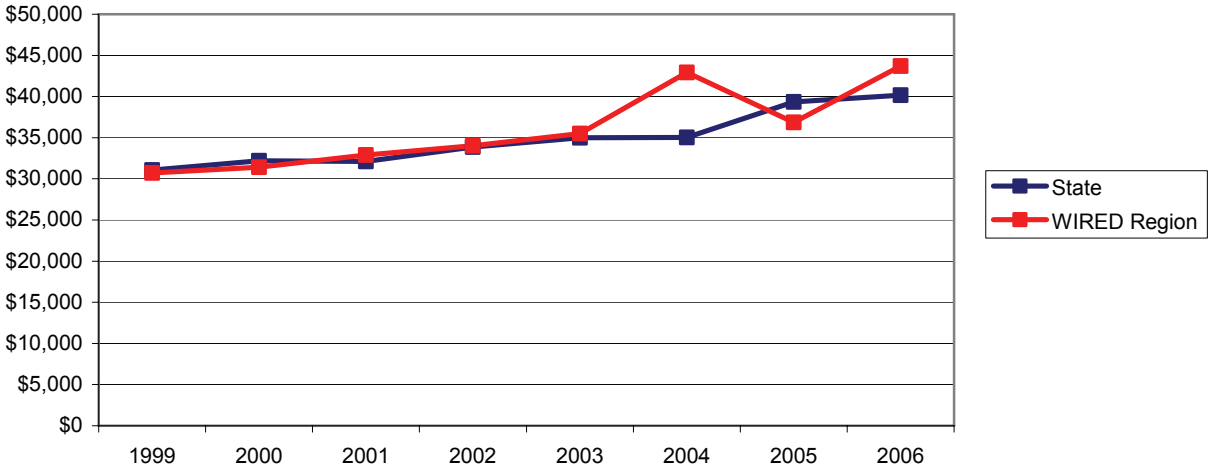
## Figure G35
## Average Employment in Region by Industry*

## NCI




## Figure G36
## Average Income for Group of Targeted Industries, Region vs. State*

## NCI




*Source: Quarterly Census of Employment and Wages

**Figure G37**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**NCI**

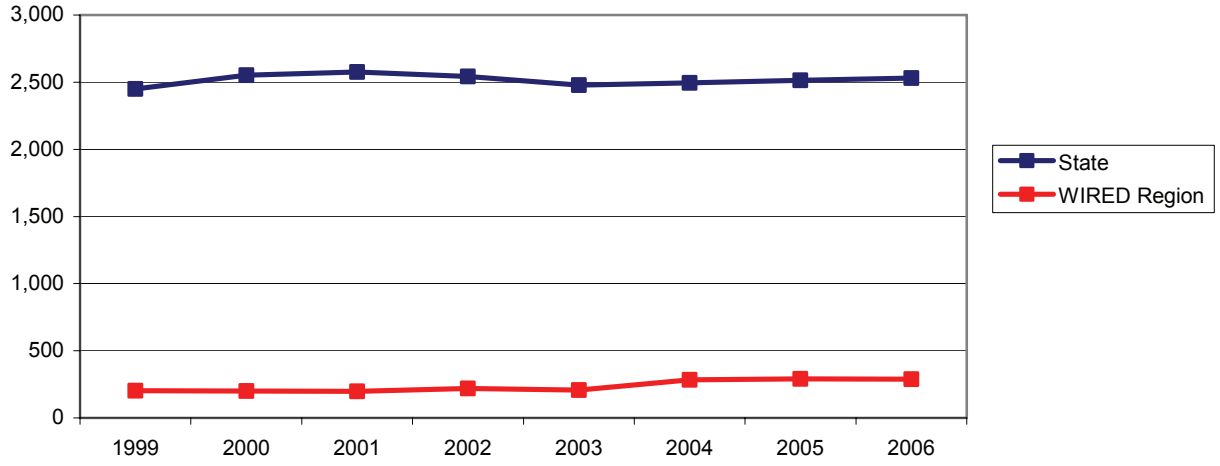
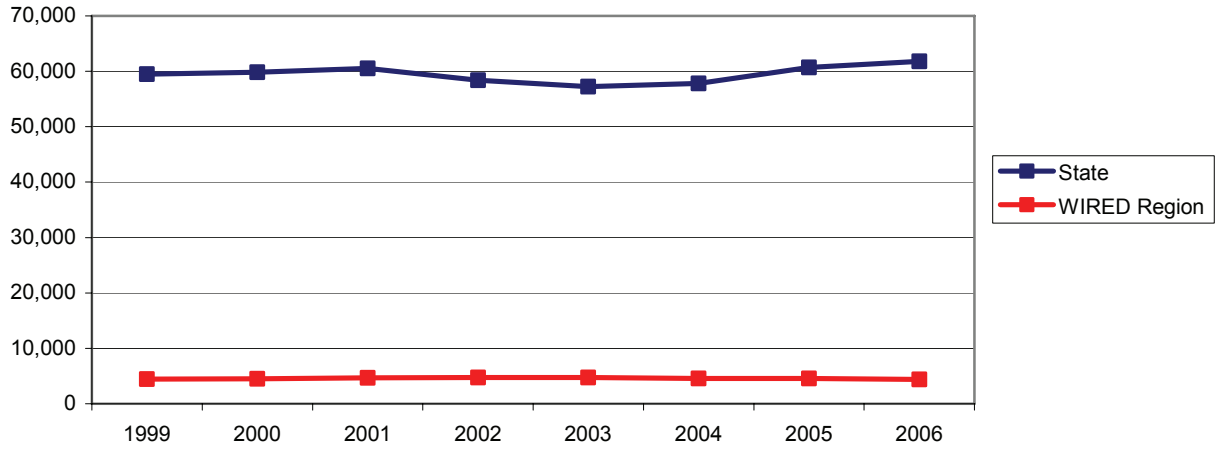



**Figure G38**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**NCI**




*Source: Quarterly Census of Employment and Wages

**Figure G39**
**Number of New Starts of Federally-Funded R&D Projects***

**NCI**

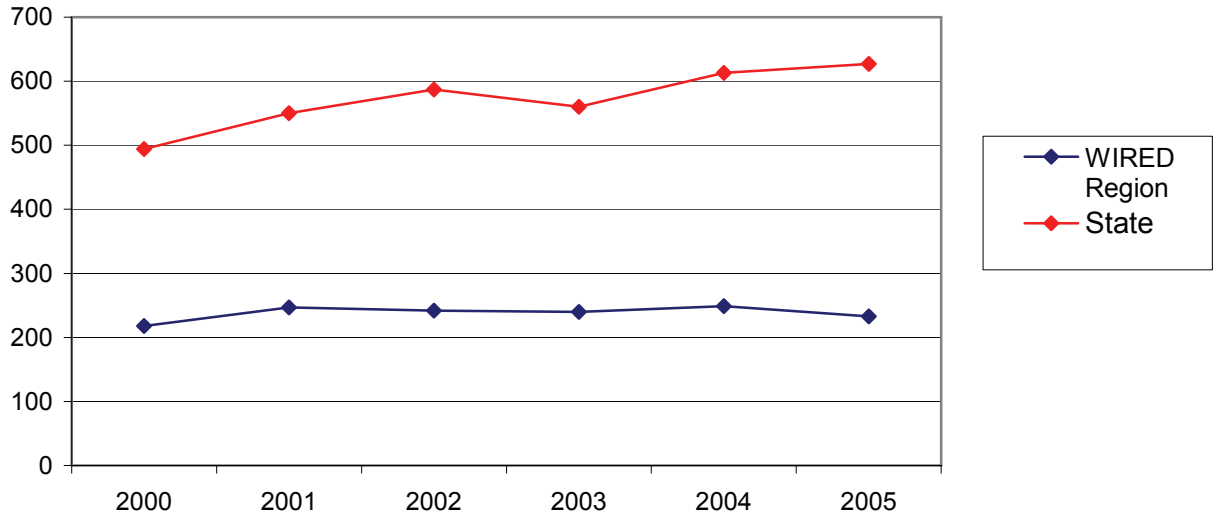
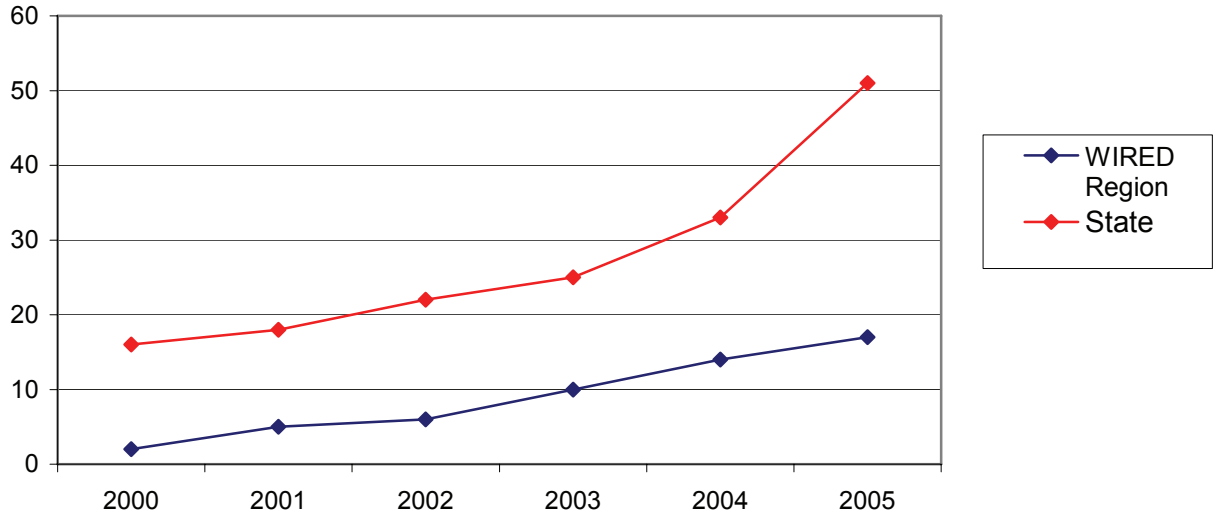



**Figure G40**
**Number of New Starts of SBIR Grants***

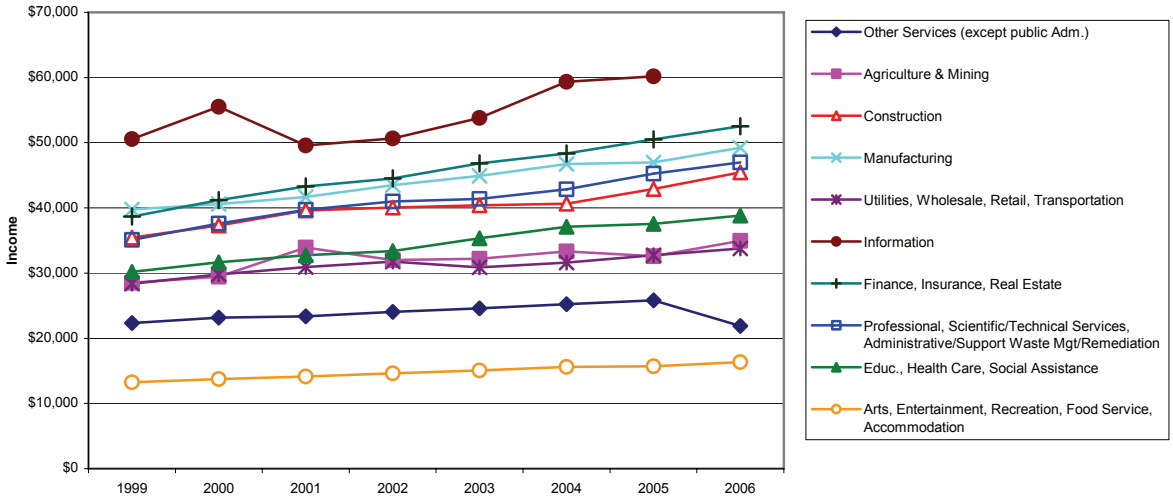
**NCI**




*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Kansas City

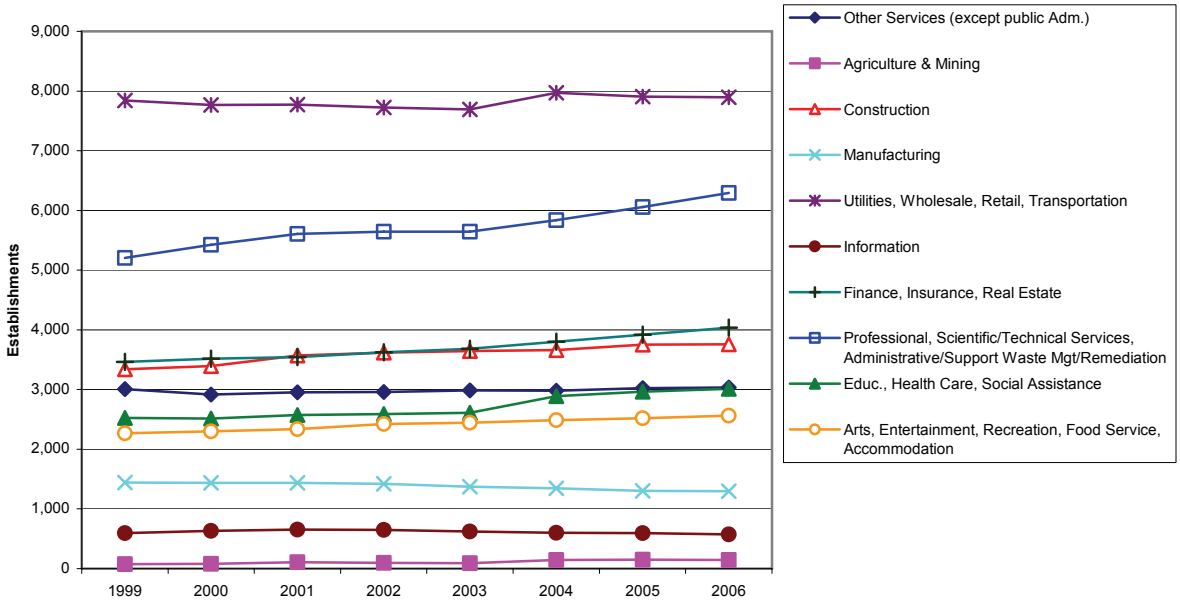
## Figure G41
## Average Annual Income in Region by Industry*
## Kansas City




*Note: state/region values calculated by averaging two states/regions (KS & MO)*

Insufficient data was available for the information industry in 2006

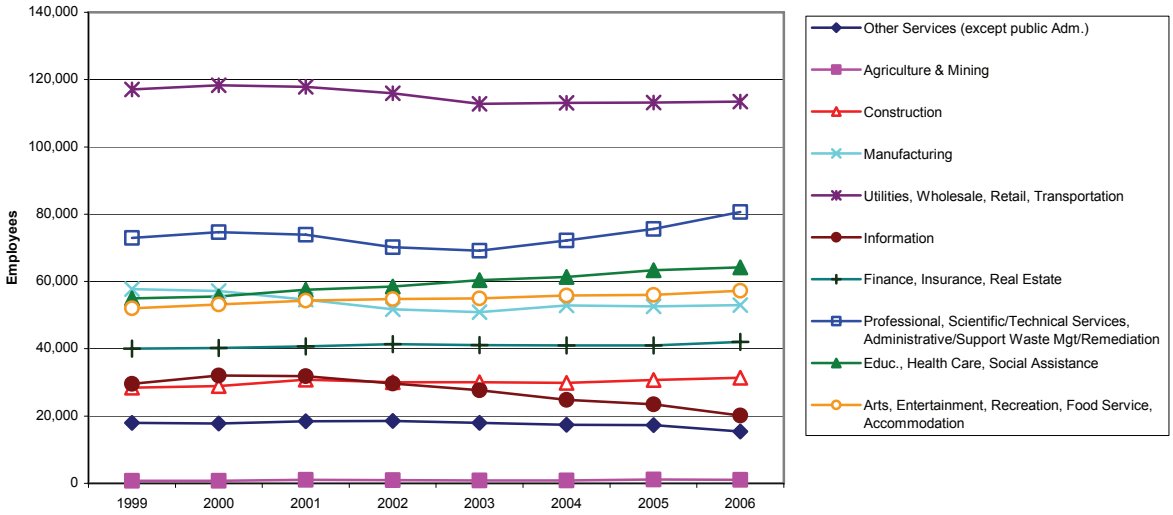
## Figure G42
## Number of Establishments in Region by Industry*
## Kansas City




*Note: state/region values calculated by averaging two states/regions (KS & MO)*

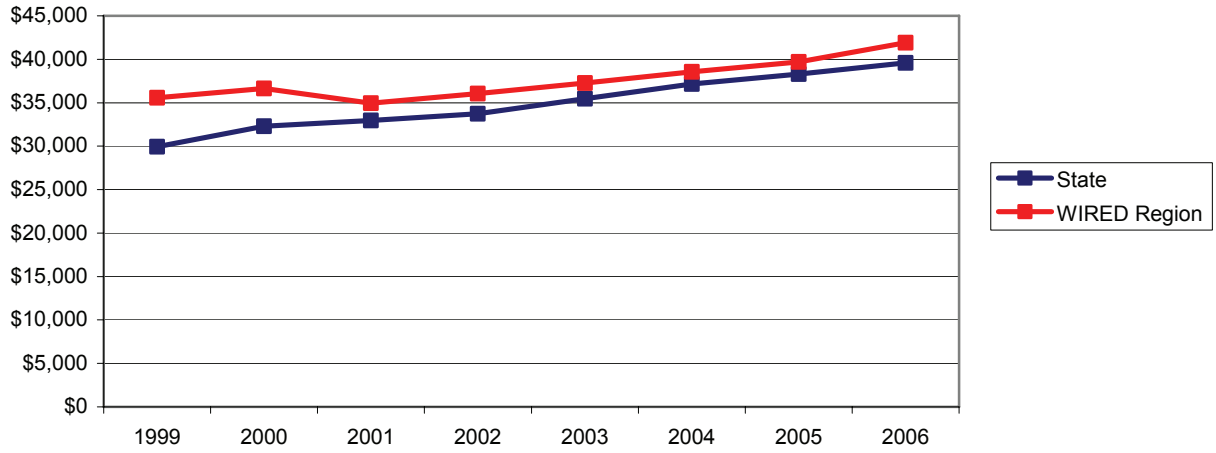
*Source: Quarterly Census of Employment and Wages

## Figure G43
## Average Employment in Region by Industry*
## Kansas City




*Note: state/region values calculated by averaging two states/regions (KS & MO)*

## Figure G44
## Average Income for Group of Targeted Industries, Region vs. State*
## Kansas City

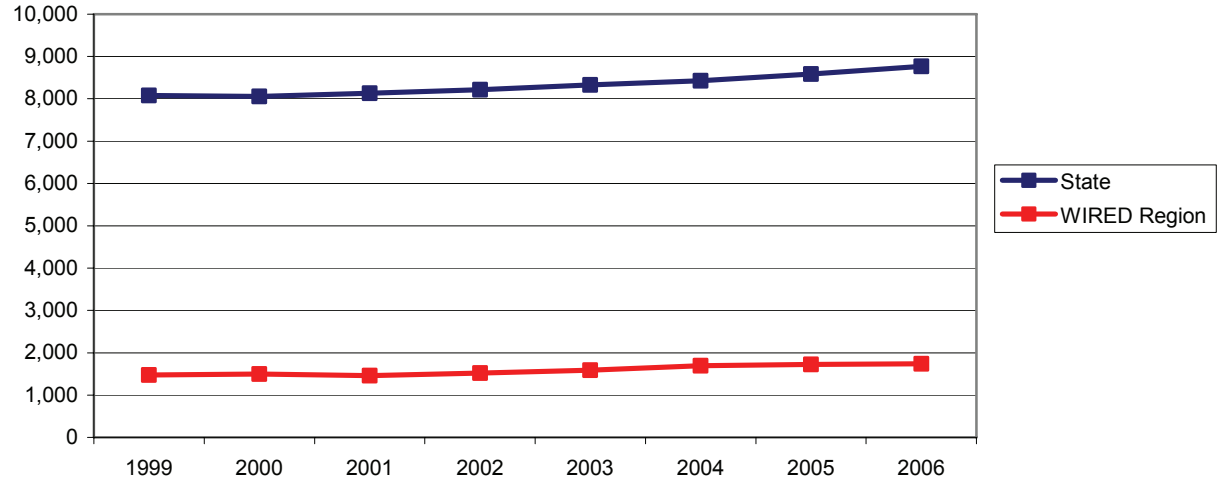



*Note: state/region values calculated by averaging two states/regions (KS & MO)*

*Source: Quarterly Census of Employment and Wages

**Figure G45**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

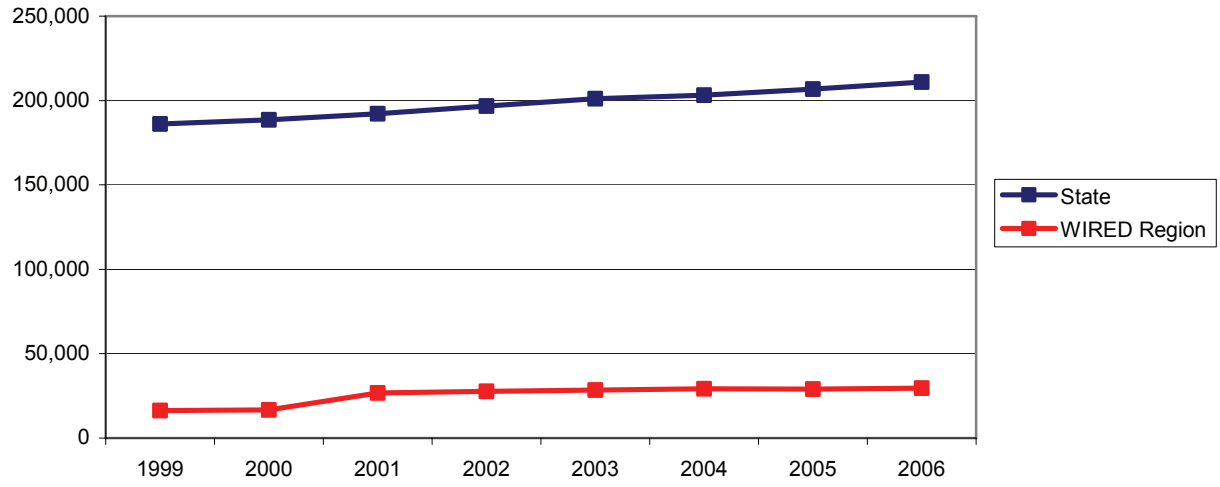
**Kansas City**




*Note: state/region values calculated by averaging two states/regions (KS & MO)*

**Figure G46**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Kansas City**

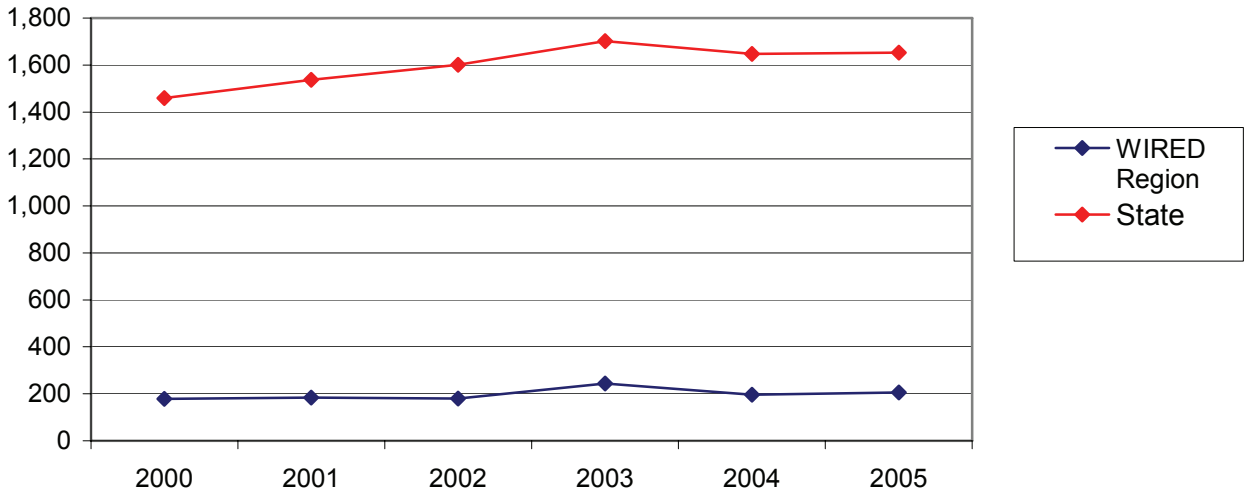



*Note: state/region values calculated by averaging two states/regions (KS & MO)*

*Source: Quarterly Census of Employment and Wages

**Figure G47**
**Number of New Starts of Federally-Funded R&D Projects***

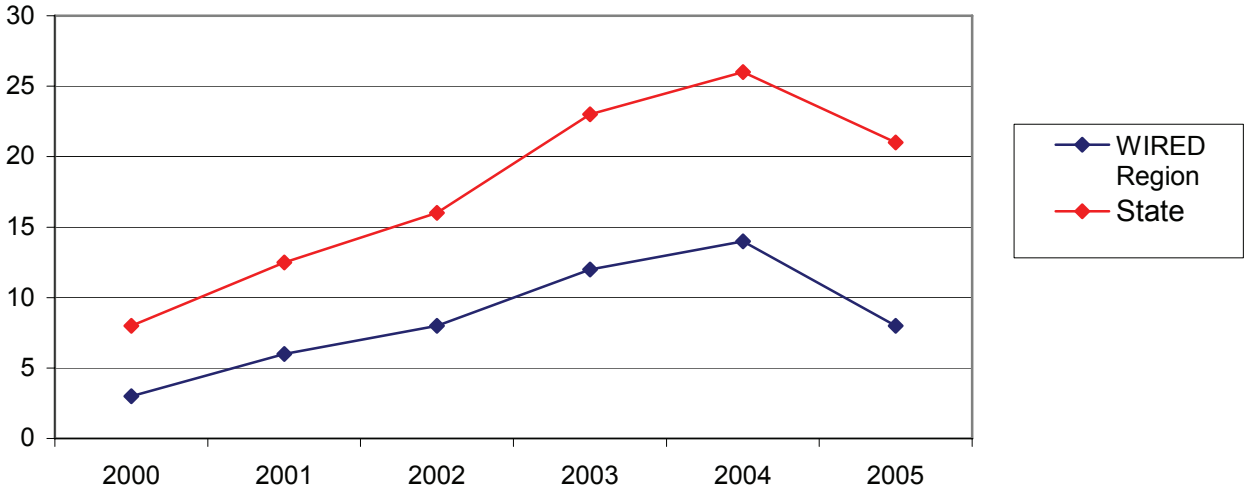
**Kansas City**




*Note: state/region values calculated by averaging two states/regions (KS & MO)*

**Figure G48**
**Number of New Starts of SBIR Grants***

**Kansas City**



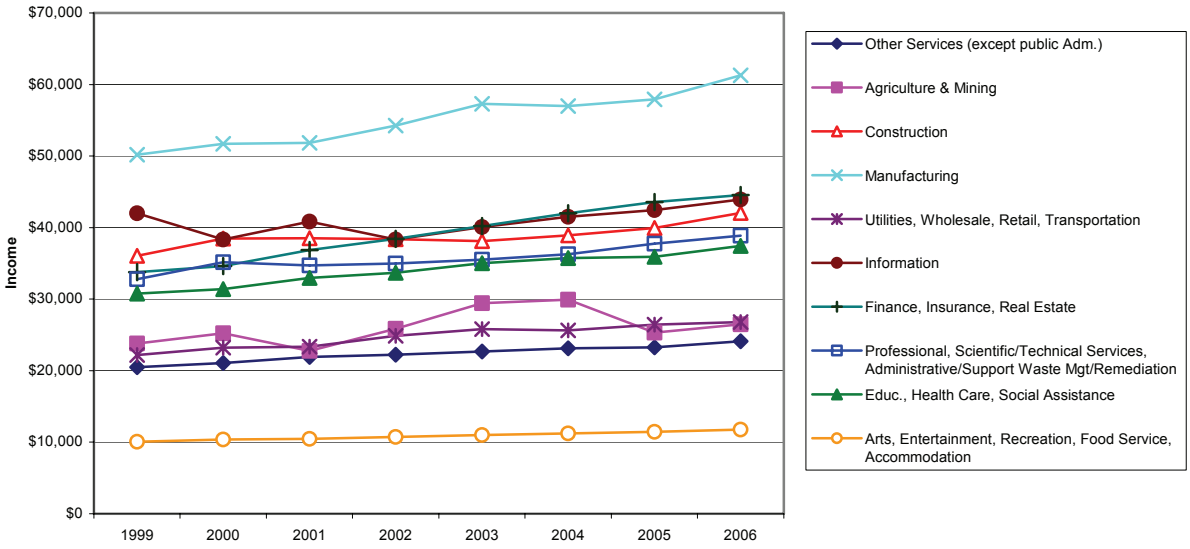

*Note: state/region values calculated by averaging two states/regions (KS & MO)*

*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Mid-Michigan

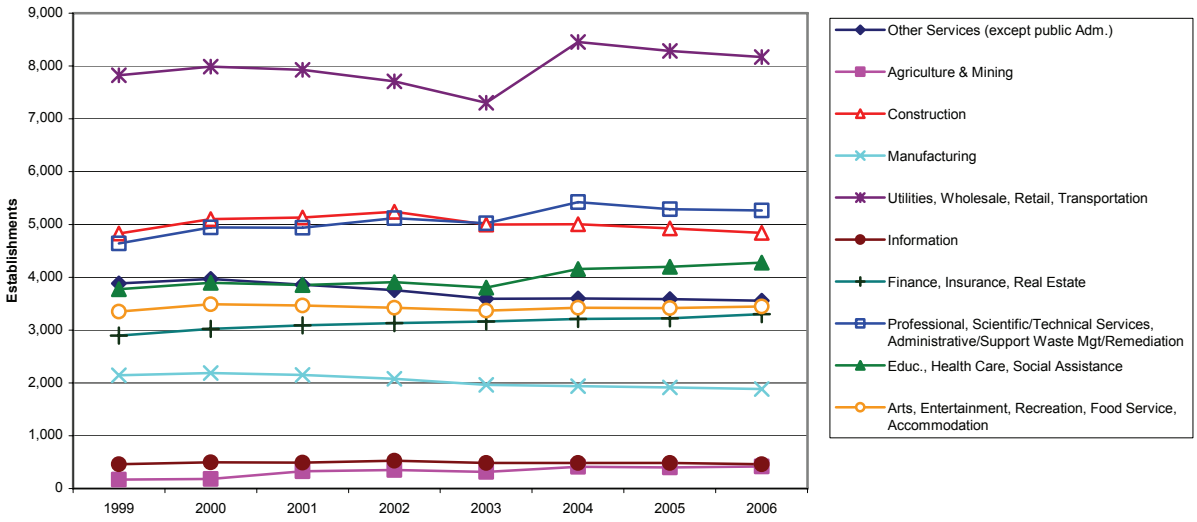
## Figure G49
## Average Annual Income in Region by Industry*

## Mid-Michigan



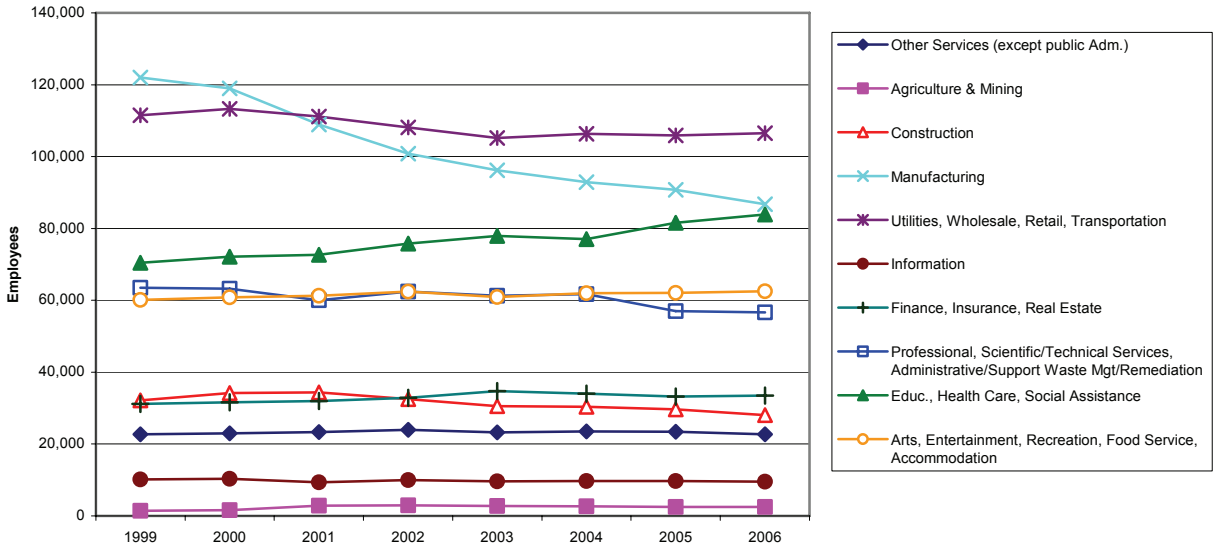

## Figure G50
## Number of Establishments in Region by Industry*

## Mid-Michigan

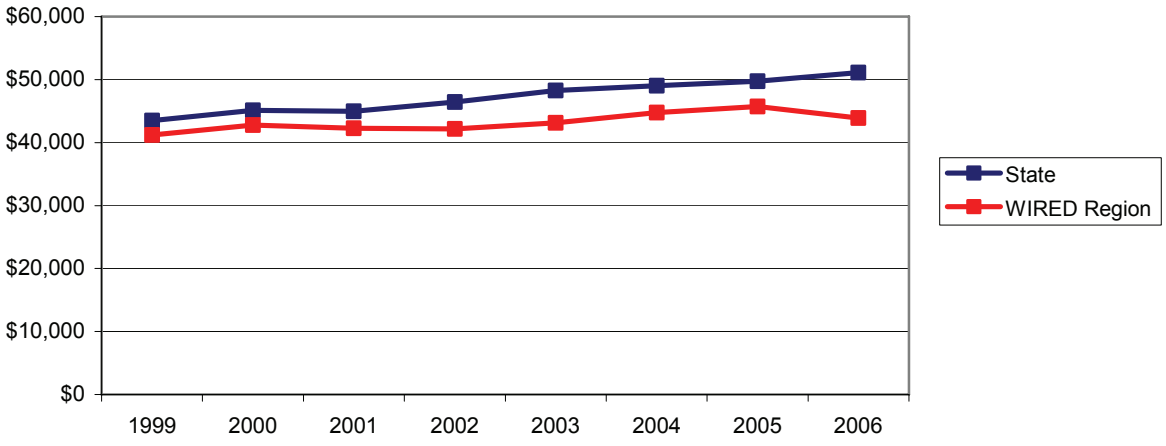



*Source: Quarterly Census of Employment and Wages

## Figure G51
## Average Employment in Region by Industry*
## Mid-Michigan




## Figure G52
## Average Income for Group of Targeted Industries, Region vs. State*
## Mid-Michigan




*Source: Quarterly Census of Employment and Wages

**Figure G53**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Mid-Michigan**

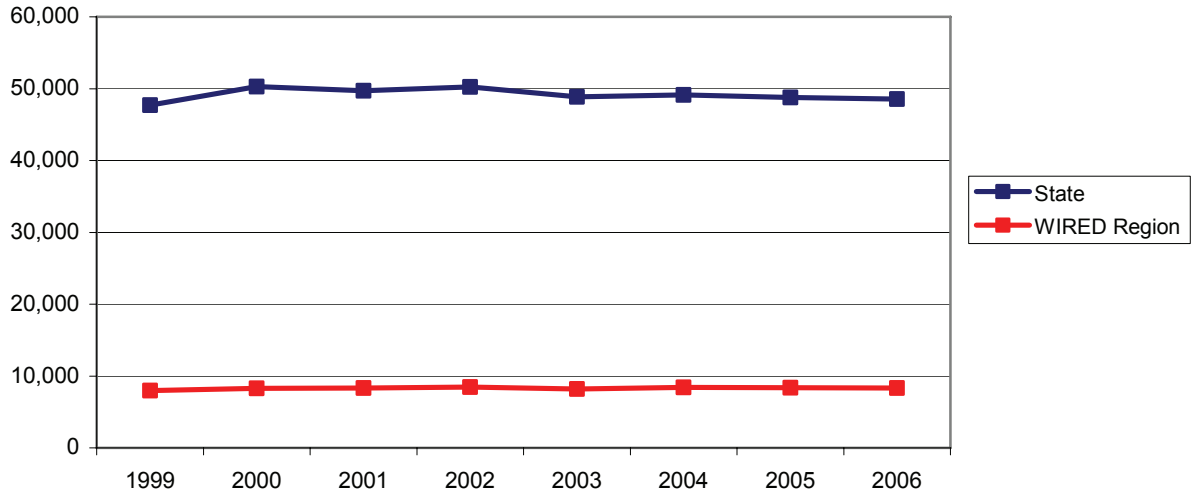
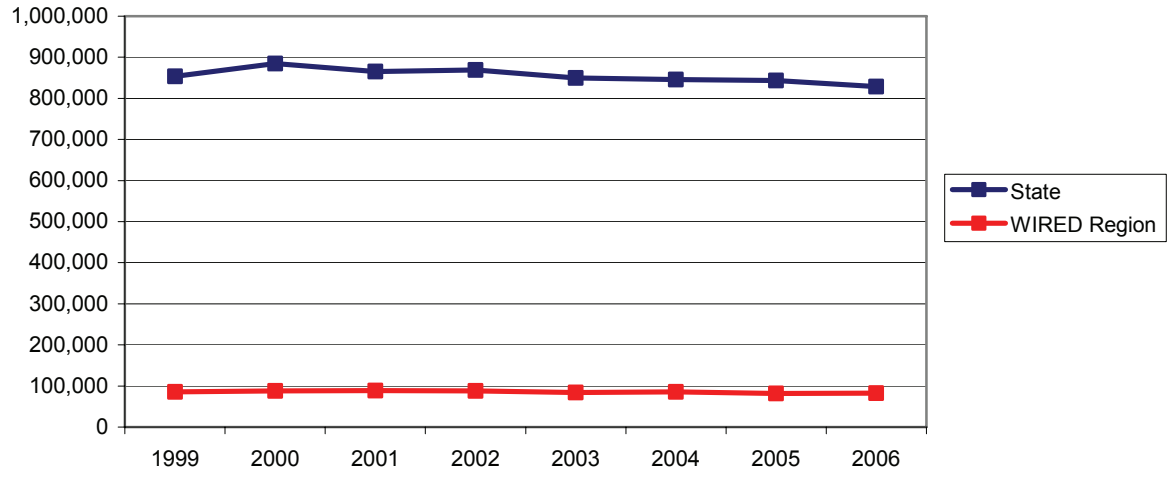



**Figure G54**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Mid-Michigan**




*Source: Quarterly Census of Employment and Wages

**Figure G55**
**Number of New Starts of Federally-Funded R&D Projects***

**Mid-Michigan**

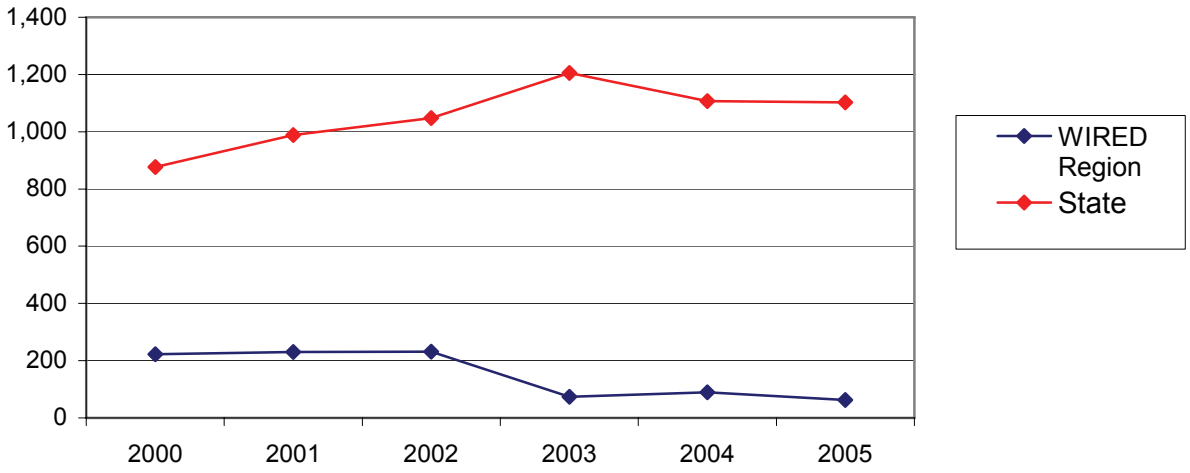
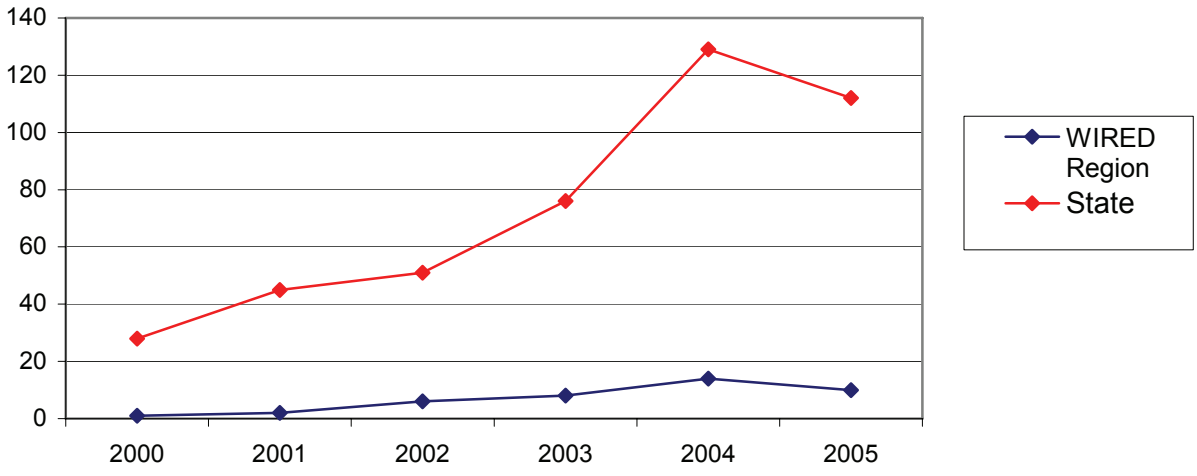



**Figure G56**
**Number of New Starts of SBIR Grants***

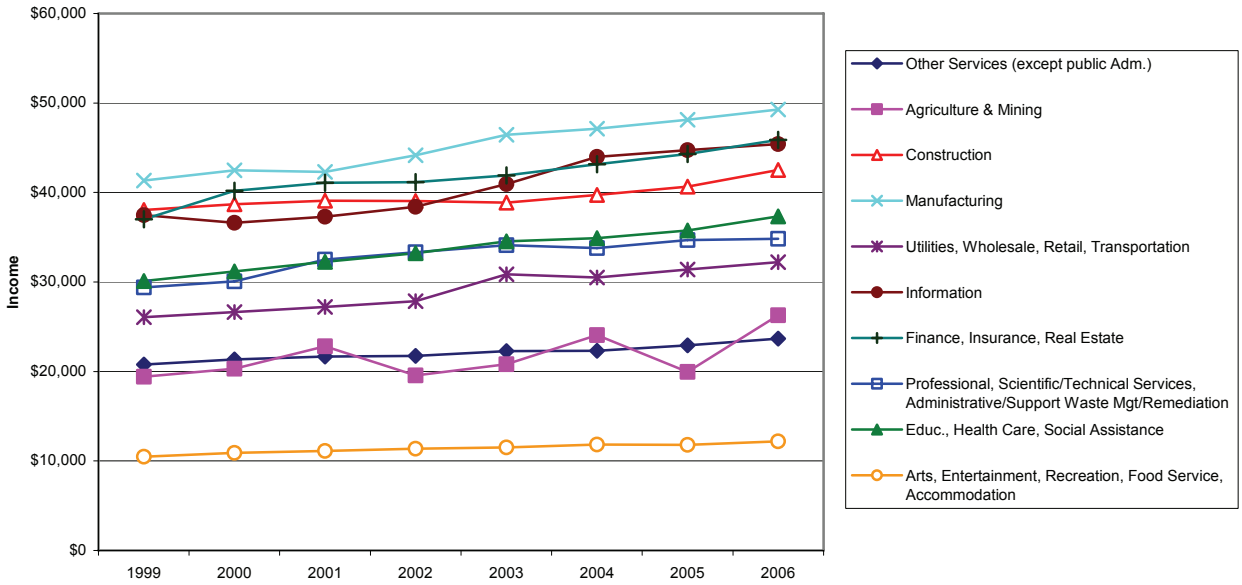
**Mid-Michigan**



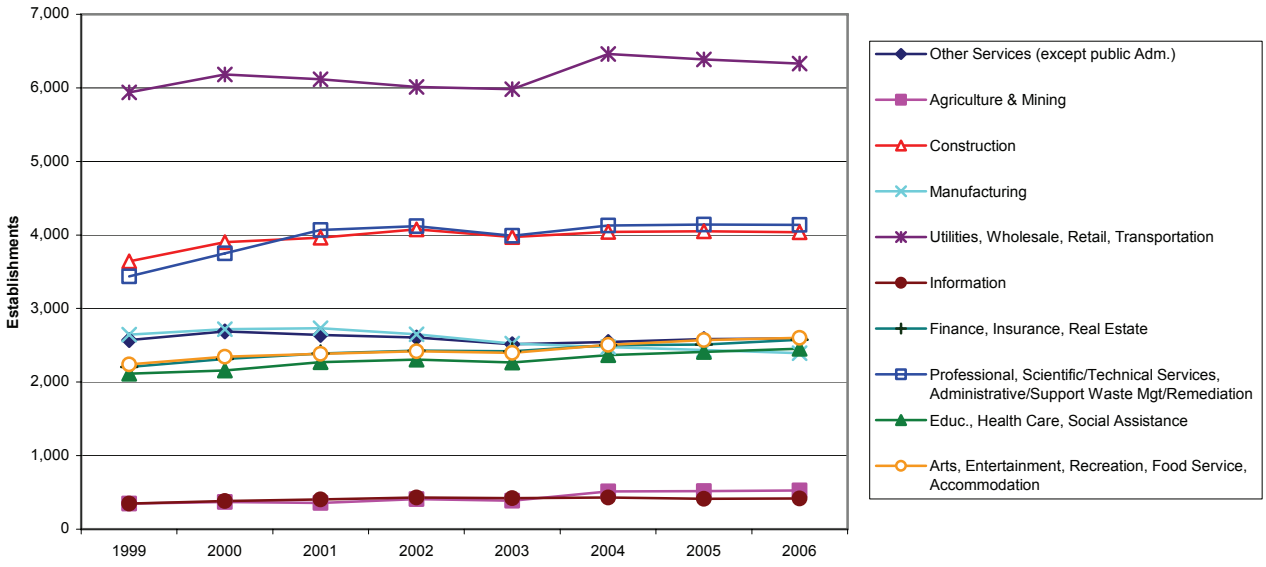

*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# West Michigan

## Figure G57
## Average Annual Income in Region by Industry*
## West Michigan

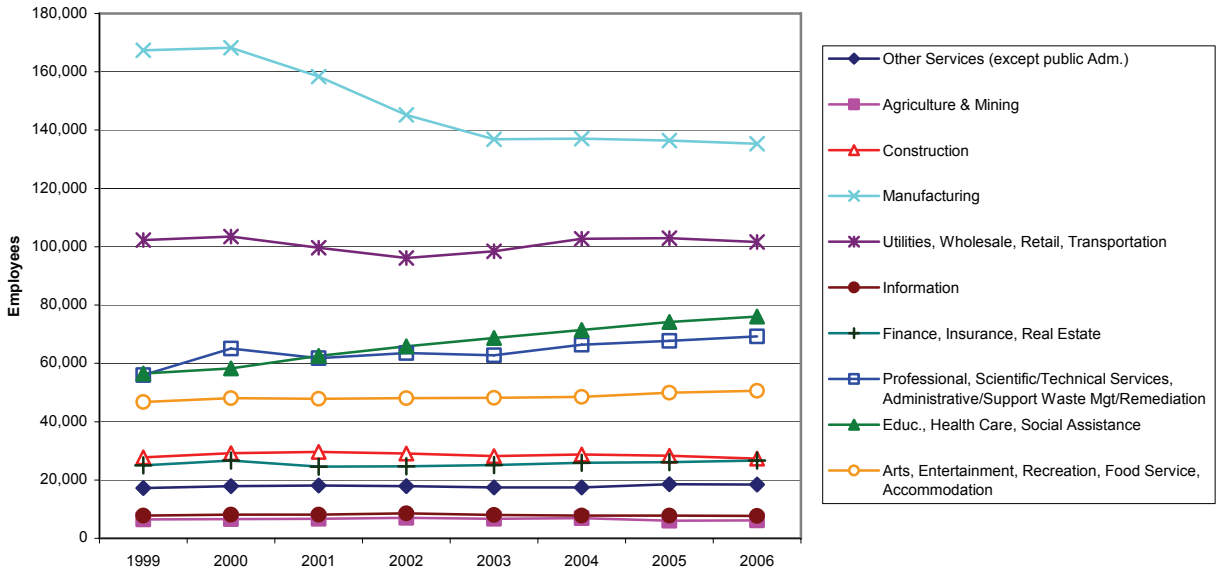



## Figure G58
## Number of Establishments in Region by Industry*
## West Michigan

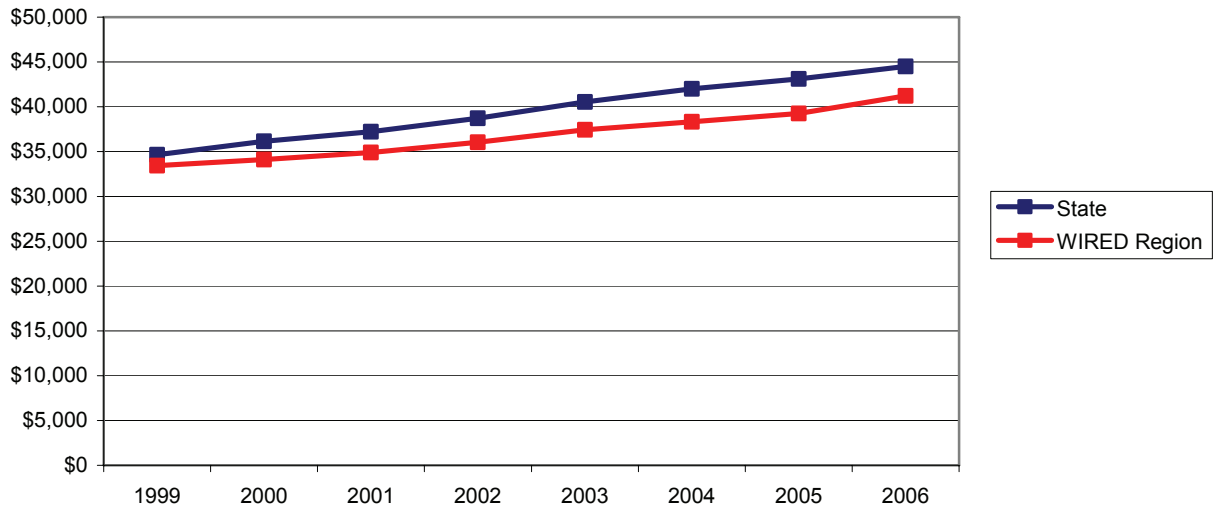



*Source: Quarterly Census of Employment and Wages

## Figure G59
## Average Employment in Region by Industry*
## West Michigan




## Figure G60
## Average Income for Group of Targeted Industries, Region vs. State*
## West Michigan




*Source: Quarterly Census of Employment and Wages

**Figure G61**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**West Michigan**

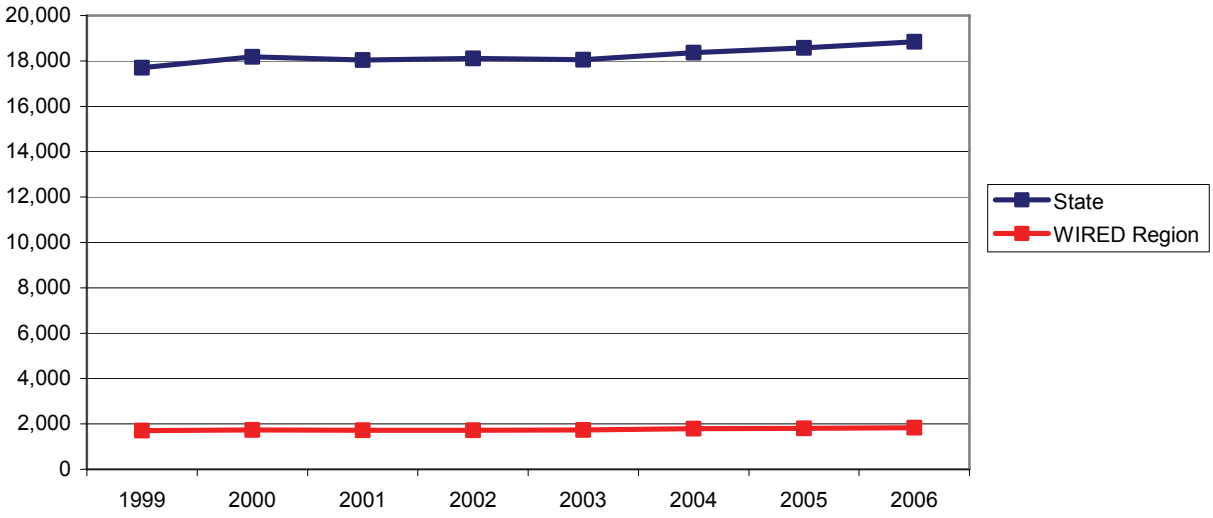
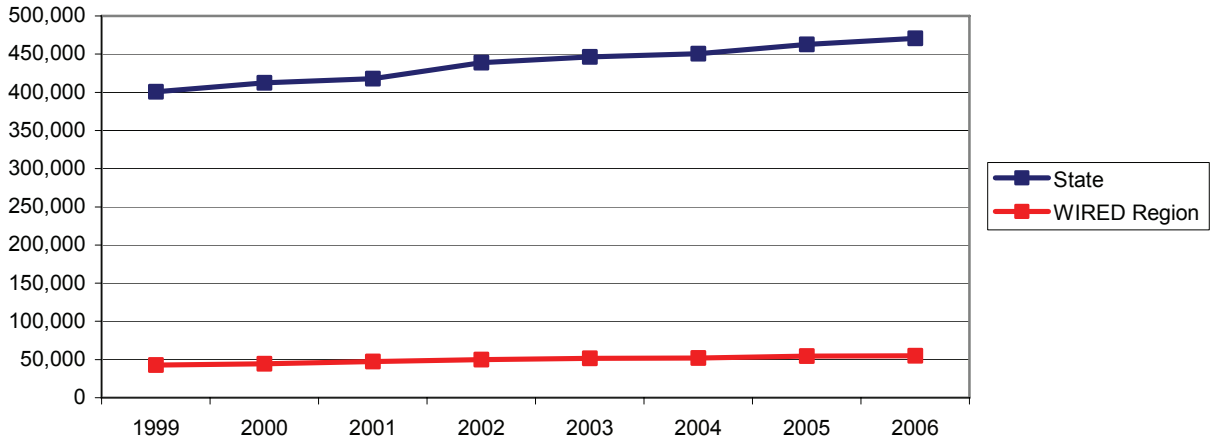



**Figure G62**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**West Michigan**




*Source: Quarterly Census of Employment and Wages

**Figure G63**
**Number of New Starts of Federally-Funded R&D Projects***

**West Michigan**

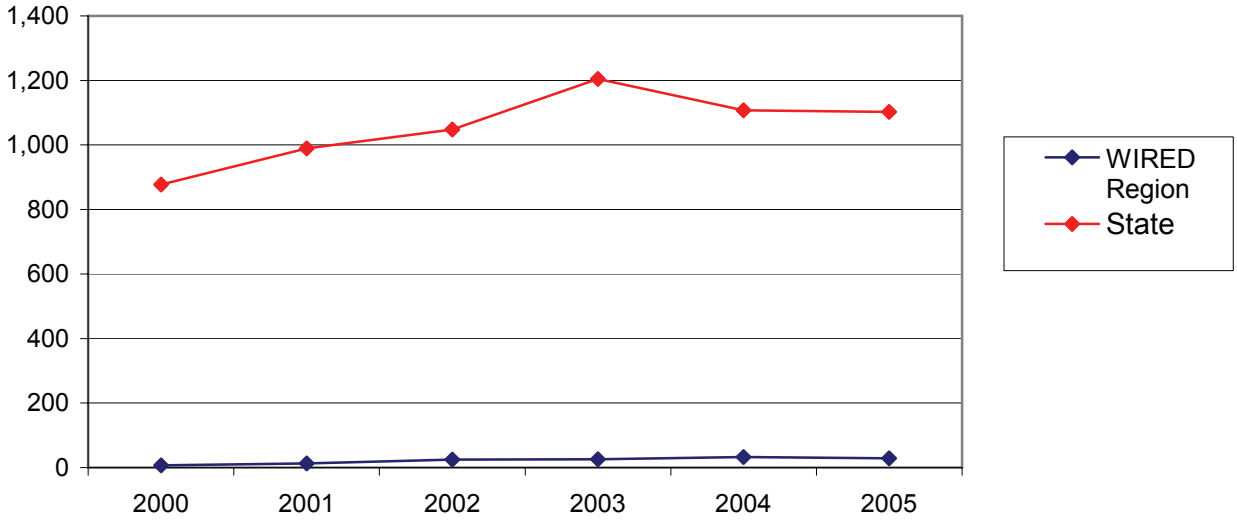
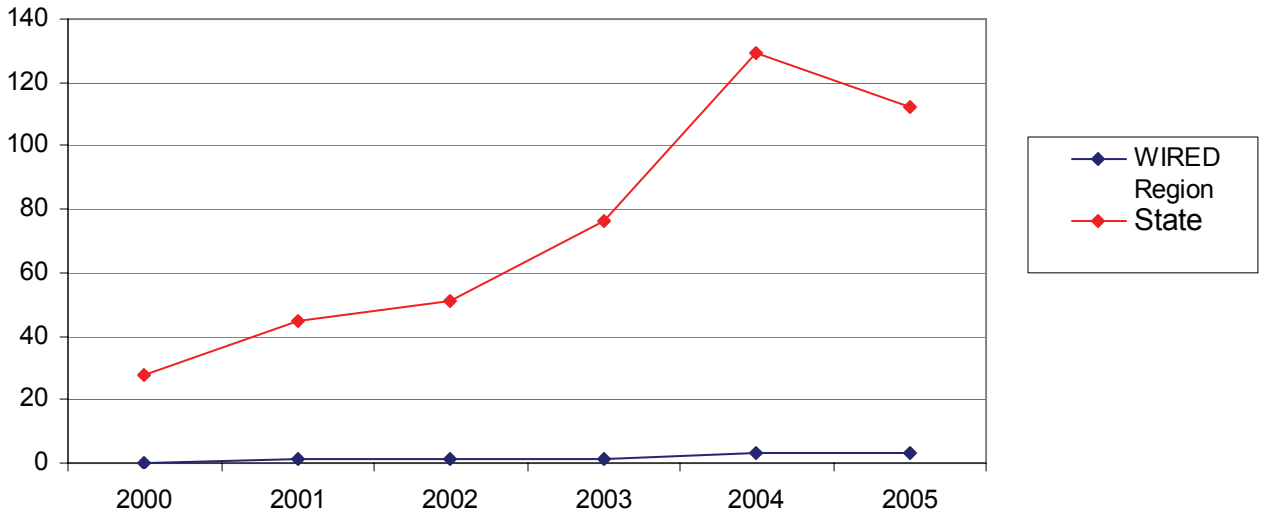



**Figure G64**
**Number of New Starts of SBIR Grants***

**West Michigan**

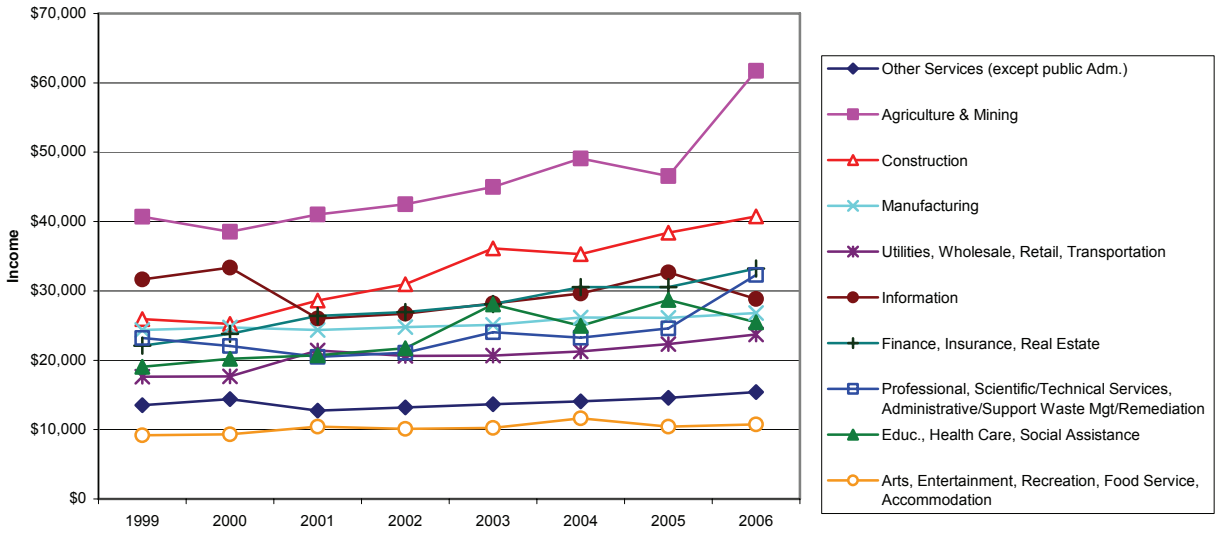



*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Montana

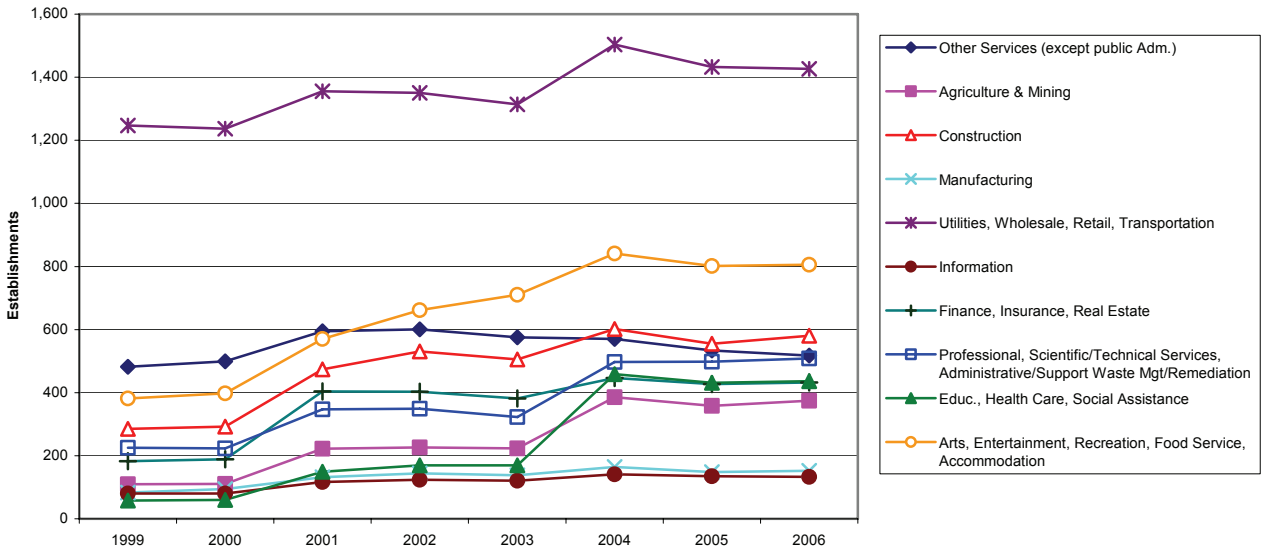
## Figure G65
## Average Annual Income in Region by Industry*

## Montana




## Figure G66
## Number of Establishments in Region by Industry*

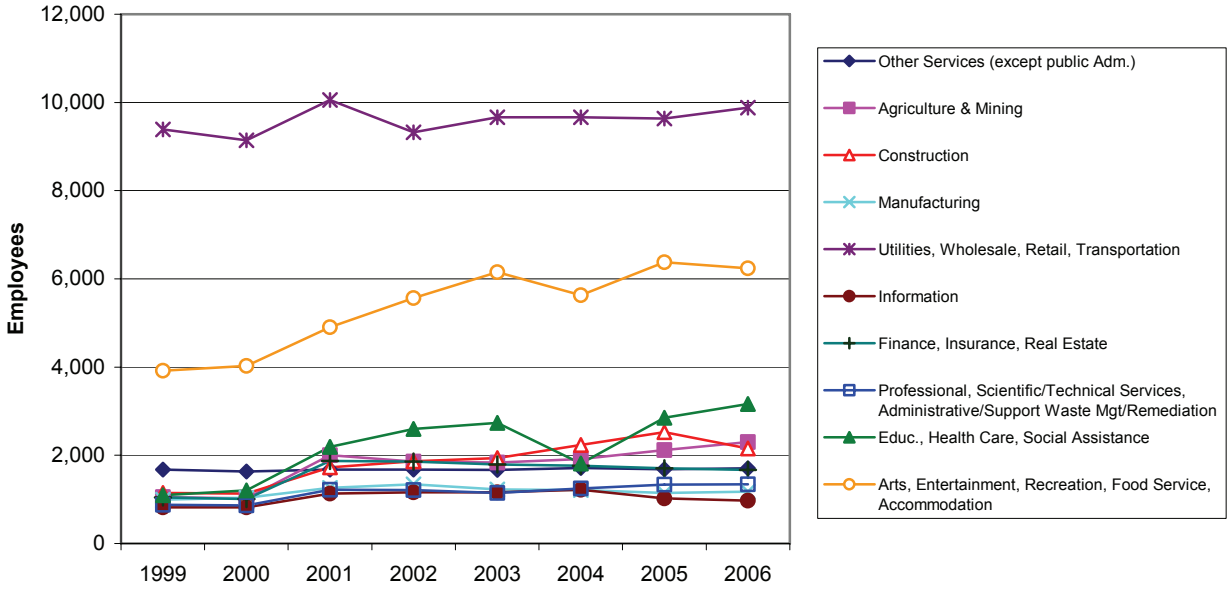
## Montana




*Source: Quarterly Census of Employment and Wages

**Figure G67**
**Average Employment in Region by Industry***

**Montana**




*Source: Quarterly Census of Employment and Wages

Baseline measures are reported for the complete basket of targeted industries rather than individual targeted industries because certain individual target industries are so specific that, for the baseline year, no data is available. This problem is so pronounced in Montana that there was insufficient data even for the complete basket of targeted industries—while there are some establishments reported in the target NAICS codes, no employees or wages are reported, most likely because many of the "establishments" are sole proprietorships and/or family farms. Accordingly, Montana is absent from all targeted industry reporting.

**Figure G68**
**Number of New Starts of Federally-Funded R&D Projects***

**Montana**

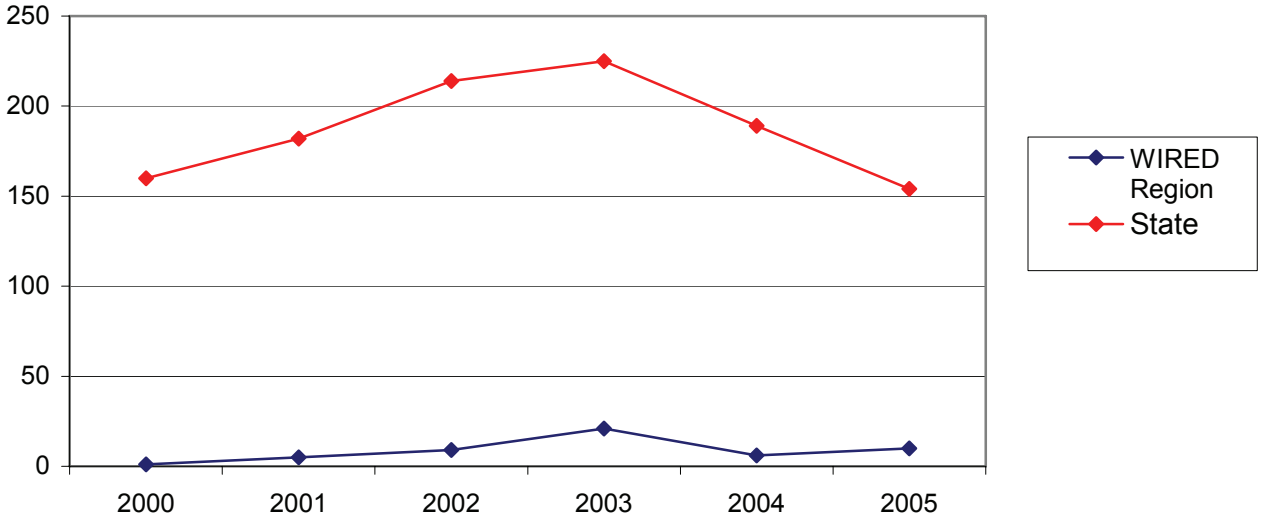
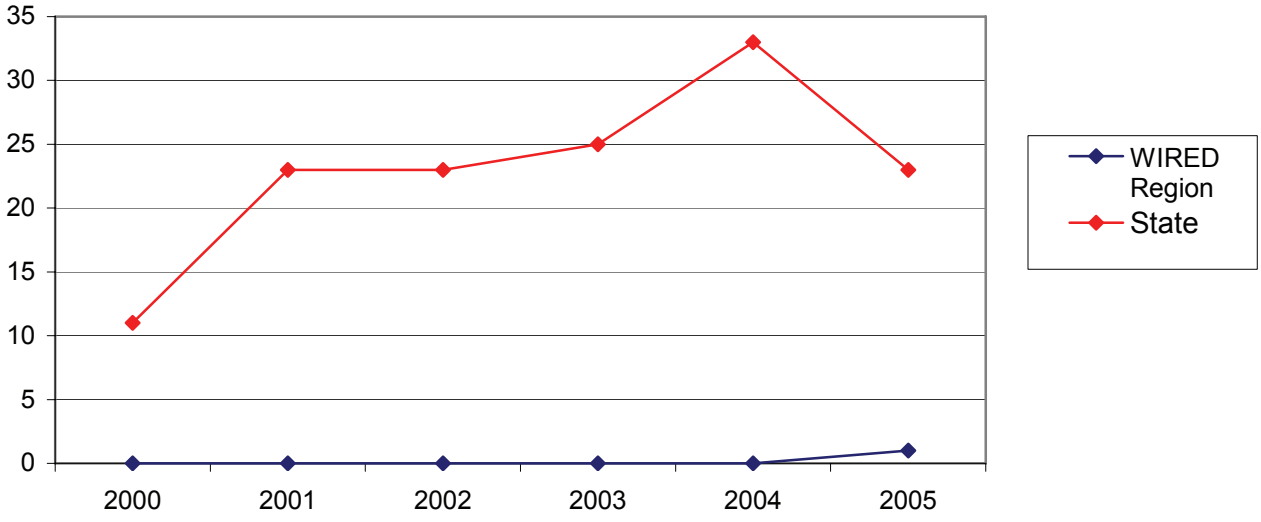



**Figure G69**
**Number of New Starts of SBIR Grants***

**Montana**

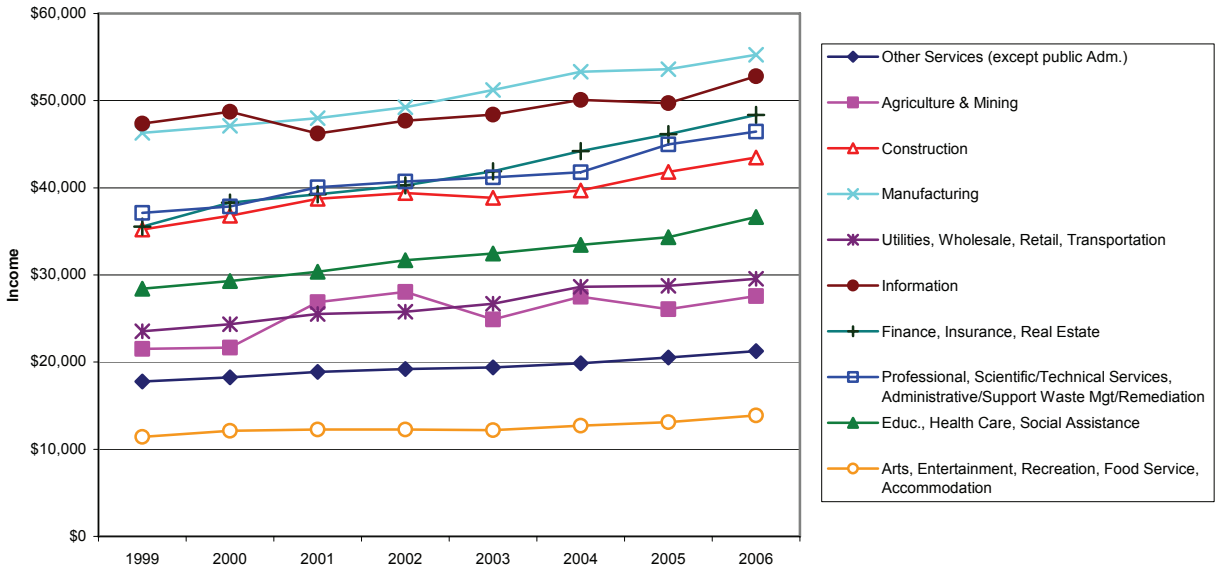



*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Finger Lakes

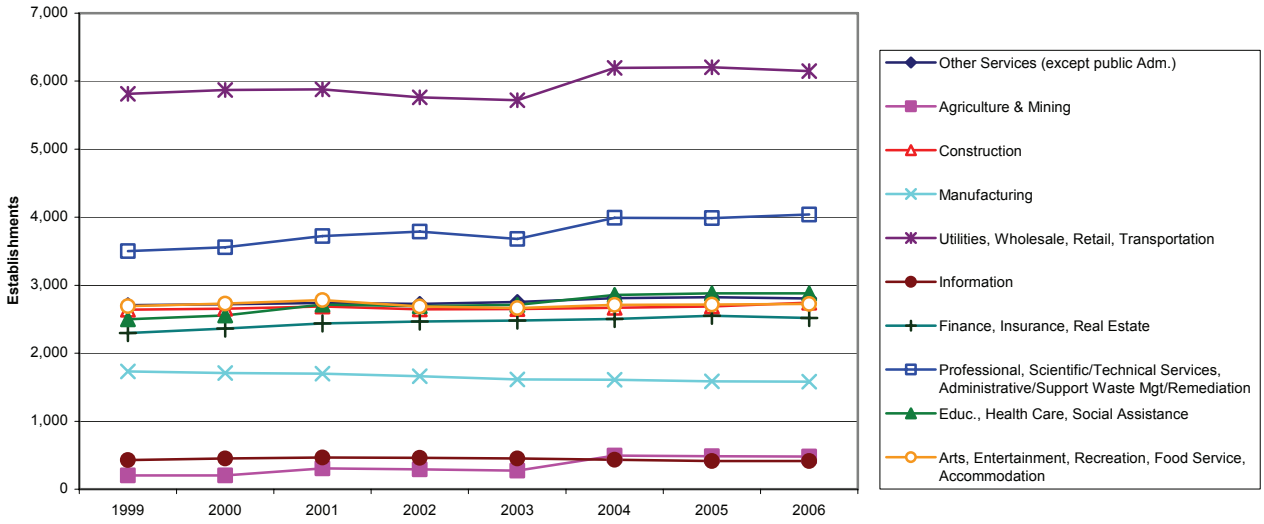
## Figure G70
## Average Annual Income in Region by Industry*

## Finger Lakes




## Figure G71
## Number of Establishments in Region by Industry*

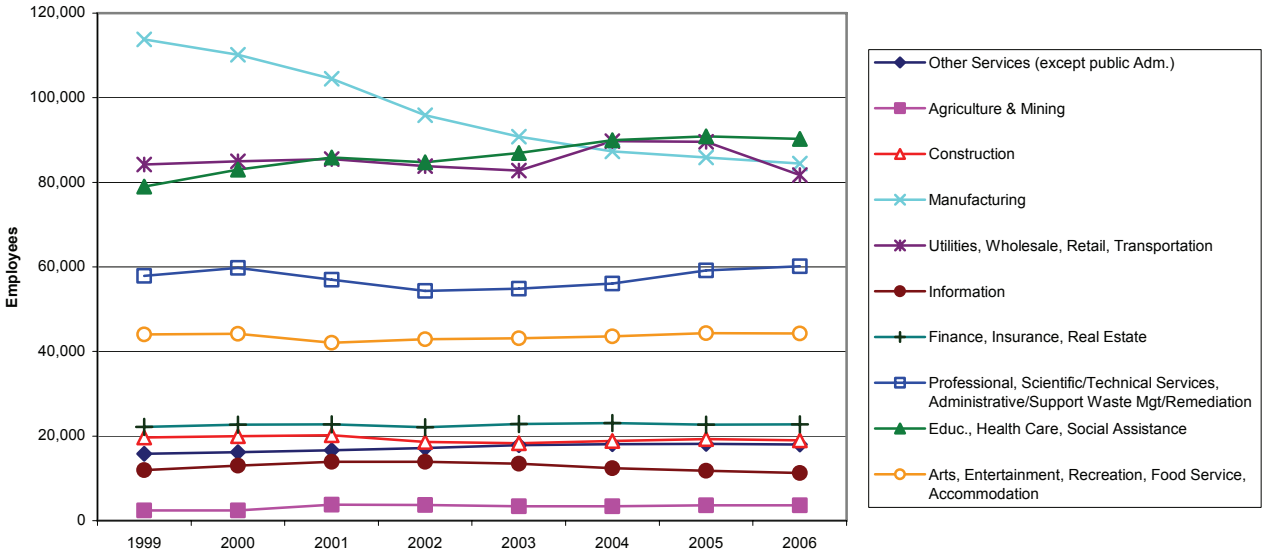
## Finger Lakes




*Source: Quarterly Census of Employment and Wages

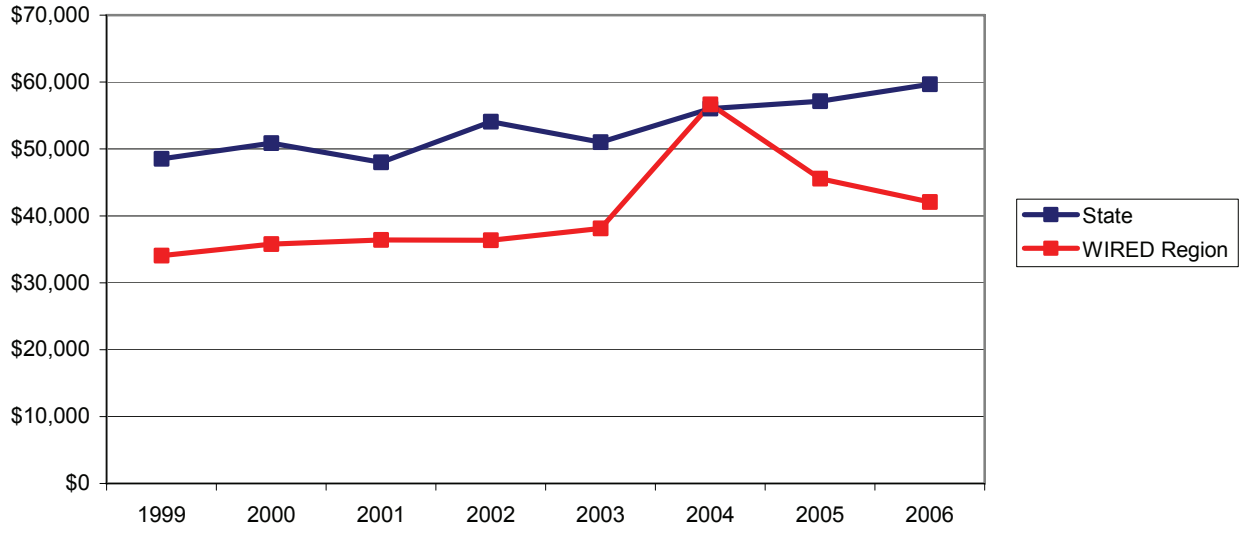
## Figure G72
## Average Employment in Region by Industry*

### Finger Lakes




## Figure G73
## Average Income for Group of Targeted Industries, Region vs. State*

### Finger Lakes




*Source: Quarterly Census of Employment and Wages

**Figure G74**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Finger Lakes**

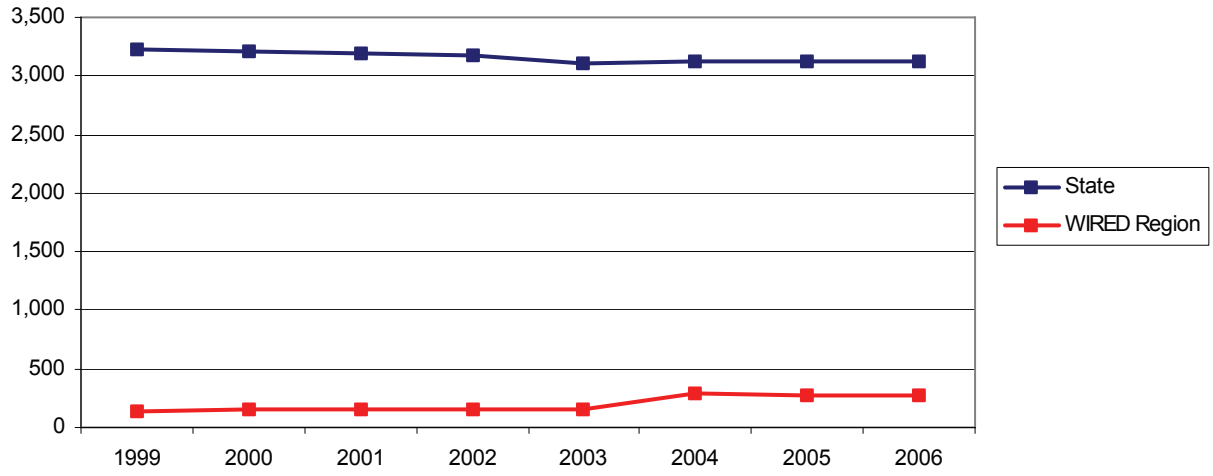
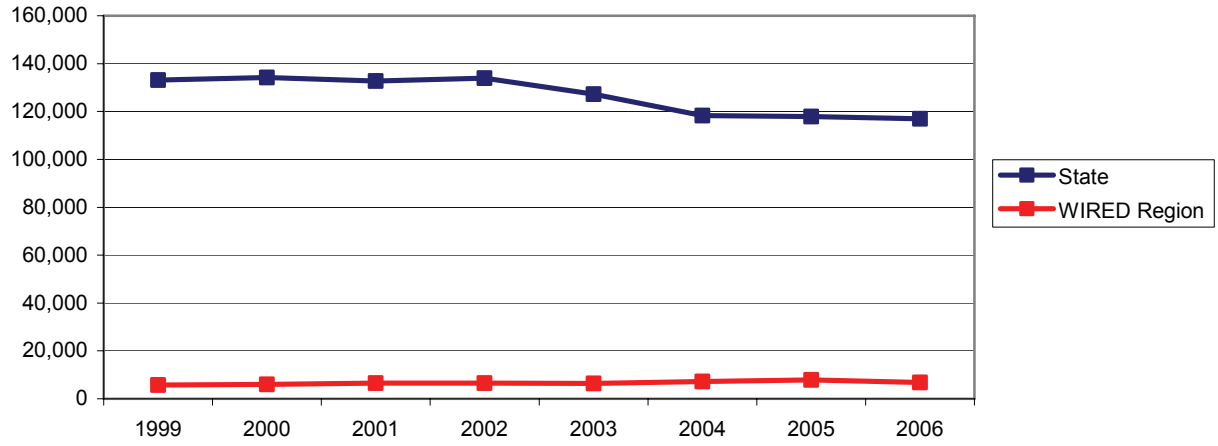



**Figure G75**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Finger Lakes**




*Source: Quarterly Census of Employment and Wages

**Figure G76**
**Number of New Starts of Federally-Funded R&D Projects***

**Finger Lakes**

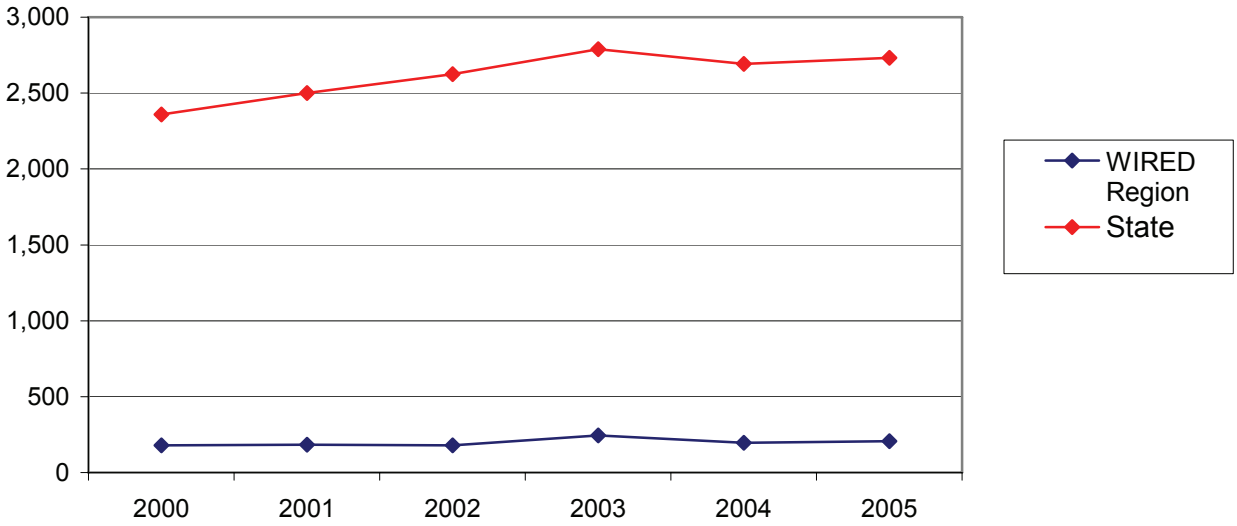
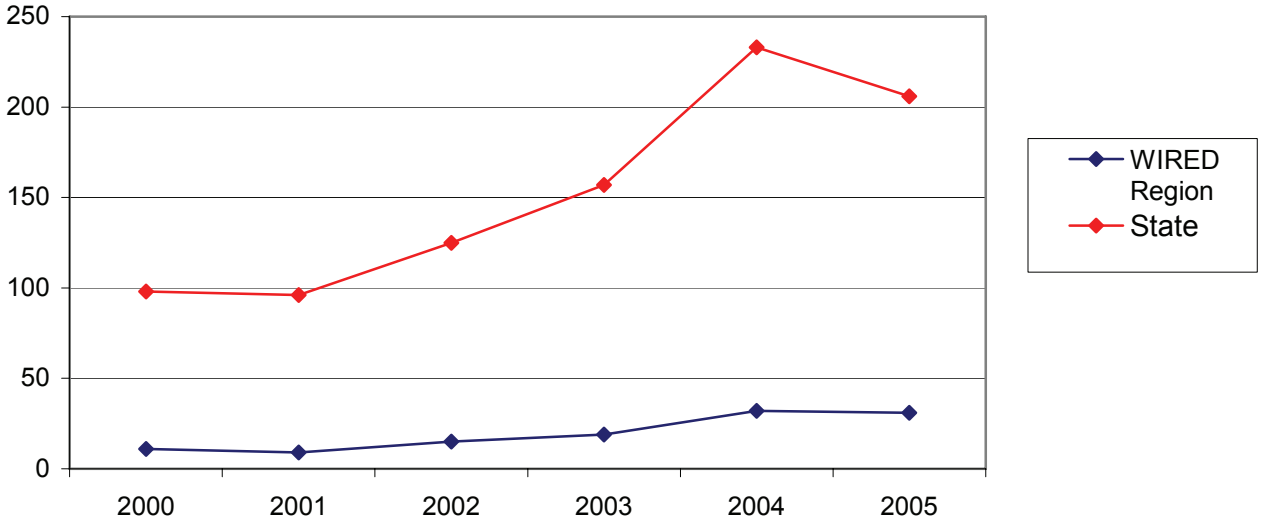



**Figure G77**
**Number of New Starts of SBIR Grants***

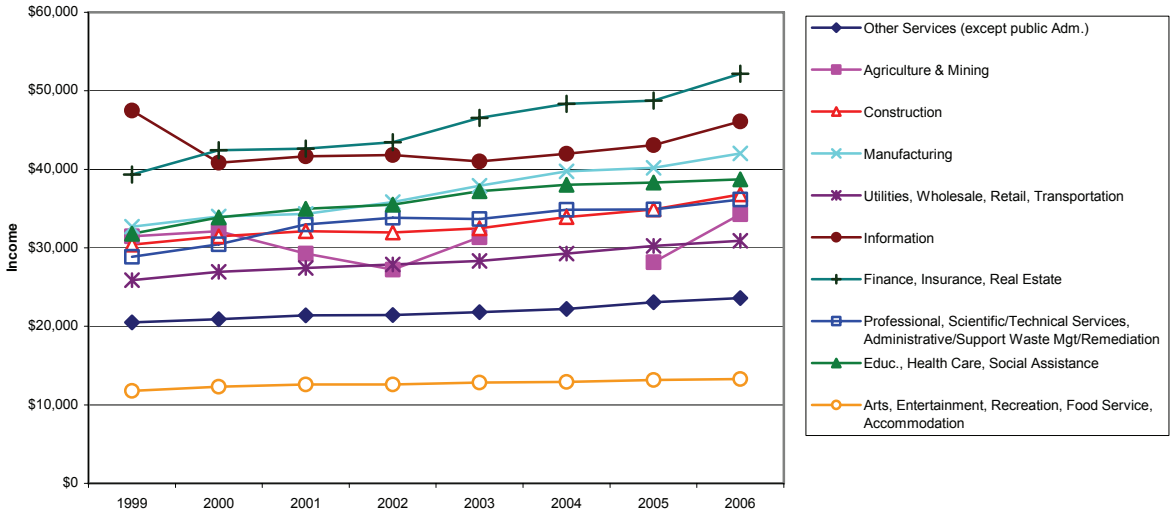
**Finger Lakes**




*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

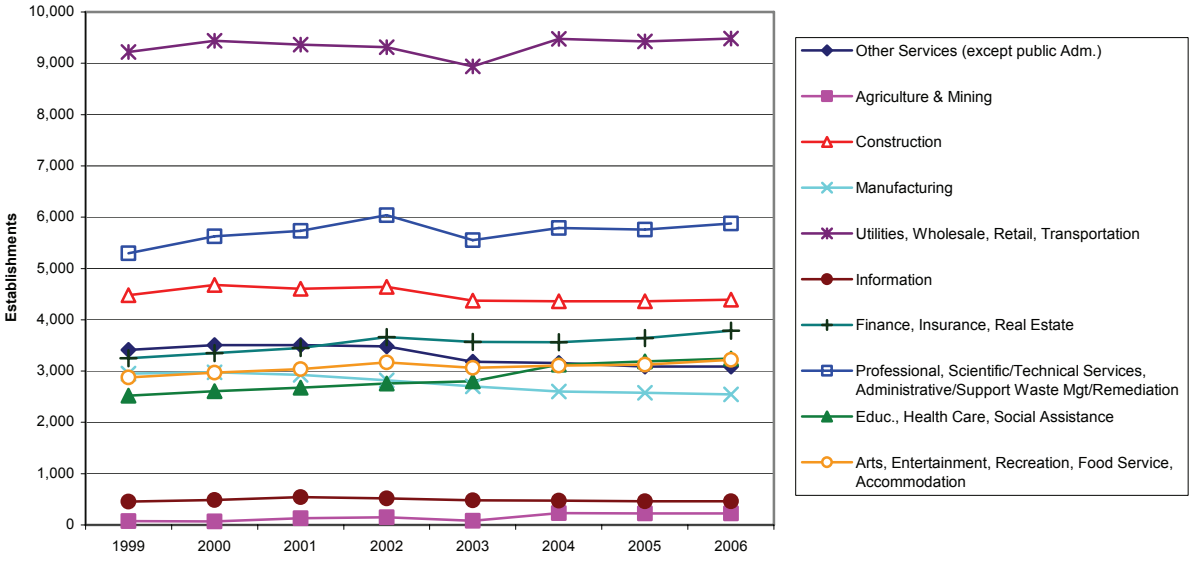
# Piedmont Triad

## Figure G78
## Average Annual Income in Region by Industry*
## Piedmont Triad



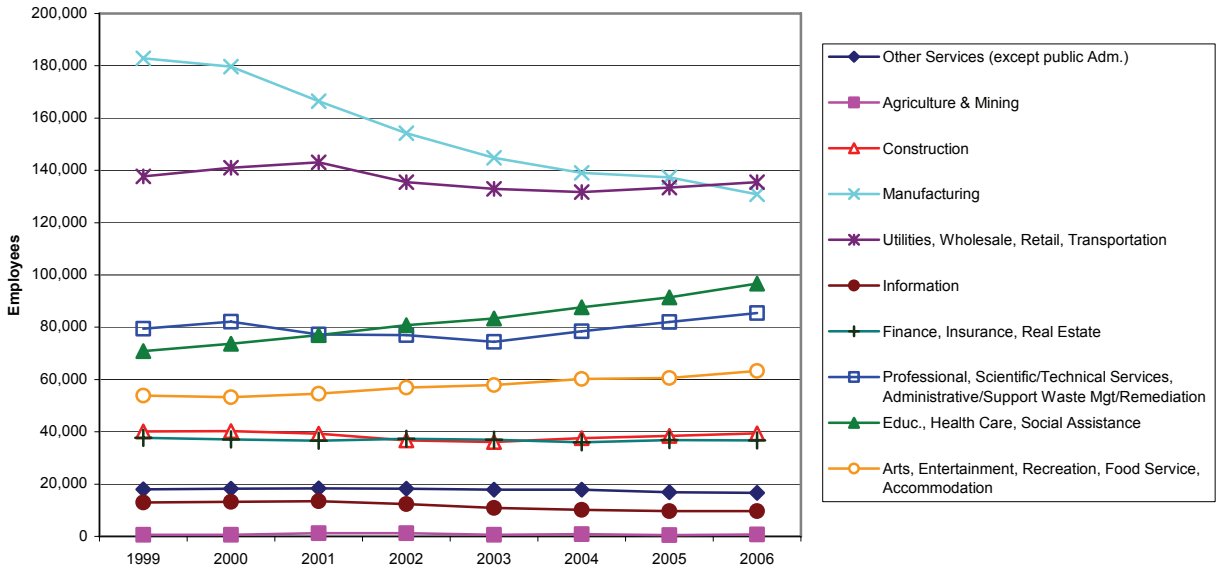

* Insufficient data was available for the agriculture and mining industries in 2004

## Figure G79
## Number of Establishments in Region by Industry*
## Piedmont Triad

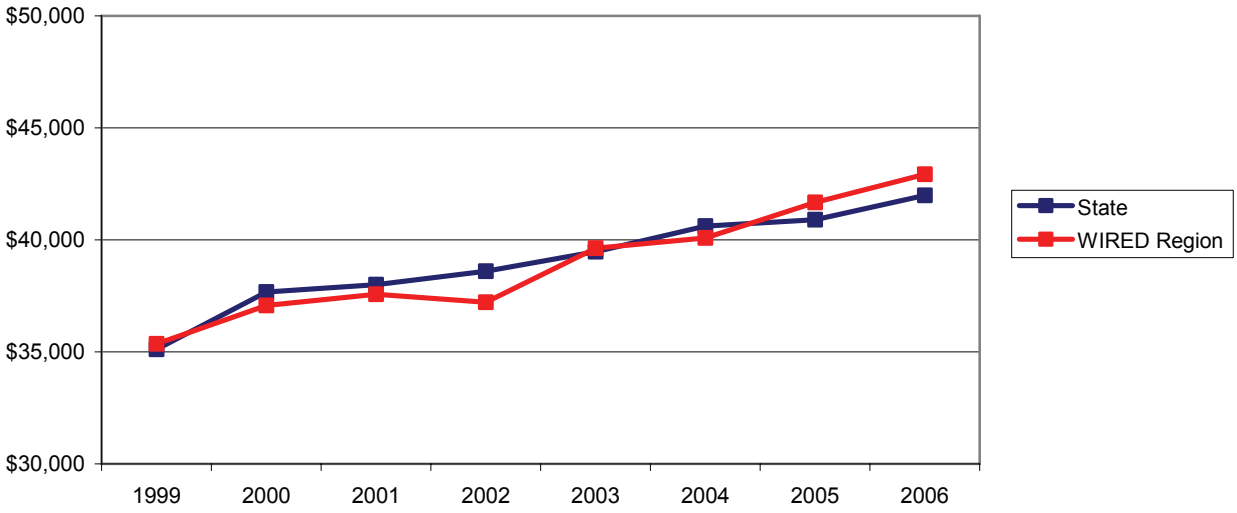



*Source: Quarterly Census of Employment and Wages

## Figure G80
## Average Employment in Region by Industry*
## Piedmont Triad




## Figure G81
## Average Income for Group of Targeted Industries, Region vs. State*
## Piedmont Triad




*Source: Quarterly Census of Employment and Wages

**Figure G82**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Piedmont Triad**

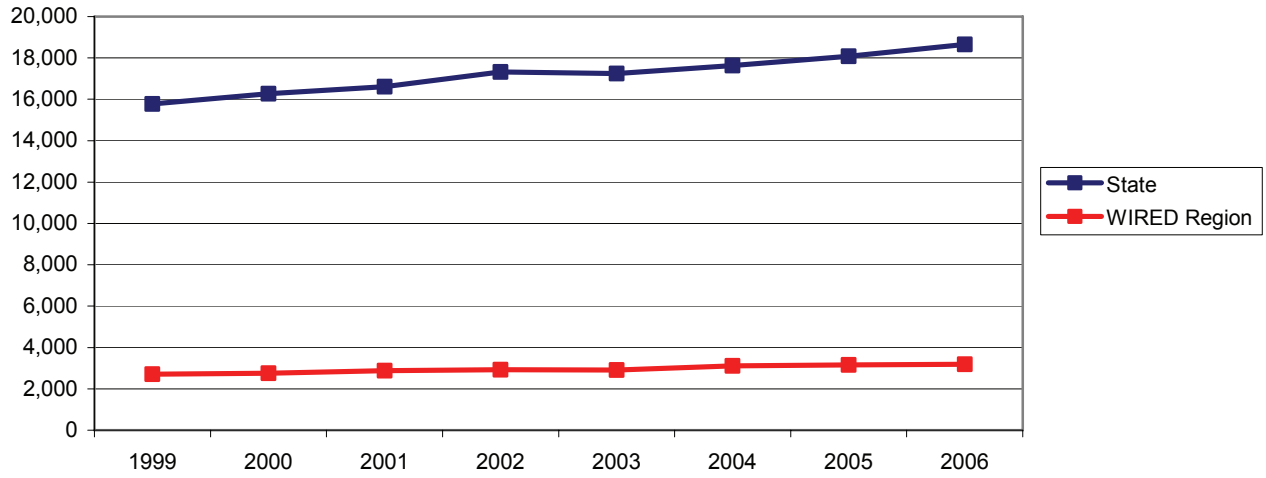
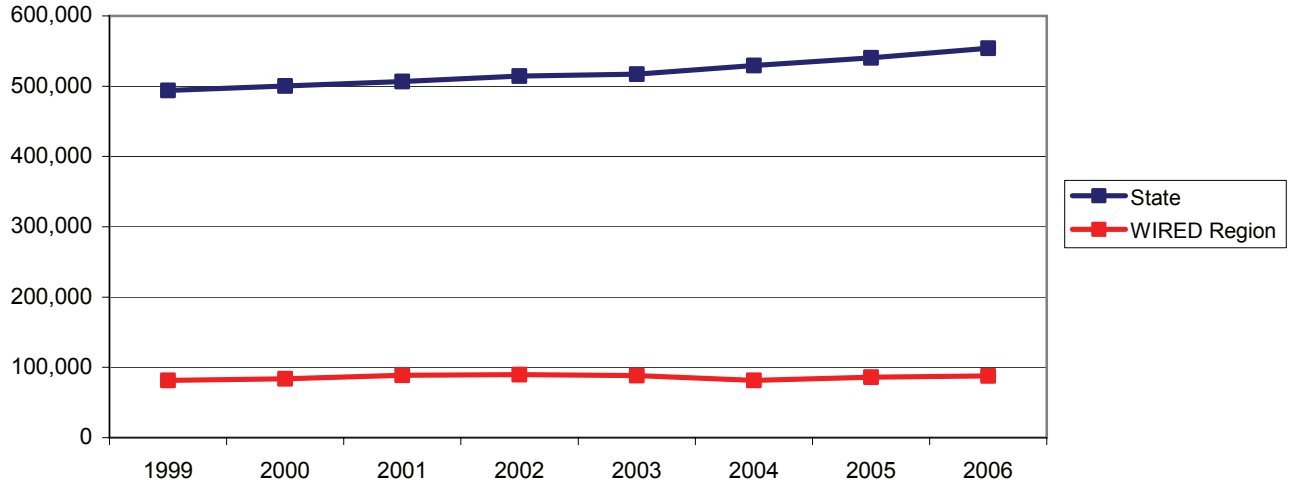



**Figure G83**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Piedmont Triad**




*Source: Quarterly Census of Employment and Wages

**Figure G84**
**Number of New Starts of Federally-Funded R&D Projects***

**Piedmont Triad**

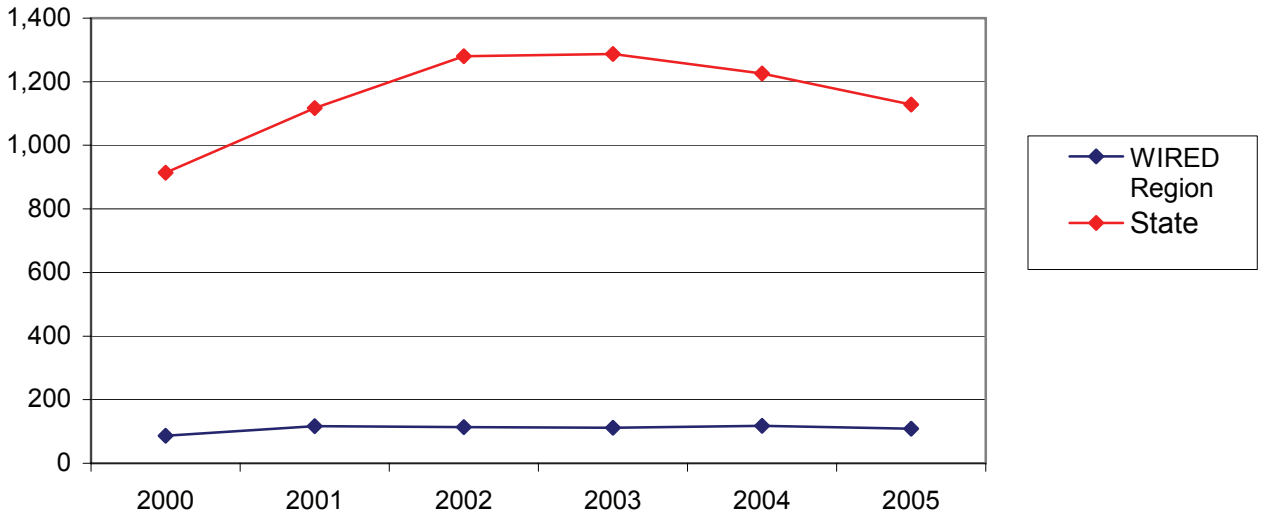
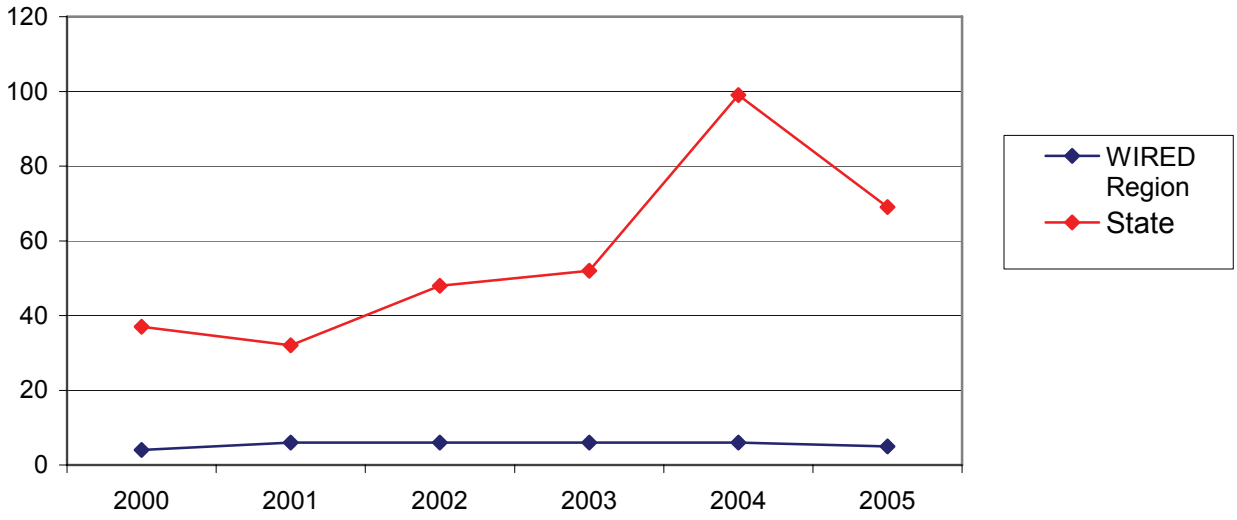



**Figure G85**
**Number of New Starts of SBIR Grants***

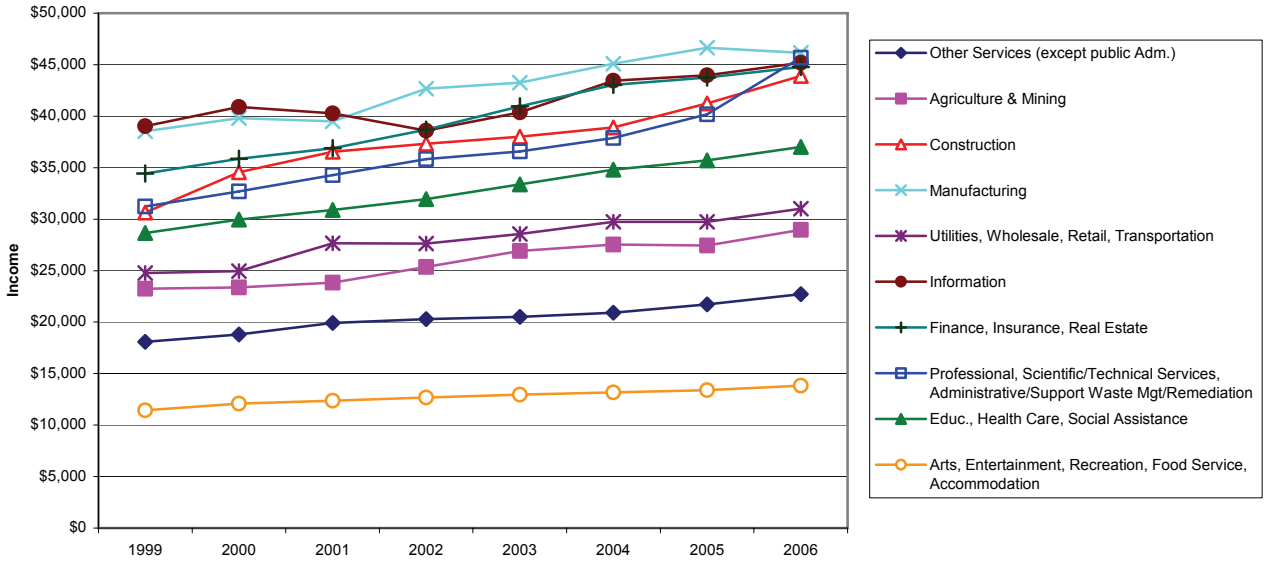
**Piedmont Triad**



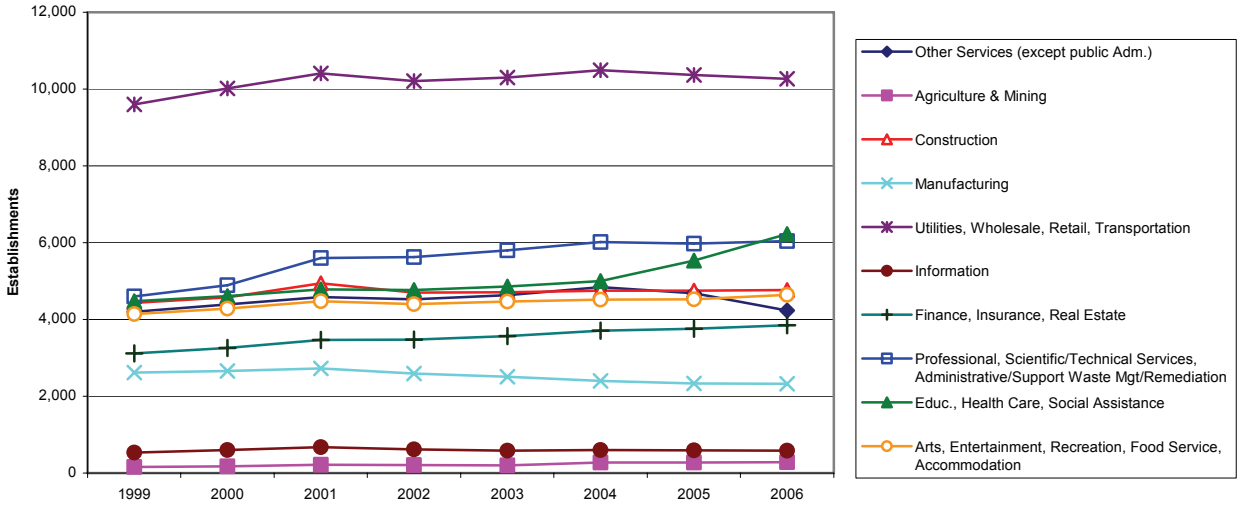

*Source: RAND Database of Research and Development in the U.S. (RaDiUS)

# Wall Street West

## Figure G86
## Average Annual Income in Region by Industry*
## Wall Street West

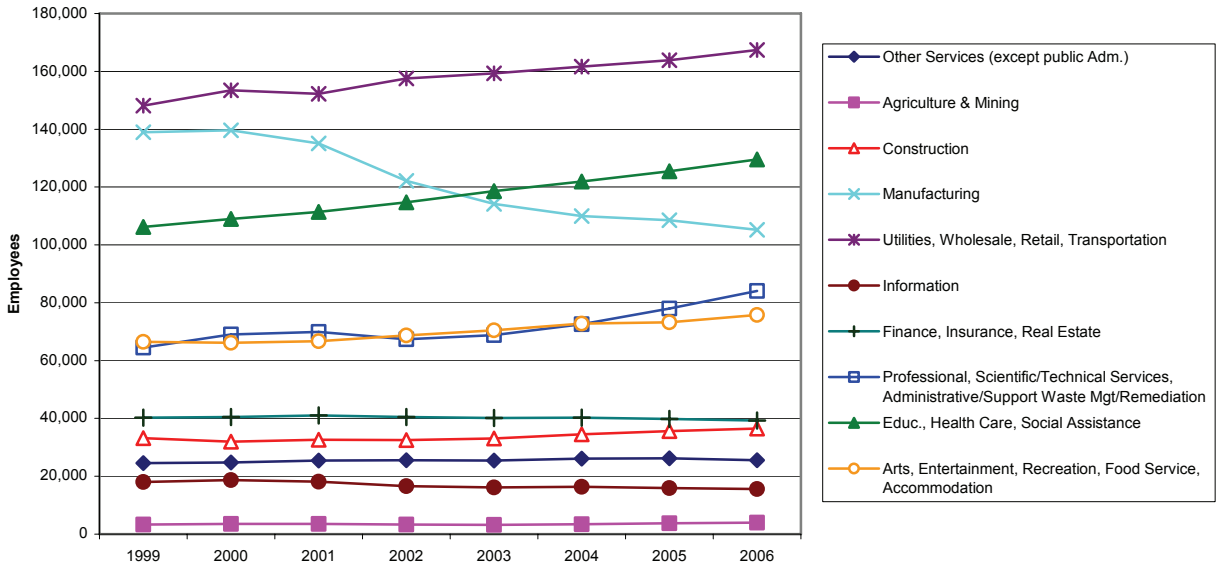



## Figure G87
## Number of Establishments in Region by Industry*
## Wall Street West

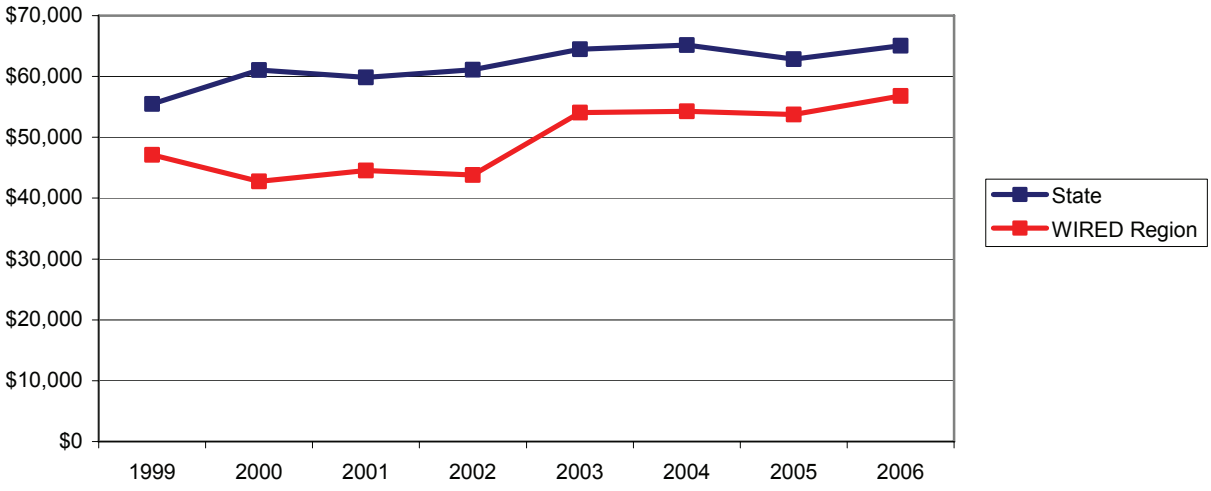



*Source: Quarterly Census of Employment and Wages

## Figure G88
## Average Employment in Region by Industry*
## Wall Street West




## Figure G89
## Average Income for Group of Targeted Industries, Region vs. State*
## Wall Street West




*Source: Quarterly Census of Employment and Wages

**Figure G90**
**Average Number of Establishments for Group of Targeted Industries, Region vs. State***

**Wall Street West**

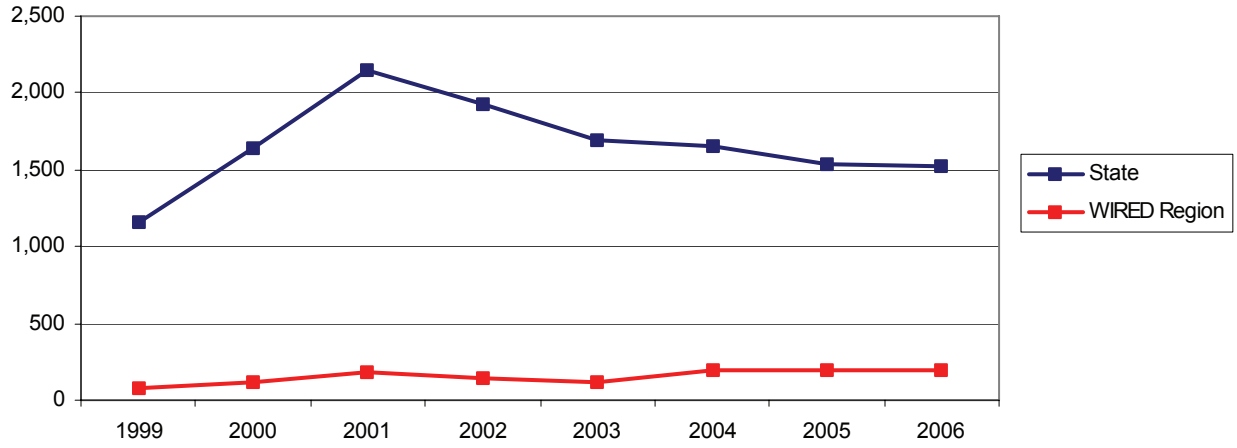
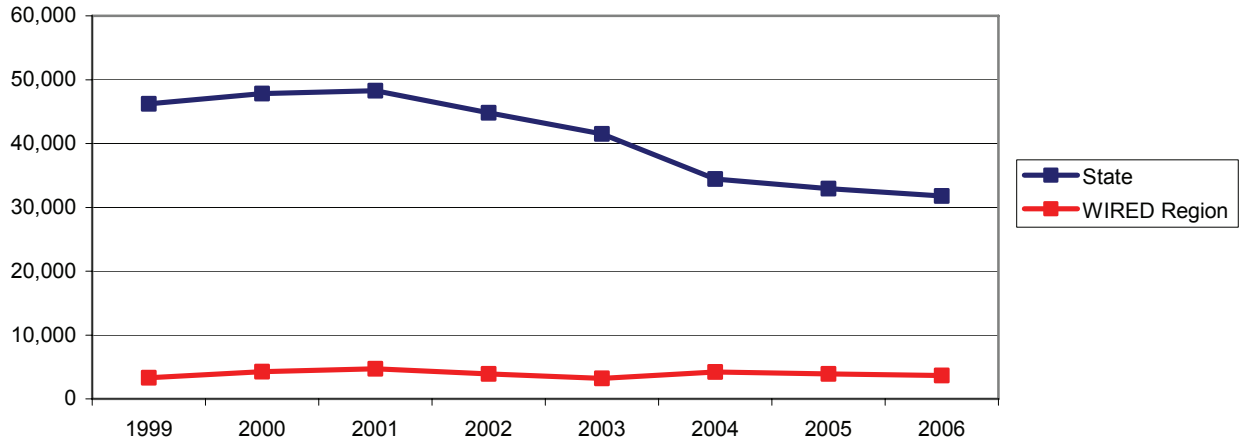



**Figure G91**
**Average Annual Employment for Group of Targeted Industries, Region vs. State***

**Wall Street West**




*Source: Quarterly Census of Employment and Wages

**Figure G92**
**Number of New Starts of Federally-Funded R&D Projects***

**Wall Street West**

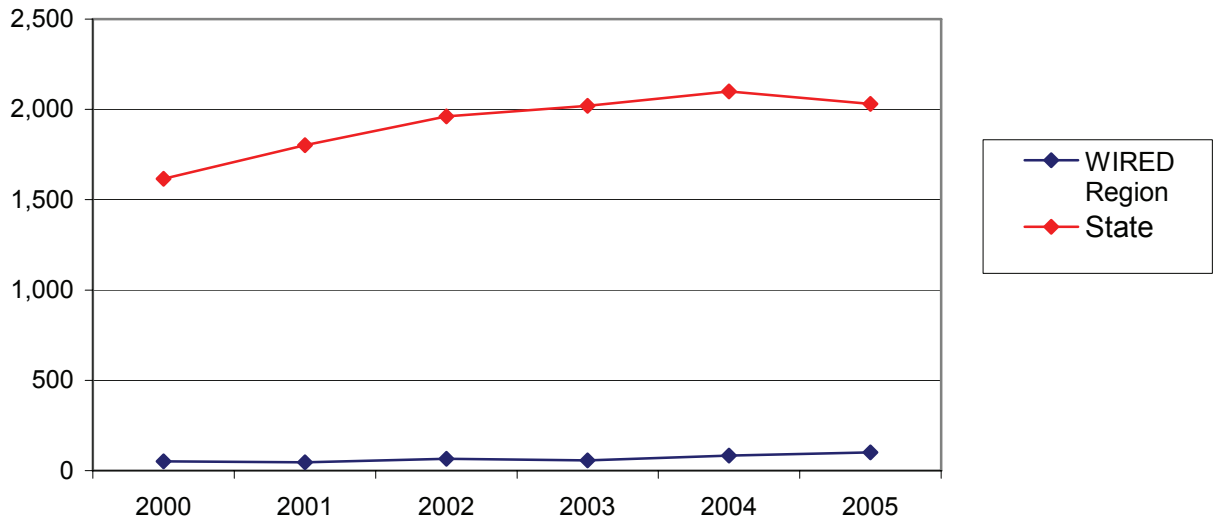
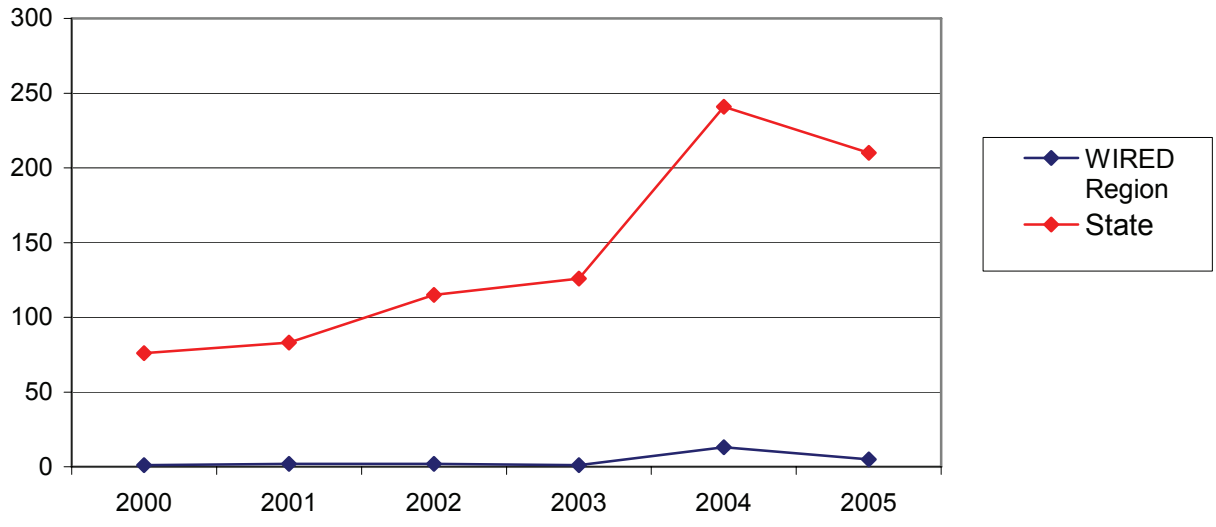



**Figure G93**
**Number of New Starts of SBIR Grants***

**Wall Street West**




*Source: RAND Database of Research and Development in the U.S. (RaDiUS)