



# **Workforce Innovation in Regional Economic Development (WIRED) Implementation Plan**

**Submitted to the U.S. Department of Labor/Employment and Training Administration by the  
State of Arizona, Pima County and the Innovation Frontier Arizona Partners  
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## INTRODUCTION

Pima, Cochise, Santa Cruz and Yuma Counties comprise Innovation Frontier Arizona, a region with a transformational purpose to align workforce development, education, and economic development assets around a unified vision for Southern Arizona's prosperity. This vision focuses on advanced technology and homeland security, capitalizing on the region's status as a border community, and one of the nation's premier aerospace-defense hubs. In spring 2007, Innovation Frontier Arizona submitted a successful proposal to the U.S. Department of Labor's Employment & Training Administration (ETA) to participate in the department's flagship initiative, Workforce Innovations in Regional Economic Development (WIRED). WIRED funding, totaling \$5,000,000 over three years, will address critical challenges to the regional vision, including uneven access to resources, tools, models and information needed to bridge a threatening skills gap. The WIRED investment will help the region unlock and transfer knowledge around game-changing solutions that will allow sustained innovation and growth.



*Innovation Frontier Arizona's mission is to:*

**Drive innovation-based economic prosperity that is shared and sustainable and continuously improves quality of life in our region.**

## WORKFORCE INNOVATION IN REGIONAL ECONOMIC DEVELOPMENT

U.S. Department of Labor's support through WIRED comes at pivotal time for Innovation Frontier Arizona's regional economy and workforce. Southern Arizona is struggling to address skills gaps that make it difficult for public and private employers in critical clusters to identify the qualified workers they need to sustain their innovation and growth. The skills gaps have a powerful downward effect on regional wage rates and per capita personal income.<sup>1</sup>

Innovation Frontier Arizona presents a comprehensive, game-changing plan to address this challenge. Though ambitious, the plan leverages substantial community resources, growing multifold a \$5 million grant, supporting community transformation and an annual return on investment well exceeding most private sector expectations.

The region has substantial innovation assets, including: a thriving transportation and logistics industry anchored by eight international Ports of Entry; four key military installations and the fifth-largest aerospace-defense industry in the nation. A concentration of technology firms have grown alongside the region's homeland-security activity, sparking emerging clusters in bioscience, analytical instruments, and environmental technology. Further, the region is home to competitive academic institutions, including a top-20 research university, the nation's 8th largest community college, and more than 40 proprietary post-secondary schools. Various technology incubators, a nationally-recognized entrepreneurship-education program, and dozens of entrepreneurship assistance providers support innovation through new firm development.

Subsequent to a series of stakeholder meetings, discussions and research, Innovation Frontier Arizona concluded that new talent pathways are needed to bridge the region's wage and opportunity divide. Skilled and semi-skilled technology workers must be able to move through a career lattice to address high-tech skill shortages; many non-technological jobs will require digital literacy and other 21st Century skills in order to meet new border management demands; and entrepreneurial knowhow needs to be much more widespread for the region's businesses to innovate and grow. . As such, in support of the regional *vision to be a national Center of Excellence for homeland security and advanced technology*, Southern Arizona's WIRED initiative has adopted the following three goals:

- TALENT: Create a home-grown talent pipeline for emerging and existing high-technology industries.
- ENTREPRENEURSHIP: Cultivate entrepreneurial culture, infrastructure, and pipelines to foster innovation and diversify the regional economy and career opportunities.
- COLLABORATION: Support regional knowledge exchange, maximizing learning, assets, and transformation capacity across all four counties.

These goals will inform the allocation of WIRED funds by Innovation Frontier Arizona and its leveraging and alignment of additional resources. At the same time the Innovation Frontier partners will be mindful of the need to be responsive to change and new opportunities: as economies evolve,

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<sup>1</sup> Despite these assets and impressive population and employment growth (11% and 21% respectively from 1996 to 2007), the region faces critical challenges. Since 1974, per capita personal income has fallen from 90% of the U.S. average to 80% and has lagged state averages for 30+ years. An estimated 15% of residents live below the poverty threshold, and Arizona's P-20 Council found that current educational programs are not rigorous enough to prepare students for skill-driven work or post-secondary education. The implication is that, in the face of climbing employment and job growth, the region would have to continue importing talent to meet skill demands, leaving further behind many already marginalized populations.

so must the initiatives actively transforming them. Further, as the Innovation Frontier Arizona WIRED initiative evolves it will help ensure the convergence and synergy of various efforts already underway, a sampling of which includes the following:

- In 2007, regional partners, led by Tucson Regional Economic Organization (TREO), conducted an in-depth regional economic analysis, the *Economic Blueprint*, identifying promising growth sectors supported by the WIRED and other initiative to drive the region forward.
- The regional workforce investment system, consisting of workforce investment boards from Cochise, Pima, Santa Cruz, and Yuma counties, has collaborated extensively in the past to propel southern Arizona's workforce strategically forward.
- Investment along the border has meant a growing personnel and infrastructure at eight ports of entry, as well as along the region's 400-mile border with Mexico.
- Governor Napolitano's P-20 Council has been undertaking extensive efforts to examine the rigor and overall quality of the state's education system, including a close look at science, technology, engineering, and mathematics (STEM).
- The State of Arizona has committed \$100 million over four years to fund Science Foundation of Arizona, supporting entrepreneurial growth in high-tech economic sectors.

Certainly, numerous other efforts are underway that enhance Innovation Frontier Arizona's economy and that of the state at large, yet regional efforts to date, while very often complementary, rarely were driven in broad-based collaboration under shared vision, goals, strategy, and action. The implementation plan's following sections offer greater detail on how the WIRED investment in Innovation Frontier Arizona will support coordinated aligned transformation efforts. Tables identify specific activities, responsible parties, timelines, necessary resources, and desired outcomes/performance metrics under closely aligned and deliberate strategies. The plan also attempts to clarify how the region's WIRED initiative fits into the larger framework of economic and workforce development activities already (or soon to be) underway, as well as clarifying governance, leadership, communications, performance measurement, and sustainability plans.

## **A. INNOVATION FRONTIER ARIZONA – VISION, GOALS & PRINCIPLES**

Innovation Frontier Arizona envisions the region as a center of excellence for Homeland Security and advanced technology, capitalizing on its border proximity and the shared economic strength of one of the nation's premier aerospace/defense clusters and a concentration of military installations across the region. A home-grown talent base meets the math, science, technology, literacy, interpersonal, and innovation demands of foster the aerospace-defense sector and supports the emergence of other advanced industries, such as bioscience, analytical instruments, and environmental technology.

The region's mission is to **drive innovation-based economic prosperity that is shared and sustainable and continuously improves quality of life in the region.** Innovation Frontier Arizona is a regional effort that brings together government, the private sector, the P-20 education system, economic development strategies and financial resources to drive the identified vision and mission through a series of well-defined goals and related strategies and tactics.

### **Goal 1: TALENT—Create a home-grown talent pipeline for emerging and existing high-technology industries.**

*Planning a diversified, innovative and inclusive economy requires assessing the demands of growth industries and positioning the homegrown workforce to meet these demands. This includes talent development and training along key competencies. In Southern Arizona, this means a heavy emphasis on Science, Technology, Engineering, and Mathematics (STEM), which supports the region's information and engineering technology fields. It also requires significant effort to remediate digital literacy and other basic skills among adult workers, to support the changing information systems demands as the region's border and logistics flows become increasingly technology dominated. New workforce opportunities can be achieved by providing appropriate skills, training and pathways for high-demand careers and updating competencies to meet market demand. This goal will address workforce barriers, relying on collaboration and coordination for achieving successful solutions.*

### **Goal 2: ENTREPRENEURSHIP – Cultivate entrepreneurial culture, infrastructure, and pipelines to foster innovation and diversify the regional economy and career opportunities.**

*The most successful entrepreneurial communities share common characteristics, including aligned, networked businesses and support systems; just-in-time training and learning opportunities to help entrepreneurs find immediate help they need to solve key problems; and just-in-case training and learning opportunities that help people understand what it means to be an entrepreneur and how they can get started on the path to new business development if so desired. Characteristics of entrepreneurship are infused at every level of society, from children to retirees. Southern*

*Arizona will help individuals think systematically—cultivating a mindset—about what it takes to start a new business that will contribute to the overall health of the regions economy. By aligning assets and programs, and creating necessary infrastructure, Innovation Frontier Arizona will become inviting to new people and competencies that seek to grow and expand in the region.*

### **Goal 3: COLLABORATION – Support regional knowledge exchange, maximizing learning, assets, and transformation capacity across all four counties.**

*Innovation Frontier Arizona understands that regionalism is less about shared geography, challenges and solutions; rather, **regionalism is about habits of collaboration** around similar sets of issues that may vary from day to day. Thus the greatest opportunity of WIRED is to practice and institutionalize collaborative practices across jurisdictions and systems, which can be sustained regardless of future priorities or resources. With this in mind, the Innovation Frontier Arizona partners will emphasize asset building through connections and partnerships—specifically:*

- *Identifying and building key assets in the region and making them available and accessible across the region;*
- *Developing infrastructure to support joint planning; implementation and accountability for activities among jurisdictions and system “silos;”*
- *Establishing a regional leadership framework to define and advocate for a regional agenda, evaluate its success, and preside over a meaningful change mechanism.*
- *A culture of regional knowledge exchange will influence the way key institutions and organizations work within the region; while supporting and promoting learning and networking at all levels. In this way we will guarantee that all four counties in our region share in continuous transformation as players in the field of global competition.*

### **Implementation Principles**

The three identified goals—Talent, Entrepreneurship, and Collaboration—support the overarching mission of Innovation Frontier Arizona and will be pursued through very specific strategies and tactics. Each of the identified tactics adheres to agreed upon, core implementation principles, which serve as tests to set priorities and determine which projects and programs are the focus of limited resources and embraced as the work of this regional initiative. Partners in Innovation Frontier Arizona have agreed that initiatives framed in or stemming from this implementation plan should be:

1. **Transformative**—a new way of doing business or responding to a critical problem;
2. **Scalable**—augmenting the entire region or at least a substantial part with potential for broader dissemination;
3. **Regional** – impacting all, or a significant portion of, the region
4. **Inclusive**—engaging multi-disciplinary regional stakeholders and systems as engaged partners;
5. **Relevant**—relating to or supporting an identified regional growth sector, occupational cluster, or key strategic priority;

6. **Sustainable**—realistic, doable with high potential for institutionalization or other sustaining support;
7. **Measurable**—likely to yield measurable outcomes, though recognizing the importance of intangible but high-impact outcomes like those realized through habits of collaboration;
8. **Sharable**—can be shared as part of the Regional Knowledge Exchange for edification of all partners and the community.

Innovation Frontier Arizona's goals, strategies and tactics have been embraced by regional partners and stakeholders, who already are strategizing the initiatives' regional sustainability and continuity. Ultimately, structural change that institutionalizes collaboration institutionalizes the means for continual regional transformation, including the mixing and sharing of ideas and resources that make new outcomes possible.

**Sustainability and continuity** of Innovation Frontier Arizona's goals depend on broad-based stakeholder buy-in and awareness as to why each is important and how it contributes to the region's success. Strategies and tactics that meet regional implementation principles will have the greatest likelihood of garnering ongoing community support and achieving institutionalization. The Regional Knowledge Exchange (ReX) will help vet the projects with the community and continually raise awareness and improve implementation efforts, continually refining efforts and preparing them to stand alone. Habits of collaboration fostered through the ReX will create lasting transformation of the regional workforce system, creating alignment with higher education, economic development and other critical actors. These habits are the ultimate sustainability strategy of Innovation Frontier Arizona and, as such, fostering them, above all else, is a priority focus.

## B. STRATEGIES, TACTICS, AND ACTIONS

Innovation Frontier Arizona has undertaken a strategic and deliberate effort to verify and that all strategies and tactics proposed originally for U.S. Department of Labor WIRED funding (1) have sufficient stakeholder buy-in and support and (2) remain timely and relevant given the time elapsed from original proposal submission to completion of the implementation plan. We also have worked closely with partners to ensure that they are clear on the various initiative components and strategies for implementation needed to go forward. This section presents the logic behind various proposed initiatives, descriptions of the initiatives and their intended outcomes, and explanations of the roles partners will play in implementing strategies.

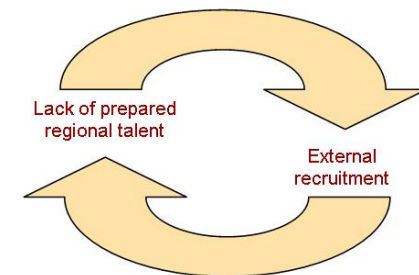
Forecasted Regional Employment Change in National Growth Industries (Top 10)		Change 2006-2015
NAICS Title		
5614 Business support services		2,567
<b>5413 Architectural, engineering and related services</b>		<b>1,694</b>
<b>5415 Computer systems design and related services</b>		<b>1,254</b>
<b>5416 Software publishers</b>		<b>1,132</b>
<b>5112 Other professional, scientific and consulting services</b>		<b>850</b>
5419 Office administrative services		693
<b>5611 Internet service providers and web search portals</b>		<b>546</b>
5181 Management companies and enterprises		540
<b>5511 Scientific research and development services</b>		<b>514</b>
5417 Support activities for air transportation		486
	<b>TOP 10 TOTAL</b>	<b>10,276</b>
	<b>TOP 10 STEM TOTAL</b>	<b>5,990</b>

Source: economy.com forecast data presented in TREO Economic Blueprint

### Understanding the regional talent dilemma

Southern Arizona faces a dilemma in that its regional economy and employment have experienced rapid growth, but there has been insufficient regional talent to meet the demands of this boon. The results have been a-tough-to-break cycle wherein: (1) firms seeking particular talent skill sets, particularly tied to engineering and information technology, have been forced to recruit external talent to the region and (2) local workers in jobs that are related to growing industries are unable to move forward in their careers because they lack sufficient skills and education, and there has been no clear, regionally-shared pathway to prepare them to meet talent demands. The following analysis helps illustrate this dilemma and provides context for the strategies and tactics selected to address it.

#### The Southern Arizona Talent Dilemma



**Impressive regional growth** Southern Arizona's assets contribute substantially to its rapid development. Between 2002 and 2007 the region underwent 11% population growth, with an additional 10% increase projected over the next five years. Even more impressive is employment, which, from 1996 to 2007, climbed 21%. In 2006 the region underwent 5% job growth, outpacing population growth by 3%. In 2007 unemployment averaged 5.22%.

**Human capital and forecasted employment demand** The region's workforce is 500,000 strong, but large pockets are employed in the lower-paying service sector (41.3% in 2006 and 46% by 2015), primarily in business/professional, health-care, transportation/ management, and leisure and hospitality services. Still, an estimated 70,000 Southern Arizonans work in high-technology, higher-wage occupations, 1/3 of these being engineers/ engineering technicians. According to a Tucson Regional Economic Opportunities (TREO) study called the Economic Blueprint (2007), over 40 percent of the region's high-technology firms anticipate growth, adding 1,500 positions in the upcoming year, including 350 engineers and 575 technicians. Over the next 10 years, looking at the top ten employment clusters, the region can anticipate over 10,000 new jobs, with nearly



6,000 in science, technology, engineering and mathematics (STEM) fields, including technology and engineering (see bolded areas in the above table).

2006 Income Levels		
	<i>Innovation Frontier AZ</i>	<i>United States</i>
Median family	\$52,379	\$63,629
Median household	\$39,968	\$48,271
Per capita	\$20,668	\$24,529

Source: U.S. Census Bureau Estimates

**Income and poverty** The region’s high-technology assets and booming employment contrast to its income indicators, which range from 16-18% below national averages. In fact, since 1974, per capita personal income has fallen from 90% of the U.S. average to 80% and has lagged state averages for 30+ years. An estimated 15% live in poverty.

**Educational attainment** Generally speaking, the region’s educational attainment rates are on par with or slightly better than national averages, however, a report issued in February 2006 by the Arizona Governor’s P-20 Council found that such comparisons are insufficient to gauge whether the state is meeting skill demands. The study concluded that current educational programs are not rigorous enough to prepare students for skill-driven work or post-secondary education. Further, high school students who want a high-wage/demand occupation will need continued postsecondary training and education to meet strategic industries’ talent needs.

Percentage of Educational Levels ages 25 and older: Region vs US		
	<u>Region</u>	<u>US</u>
< HS	15%	16%
HS +	85%	84%
Assoc Degree +	35%	34%
BS +	27%	27%
Advanced	11%	10%

**Leveraging opportunities**

The 2007 TREO Economic Blueprint states, “While people and jobs will grow favorably. . .in the future, current per capita personal income and poverty rates indicate that wealth creation is not keeping pace with . . . economic growth.” It concludes, like the Governor’s P-20 Council, that emphasizing high-tech training and education is the primary way to overcome talent and related wage gaps and achieve the region’s strategic economic goals.

**Homeland security, aerospace, information technology** Focusing on homeland security—defined broadly to incorporate aerospace-defense, information technology and the border—creates unique opportunities in a region where the military’s has a particularly notable regional presence. Cochise County, in the region’s far east, is home to Fort Huachuca, a center for Army defense intelligence. Yuma County, in the region’s far west, is home to several installations, including the Marine Corps Air Station and the Yuma Proving Grounds, which specializes in artillery, mines, and ordnance systems. The Goldwater Bombing Range spans from Yuma in the west to Pima in the east. Pima houses Davis-Monthan Air Force Base and the 355th Wing, one of the Air Force’s largest.

Many of the aerospace industry’s most prominent companies benefit from close proximity to military assets. Pima County, anchored by Tucson, is home to Raytheon, the region’s largest employer (over 11,000) and a major defense systems and intelligence contractor. Cochise, in the region’s far east, benefits from the presence of Northrop Grumman’s transportation depot for Fort Huachuca, as well as General Dynamics’ state-of-the-art virtual training center. Together, the region’s 200+ aerospace-defense firms employ over 30,000 people and contribute substantially to the economy. This is in addition to over 20,000 military personnel.

Information Technology firms also help define the region. Many are aerospace-defense suppliers, but the cluster stands well on its own, incorporating 1,200 firms and 50,000 employees. Regional leaders include IBM (information storage development), Texas Instruments (specialized chips) and Intuit (software for accounting and tax returns). The sizeable, joint presence of aerospace-defense and information technology has helped spawn various emerging clusters, including bioscience, analytical instruments, optics, and environmental technology, which now employ relatively few but offer competitive wages, high annual revenues, and much potential.

Average Annual Wages Tucson Traded Sector Clusters-2004			
Traded sector cluster	Tucson wages	U.S. wages	Tucson % US
Information technology	96,639	84,495	114.4
Aerospace vehicles and defense	81,654	66,047	123.6

*Source: TREO Economic Blueprint*

Aerospace-defense jobs, particularly engineering and information-technology, provide the highest average wages in the region (see chart). Moreover, many of the skill sets and talents required for these jobs have applicability to, and share common core competencies required for, several other high-potential industries. Much demand for employment in these clusters is going unmet, and, in many cases, when demand is met, it is done so through external employee recruitment. Greater focus must go toward developing highly skilled, homegrown talent. Moreover, vast border commerce through eight ports of entry generates a huge impact on the region's transportation and logistics cluster, another major economic contributor.

**The border and secure, efficient crossings** Second, the region has a unique interest in the secure flow of goods and people across the border, not only because of the socio-economic implications of illegal activity, but also because of related growth in services (e.g., business professional and transportation/logistics) and for the simple sake of economic and national security. The four-county area spans 370 miles of the U.S./Mexico border and annually facilitates 32.8 million individual crossings through eight points of entry. Southern Arizona is traversed by the CANAMEX transportation corridor linking Canada, the U.S. and Mexico. Supporting this trade route and connecting the region are interstate highways I-8, I-10 and I-19, the Union Pacific Railroad, and an international airport. The region's history with and proximity to Mexico is evident: nearly 40% of the population is Hispanic, with concentrations nearing 80-90% along the border. Though proud of their border identity, Southern Arizonans are sensitive to strains placed on public systems from illegal commerce and crossings and the underlying national security threat this poses. Because of the region's strategic importance in the flow of goods and people, Department of Homeland Security (DHS) is rapidly integrating new technologies—including motion sensors, radiation and explosives detectors, biometric indicators and others (see chart)—to monitor and manage the border, and business must learn to adapt. Firms supporting border-management activities—and certainly most all other employers—require digitally literate staff to support both their clients and themselves; that is,

Sampler of DHS high-technology tools used at border crossings	
E-manifests	Electronic submission of customs information using wireless technology
C-TPAT	Voluntary supply chain security assessment to identify "trusted" shippers
U.S. Visit	Tracks entry and exit of foreign nationals using digitized biometrics
SENTRI	Expedited border crossing system relying on radio frequency identification
Western Hemisphere Travel Initiative	Biometric indicators and digital information to determine identity and citizenry
Inspection and surveillance technologies	Use of x-ray machine, radiation and isotope indicators, explosives detection and sensors and cameras along the border

staff must be comfortable with and understand how to use computers and other technology so they are prepared to use 21<sup>st</sup> Century tools employed to ensure the secure and efficient flow of goods and people across the border.

**Entrepreneurship** Third, the region must recognize and support an expanded role for small business and entrepreneurship. Nearly 80% of projected national growth will come from small business. University of Arizona's McGuire Center for Entrepreneurship found in a study funded by the Kauffman Foundation, that entrepreneurial employment correlates positively with higher wages and job satisfaction. The region has many excellent resources to support entrepreneurs and is well-poised to be a leader in support new business start-ups and growth, both as an economic and workforce development strategy. For example, University of Arizona scientists are responsible for more than 70% of the state's R&D activity, and from 2000-2007 the region was responsible for 3,451 issued patents. Numerous community organizations support entrepreneurship, including Small Business Development Councils (SBDCs), economic developers, venture capitalists and others to connect new ventures with venture capital through IDEA Funding and IdeaXchange, led by the UA's McGuire Center. The latter provides entrepreneurs with broad-based referrals and direct technical assistance to support new business ideas. The region also houses such business incubators as the UA Science and Technology Park, BIO-5, and others. These resources are essential for a region in which industry clusters are dominated by numerically small firms: the median high-tech company has eight full-time employees and \$1.1 million in annual revenues.

Based on the above, IFA has concluded that moving employees through a high-tech career lattice to increasingly high-wage opportunities, helping service-sector employees develop the digital literacy skills they will need to navigate the border and perform other 21st Century tasks, and providing current and future entrepreneurs with skills they need to succeed, will help bridge the region's income and opportunity divide. To support these efforts and ensure their success, IFA has identified need for a regional knowledge exchange system that will help communicate change efforts, connect partners, and otherwise be a conduit for learning, exemplary-practices sharing, and cornerstone for innovation. Innovation Frontier partners have developed realistic goals and practical strategies to address these needs and achieve greater, shared prosperity and improved quality of life in the region.

**Goal 1: TALENT—Create a home-grown talent pipeline for emerging and existing high-technology industries.**

- STRATEGY: Develop articulated career ladders in engineering technology and information technology, featuring common curriculum and training for certification and associates degrees
- STRATEGY: Regional professional development center for K-12 teachers in STEM education and contextual learning
- STRATEGY: Border Professional Preparedness Program (BP3) to foster 21st Century digital and other literacy skills to enhance career opportunities in border navigation and security and ensure the safe, smooth and legal flow of goods and people.

**GOAL: Home-grown talent pipeline**

Employers in aerospace defense, information security, and border management will define career paths and skill requirements in engineering technology and information technology. Career ladder development will help prepare lower-wage and/or lower-skilled skilled workers for high-demand, high-technology occupations, diminishing the need to import outside talent to address unmet demand. Re-aligning the K-12 system and infusing new approaches and skill sets for contextual technology learning (math, science, engineering) will ensure a continuous pipeline for higher rungs of development. Providing 21st digital and other literacy skills will help professional occupations charged with the secure flow of goods and people succeed in an increasingly tech and reading literacy-dependent field. It also will increase the number of people in the region who possess the basic skill sets that are the foundation for education and training in the high-tech fields.

**STRATEGY: Career ladders, high technology curriculum and system alignment** The region's community colleges (Pima, Cochise and Arizona Western) will collaborate on common curriculum and training for certification and associates degrees in engineering technology and information technology. Designed after successful southern Arizona models in nursing, career ladders will use industry-driven training to help workers move up into higher-skilled occupations in their company or industry. Employers, or groups of employers, in the aerospace-defense industry and border-related fields will identify typical or potential pathways for advancement and key occupations experiencing shortages or workforce bottlenecks. Of particular interest are skilled technical occupations with skill sets that could be applied to advanced training in the STEM professions.

The development of a work-based pathway in STEM will be made possible by the establishment of a regional community college partnership. The three colleges will focus on two tiers of aligned curriculum: 1. an agreed-upon core technology competency for STEM occupations, and 2. a degree "bank" of specialized credentials. Students will be able to obtain core education locally and then commute or participate in distance learning to complete the final coursework for a more specialized degree that, before, might only have been available through full attendance at a single, remote institution. The colleges will develop as many as six specializations in engineering technology and information technology, framed around homeland security, including aerospace/defense, information security, and the border.

Under a recently-awarded Community Based Job Training Grant, the WIRED partners will develop a third strand of career-ladder training focused on transportation, distribution and logistics. The Southern Arizona Regional Logistics Workforce Initiative will establish a shared set of certificates and degrees to offer an advancement opportunity for workers in transportation and warehousing to move into inventory control, distribution, purchasing, import/export and supply-chain management jobs that are in high demand and changing rapidly in the context of border-management opportunities and challenges.

In developing the shared curriculum, partners will identify opportunities for 2+2+2 articulation involving high schools, community colleges, and four-year institutions (University of Arizona, University of Arizona-South, Northern Arizona University-Yuma). Such collaboration also makes possible the exploration in technology fields of demonstrable prior learning that would allow incumbent workers to receive credit for verifiable/assessable skills learned on the job. Grant funds will help support the costs of curriculum alignment and development; fill gaps in online/other distance learning capacity; provide tuition/training matching funds to leverage WIA Individual Training Accounts, state job training dollars, student financial aid, and employer tuition reimbursement; and conduct of student and employer outreach.

The University of Arizona's Outreach Campus will house a regional articulation coordinating effort supported by WIRED funding. The Outreach Campus is the result of the University of Arizona's strategic reorganization of its extension and continuing education assets, so that previously-siloed programs could be dedicated to three educational priorities: commerce (including entrepreneurship), teacher training (including STEM), and aerospace-defense. The Outreach Campus – which incorporates UA South, a designated Hispanic Serving Institution with sites in Sierra Vista, Nogales and Yuma – is envisioned as a “conveyor belt” for bringing expertise out of the University's traditional academic departments into communities to meet specific needs. The Outreach Campus' articulation coordinators will work with the WIRED partners to develop and align training so that the regional STEM career ladder can take workers all the way to four-year degrees in aerospace, defense and border management.

Complementing the regional high-tech curriculum development will be two four-year programs targeting two specialized areas of the region's economy. Over the past six months, NAU Yuma and U.S. Army's Yuma Proving Ground (YPG) have engaged in a series of planning meetings to establish an engineering program capable of meeting regional labor demands with a qualified workforce of engineers. The meetings clarified the mutual goals of the educational and industry partners, including: 1. the development of an accredited baccalaureate program to assure professional qualifications and licensure among graduates; 2. the need for an interdisciplinary curriculum (“Integrated Engineering”) to assure a breadth of academic preparation in support of changing industry and entrepreneurial needs; 3. the investment of U.S. Army funds in laboratory and classroom infrastructure to permit university investment in qualified faculty and staff; 4. the assurance of an enrollment cohort of U.S Army SCEP students sufficient to sustain institutionalization over five years of program development; 5. academic leadership to commit time and effort to institutional transformation; 6. the incorporation of applied learning experiences in the engineering curriculum to further university goals of enhancing Community Engagement.. As a result of this process Northern Arizona University is developing a new integrated engineering program to address unmet, local talent demands. WIRED funds will assist development of this program and support faculty coordinator costs during the program's first three years. This support will allow the program to grow critical mass and ensure self-sufficiency over time.

At the University of Arizona preliminary discussions with military personnel and contractors in the region point to a need for re-focusing educational and research assets at UA in management information systems, information security, computer science, optics and other areas relevant to defense intelligence. An integrated “storefront” for degrees and certifications, linked with Cochise Community College’s information security program, would focus on needs identified by the military installations and defense contractors within the region. WIRED funds will be used to conduct a needs assessment to study the feasibility of an Arizona Defense Intelligence and Security Institute (AZDISI). If justified by market demand, the AZDISI will be developed with leveraged resources from the State of Arizona and the University of Arizona Board of Regents, and result in additional courses, certificates and specializations in degrees relevant to regional defense, intelligence and security entities. These degree offerings provide important opportunities for the region’s high concentration of military personnel and aerospace/defense/intelligence/security workers to advance their careers in this growing and increasingly important field. Development of this center greatly complements recent regional investments by the Department of Defense in positioning Southern Arizona as a Center of Excellence in Border Immigration and Security.

Lead organizations: The region’s three community colleges will work as co-equals on the aligned, high-tech curriculum core and specialties, with accountability to Pima County and the Innovation Frontier Arizona executive committee. **Pima Community College** will serve as ring-leader of the college consortium. **Northern Arizona University-Yuma** will develop the new, regional engineering program, working with the community colleges to ensure program articulation with the core high-tech curriculum initiative. Greater Yuma Economic Development Council conducted the needs/feasibility analysis for this effort. University of Arizona will lead the needs assessment and subsequent development of AZDISI.

Outcomes: After a year of community-college system reconfiguration, approximately 100 incumbent and future workers will participate in the high-technology core and specialization programs in engineering technology and information technology. This change, which will produce ongoing, sustainable results, will yield an approximate, average wage increase of \$3-\$4/hour. Further, the initiative will transform and create unprecedented alignment of the regional community college system around two of the region’s most highly-paying, demand driven occupational clusters, which directly enhance the region’s position as a Center for Excellence in Homeland Security and supports various emerging clusters. The approach also creates greater institutional efficiency, allowing division of labor and broader availability, accessibility, choice and best-practice sharing in specialty fields relating to the identified core. (For example, engineering technology programs currently are not available at Cochise College, though it offers a highly-lauded Information Security program not available at the other colleges.) This will create a broader pool of workers with skills and knowledge specific to target employer needs, as well as a pool of workers ready to take the next step in career advancement, up to and including a more advanced degree. This process will be accelerated through alignment with K-12 and post-secondary institutions, facilitating greater articulation at every level and speeding completion of credential achievement and supporting wage growth. Exploring development of prior learning assessment will expedite and expand interest in credential pursuit.

Development of a new, integrated engineering program will enroll 15 students per year in a bachelor of science in engineering, producing 10 graduates by 2011 and filling directly the talent needs of Yuma Proving Grounds and other regional businesses. Further, at least 15 enrollees will benefit from the needs assessment that will shape AZDISI, furthering their careers and incenting them to stay in a region with rich aerospace/defense, intelligence and security assets.

Leveraged funds: Pima County individual training account funds for career ladder training (\$350,000); Yuma, Santa Cruz and Cochise anticipate similar contributions (\$70,000); Cochise Community College will provide in-kind scholarship (\$50,000) and leverage staff support (\$25,000); Pima Community College will support availability of online classes and provide leveraged teaching staff support (\$230,968); Arizona Western College will leverage dislocated worker funds for scholarships (\$25,000); UA and UA – South will leverage staff articulation support (\$15,000); various employers will provide tuition reimbursement and training matches (\$200,000, a conservative estimate). TOTAL LEVERAGED: \$1,040,968 + \$1,800,000 (State of Arizona budget allocation and proposition 301 funds for University of Arizona defense intelligence degree offering and UA-South Commerce Degree<sup>2</sup>) + \$2 million CBJT Grant

NOTE: The Arizona Job Training Program and has produced a minimum of \$22 million in training grants for Pima County businesses. Also, in 2006, Arizona Science Foundation received a \$35 million budget allocation to support STEM-related business development and education.

**STRATEGY: *Regional Professional Development Center for K-12 Teachers in STEM fields*** WIRED will allow IFA to partner with regional stakeholders to coordinate pilot implementation in Southern Arizona of a regional professional development center for teachers to learn about new tools in science, technology, engineering and mathematics (STEM) education and entrepreneurship. Project Lead the Way (PLTW) is a national, state-of-the-art initiative designed to create a pipeline of students prepared to pursue engineering- and technology-related careers, with tracks in aerospace-defense and biotechnology, which align with target clusters. In partnership with Arizona State University Polytechnic, the region will coordinate implementation (PLTW targets the top 80% of students) in Tucson, Sierra Vista, Santa Cruz and Yuma school districts, including teacher training and counselor coaching in STEM careers. Key to program success is partnerships with the corporate sector and post secondary institutions to assure that students and teachers learn about the practical applications for the subjects that they study every day. The region will pursue a 2+2 model with the program, so that PLTW graduates can articulate their learning into postsecondary credit, whether at community colleges or four-year institutions.

Pima Community College and various partners (including Raytheon and several school districts) also will collaborate in developing an aligned professional development program for K-8 teachers seeking to integrate more applied, contextual learning in math/science. This will create pipelines of students for later, middle- and high-school participation in PLTW and other math and science programs. WIRED funds will make the training available online and available throughout the region and beyond.

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<sup>2</sup> UA has \$800,000 in permanent money from a state budget allocation for hiring 3 outreach coordinators and 2 course development specialists, outsourcing electronic delivery, and requiring faculty to participate in the electronic platform. The funds also will create an online incentive fund to get courses up online and an Arizona community education incentive fund to support teacher education, entrepreneurship, and high vertical disciplines. Further UA has \$1 million over three years (temporary) in “proposition 301” money, all for rural education to hire adjunct faculty in outlying areas to generate a cohort of students in distance programs. University budget priorities for 2007/8 focus on a model of hybrid education (live and distance) linked to 2+2 articulation and around three disciplines, all of which align with WIRED: defense/intelligence, commerce/entrepreneurship, and teacher education.

Partners in these efforts also will focus on mapping and aligning other STEM efforts throughout the region to ensure they coordinate, align, and even articulate with one another, creating a regional system supporting regional education and training.

WIRED also will enable the McGuire Center to collaborate with middle and high-school educators to integrate critical entrepreneurship skills—idea management and decision support—in existing science fairs. Students will learn to develop their business ideas based on scientific principles, including concept (hypothesis) formulation, testing and validation, final and written analysis, and communication. The learning process will culminate in an annual region-wide competition, where students will get to pitch their concepts to a panel of “venture capitalists/judges” and receive prizes.

Lead organizations: **Arizona State University Polytechnic** will lead efforts associated with Project Lead The Way. **Pima Community College**, in collaboration with the region’s other colleges, will lead development of the K-8 applied math and science professional development training for teachers. Public School Districts in Douglas, Nogales, Tucson, Sierra Vista and Yuma, and the Pima County Joint Technical Education District, will identify teachers for professional development training through PLTW and for the K-8 applied math and science teaching program. The **McGuire Center for Entrepreneurship** will lead efforts to train teachers in integration of entrepreneurship principles and a business plan competition in high school science fair settings. For this effort, the Southern Arizona Science and Engineering Fair (SARSEF) will collaborate to identify schools and teachers to participate in this professional development effort

Outcomes: The four-county PLTW pilot is expected to reach 24 teachers and 24 counselors over three years. These trained teachers and counselors in turn will expose an estimated 960 students to the proven curriculum (articulated for credit at UA, ASU and regional community colleges) and methods and information on STEM careers, with a special focus on biotech and aerospace-defense-related engineering technology. The K-8 teacher training program, offered in years two and three, will reach an estimated 300 teachers (and hence thousands of students), who are required by law to undergo professional development.

The PLTW and K-8 teacher-training initiatives will help build critical mass for a program that directly addresses the Governor’s P-20 Council and others’ call for more meaningful, rigorous STEM education and skills, particularly in math, science, and related reading. Reports reveal that PLTW students are substantially more likely than average high school students (80% versus 65% respectively) to graduate from 2 or 4-year postsecondary study. PLTW students also are more likely to enroll in postsecondary engineering or engineering technology study (68% versus 10%), and PLTW retention rates post-enrollment are impressive (85% versus 40%).

McGuire Center will work with the Southern Arizona Science and Engineering Fair (SARSEF) to target the initiative’s 60 high schools and 200 middle schools (which touch almost 3,000 students) for integration of the science-methodology-based business concept development and competition. McGuire anticipates to engage 10%, or approximately 6 high-school and 20 middle-school professionals and 300 students.

Leveraged funds: PLTW’s provision of free curriculum and administrative staff time (\$141,000); Pima County’s youth work experience program will provide internship opportunities with businesses for 250 students (\$500,000); Arizona Western College will apply Workforce Investment Act Title 1



funds to allow ten targeted juniors and seniors to simultaneously enroll in community college classes with an emphasis in entrepreneurship or pre-engineering (\$38,000); STEM education or entrepreneurship training school counselor and teacher staff time (\$73,850 for two-weeks' teacher salary at PLTW training, plus related counselor time at 24 schools); Arizona State Polytechnic (\$40,000 for staff administration and overhead and training); K-12 system and SARSEF time and coordination for entrepreneurship integration into science fairs (\$80,000); Pima Community College staff and other program development time (\$111,668); Arizona Science Foundation, Governor's P-20 Council and numerous employers and associates will be engaged in this initiative, offering additional leveraging opportunities. TOTAL LEVERAGED: \$984,518. NOTE: Department of Defense endorses PLTW and makes clear its full-ride SMART Fellowship Program, which also provides student stipends and DoD job placement, will be available to students partaking in this effort.

**STRATEGY: *Border Professionals Preparedness Program*** BP3 will focus on basic 21<sup>st</sup> Century skills in order to create a viable career pathway for lower-skilled workers into the border economy. BP3 will encompass two strategies: 1) a pre-academy for jobs within the US Department of Homeland Security and 2) a contextual workplace literacy program for border-related support jobs. The programs will target dislocated workers, underemployed and unemployed adults and young adults entering the workforce. Four out of five of job seekers screened in the four IFA One Stop Centers lack either the computer skills, English language skills or basic educational level to meet employers' requirements. These are part of a 21<sup>st</sup> Century skill set that is growing increasingly important. This is true especially along the border as Customs and Border Protection continually integrates both public and private personnel, infrastructure, technologies, and other capacity into a comprehensive—though complicated—border protection system (see table for new tech developments). Digital and other literacy skills also are a crucial stepping stone for movement along the career ladder into STEM-related education and training. With IFA's recent award of a Community Based Job Training grant for Transportation, Distribution and Logistics this stepping stone can also lead into careers in inventory and supply-chain management, import-export services and other skilled professions. Degrees and certificates developed under the CBJT grant will be included in the two-year degree bank being created by the collegiate partners in IFA for aligned delivery throughout the region.

IFA will leverage the entrepreneurial Workplace Education model developed by Pima College Adult Education under the Work-Based Learning project funded by the U.S. Department of Education in 2003-04. The program won national recognition for teaching English as a second language and basic reading, language and math skills in the context of the learners' every-day jobs. The Regional KnowledgeXChange will include an inventory of adult education providers in the region capable of delivering this type of education. WIRED funds will be used for outreach and instructional costs for employers in each county to experiment with and adapt the workplace education model to the needs of their workforce. The four local One Stop Centers in the region will offer matching grants for employers to commission workplace education and digital literacy instruction tailored to their skill needs and unique business operations. The grants will be for digital literacy and basic math, reading and language skills essential for service-oriented, border-relevant fields. Digital literacy refers to individuals' familiarity and comfort with basic technology, for example, use of standard computer applications, the internet, digital scanning devices, etc. Target employment areas include technology-dependent—though not necessarily “high-tech”—business professional occupations as customs management, transportation and logistics. Business support services are the fastest growing occupational cluster with expected new positions totaling 2,500 by 2015.

Further, the BP3 partners, including Pima Community College's Public Safety Institute, other regional safety and security training programs, University Arizona and the Southwest Border Security Consortium, and Department of Homeland Security, will support planning and development of a pre-academy for professionals interested in pursuing such careers as federal customs and border-patrol, but for which there is a 40% wash-out rate. Last year DHS reported that southwest border staffing will climb 43 percent from 2006 to 2009. DHS spends \$187,000 to recruit and train each new agent, with an additional \$14,700 spent in a training academy. Most common wash-out points occur during early assessment, then again at 7 and 10 months, particularly because of deficiency in language skills and criminal justice law.

Besides emphasizing digital literacy and other identified skill sets, the pre-academy will help individuals better understand the rigors of their professional training, security-clearance and background-check processes and how to anticipate/overcome potential barriers, and other appropriate careers given their skills and interests.

Border management is also one of the industry clusters for which Innovation Frontier Arizona will develop regional, articulated career-ladder training at the two-year degree level, as described on pages 13-15. Being able to leverage a recently-awarded Community-Based Job Training Grant in transportation and logistics will strengthen this strand. The CBJT grant funds will be used to develop an articulated regional career ladder from truck driver through increasingly sophisticated jobs in warehousing, distribution, import-export services and supply-chain management.

Lead organizations: Yuma County Private Industry Council and Santa Cruz County One-Stop will lead development of the border contextual digital and other literacy program, with reach to 80 enrollees and 60 graduates, and the border professional pre-academy, with reach to 100 enrollees and 75 graduates. They will develop these efforts working closely with DHS Customs & Border Protection, University of Arizona (which recently was awarded \$18 million from the federal government to develop a Center of Excellence for Border Immigration and Security<sup>3</sup>), Pima Community College Public Safety Institute, and other colleges and programs with a clear focus on border-related safety and security.

Outcomes: The region will reach an estimated 200 employees through 20-25 workplace projects funded through the digital and other literacy challenge grant program. With increased levels of digital and other literacy, employees will help their employers better navigate the new high-tech nature of the Southern Arizona border, plus provide additional value-add that could increase wages an estimated \$3/hour. An additional outcome

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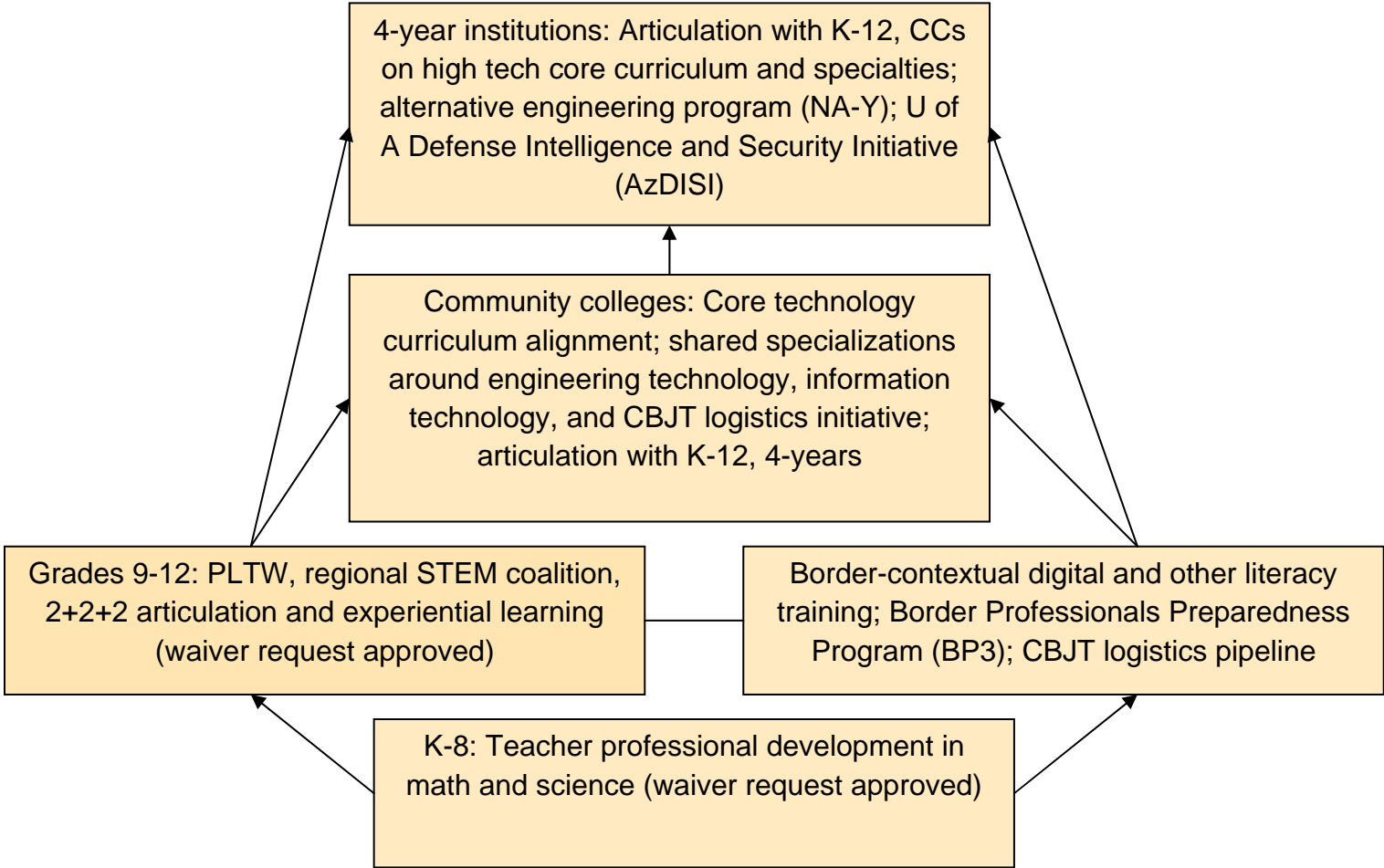
<sup>3</sup> Innovation Frontier Arizona was in discussions with the UA Office of Economic Development regarding the Center of Excellence during the development of the original WIRED grant proposal and during the implementation planning process. Both efforts are focused on the development of southern Arizona as a center of excellence for border security. In fact, upon learning of the UA proposal, and that it identified workforce development as a goal for the border security effort, it became even clearer that the WIRED proposal should complement the effort. Innovation Frontier Arizona partners consulted with project director Elyse Golob on the proposed strategies to provide a pre-academy for border professionals and a customized adult education program for border-related employers, and she expressed support for those approaches. At the time Dr. Golob was waiting to hear from DHS on whether their Center of Excellence proposal would be funded. If they were funded, she said they would work with the IFA partnership to link us to contacts and feedback on training needs in border-related occupations.

will be the development and pilot of the BP3 federal border professional pre-academy, which could help reduce washout rates and provide redirection for individuals interested in like careers.

BP3 not only would create a formal talent-development opportunity to engage DHS in WIRED, it would directly leverage efforts underway at University of Arizona and throughout the community to position Southern Arizona as a Center of Excellence in Border Immigration and Security. A major component of this initiative, which could yield \$18 million over 6 years from the Department of Homeland Security, includes border-related workforce training and development. Besides BP3, the community-college based technology program and K-12 STEM initiative both directly support this initiative.

Leveraged funds: Pima County will provide support for 10 projects through the BP3 professional development/digital literacy initiative (\$350,000); Yuma, Cochise and Santa Cruz will support additional projects (\$70,000); employers will provide matching funds (\$200,000); Pima Community College will provide staff and other support (\$90,276). TOTAL LEVERAGED: \$710,276.

**Alignment of high-technology career initiatives in support of home-grown talent**



**GOAL 2: ENTREPRENEURSHIP— Cultivate entrepreneurial culture, infrastructure, and pipelines to foster innovation and diversify the regional economy and career opportunities.**

- STRATEGY: Share common entrepreneurship curriculum principles and modularized/segmented training to address “just in case” and “just in time” education needs.
- STRATEGY: Network and align system stakeholders to provide technical expertise and direction to current and aspiring entrepreneurs.
- STRATEGY: Raise awareness of entrepreneurship at all levels and among all regional partners by promoting success stories and hands-on learning.

**GOAL: Entrepreneurship**

Again, entrepreneurship is a critical element of Southern Arizona’s transformation story. New business start-ups and growth present tremendous opportunities to expand on regional assets in the aerospace/defense, security, intelligence and other industries. Further, it presents opportunities to diversity from this base and, as noted earlier, allows individuals to take their careers in their own hands, often generating increased job satisfaction and earning potential. Finally, communities with high levels of entrepreneurship tend to enjoy greater innovation and a more unique and varied quality of life that results from the break from cookie-cutter development.

**STRATEGY: Common curriculum principles, shared modular training/education, articulation** Several of the region’s four-year institutions, community colleges, SBDCs and other institutions already have developed sound entrepreneurship programs. Working together, these organizations will develop a set of entrepreneurship principles, or a baseline of knowledge and learning that should be infused across existing curriculum and efforts but not in lieu of them. The goal is to identify, adopt, and adhere to commonly agreed-upon principles that will propel the region’s entrepreneurship efforts forward. Partners also will develop toolkits to help new and existing efforts live up to the principles and a shared vision and standard of what regional entrepreneurship training and education should entail.

Though there is an abundance of “just-in-case” training and education that often results in a degree or certificate, regional stakeholders have identified a lack of modular education and training experiences that allow entrepreneurs to obtain the “just in time” learning experiences they may need to move their businesses forward. Such curriculum would address needs that entrepreneurs face at a point in time in their business development and may not necessarily lead to a formal credential, though, completion of several identified modules, very well could lead to degree/credential achievement. Efforts will be designed to maximize articulation among institutions, including the region’s three community colleges

and the University of Arizona's top-ranked McGuire Center for Entrepreneurship, University of Arizona-South's Commerce degree, and Northern Arizona University-Yuma's BA in Entrepreneurship.

Lead organizations: Arizona Western, Cochise Community, and Pima Community College will collaborate with the McGuire Center for Entrepreneurship, NAU-Yuma, and UA-South to develop jointly shared principles and toolkits for enhancing entrepreneurship. The McGuire Center will report status of these efforts to Pima County and the executive committee.

Outcomes An estimated 1,000 people region-wide will receive training through modular entrepreneurship curriculum. Thousands of others will benefit from improved education and training as a result of agreed upon principles and toolkits for program enhancement. Research on UA's McGuire model, funded by the Kauffman Foundation for Entrepreneurship, shows that participants in the UA entrepreneurship program are: three times more likely to be involved in starting a new business; more likely to work in high-tech companies and be instrumental in new-product; more likely to be self- and full-time employed; have incomes that are 27% higher and own 62% more assets (over \$12,000/year controlling for socio-economic factors); and are more satisfied with their jobs. WIRED funding will allow region-wide improvement of entrepreneurship efforts and more prepared, better supported entrepreneurs.

***STRATEGIES: Network and aligned system to support entrepreneurs; raise awareness and promote hands-on learning*** Beyond collaborating with in shared principles, toolkits and modular curriculum, the region's community colleges, working closely with McGuire, will co-lead a design-build entrepreneurial support effort called *IdeaXchange*, using local and regional networks to coach entrepreneurs, offer solutions, make referrals and study the nature of entrepreneurial support needs in the region. A model for *IdeaXchange* already exists in Pima County, but the goal is to enhance this effort and expand it regionally. Besides allowing initiative expansion/scalability, WIRED grant funds will be used to provide the architecture necessary to track inquiries received through *IdeaXchange*, record the results of each intervention, and support outreach for rural network extension. Complementing this effort will be a rural entrepreneurial society and a set of best-practice benchmarks for rural entrepreneurship efforts, both designed to elevate rural entrepreneurship and connect business and academia.

Finally, as addressed in a previous section, regional partners will work with the Southern Arizona Science and Engineering Fair (SARSEF) to prepare teachers to integrate critical entrepreneurship skills—idea management and decision support—in existing science fairs and other youth entrepreneurship programs (e.g., summer camps, 4H, Junior Achievement), as applicable. The science-fair learning process will culminate in an annual region-wide competition, where students will get to pitch their concepts to a panel of “venture capitalists/judges” and receive prizes funded through private contributions.

Lead organizations: **University of Arizona's McGuire Center for Entrepreneurship** will work with regional community colleges, four-year institutions, SBDCs and others to develop the rural network and entrepreneurship society, regionally expand *IdeaXchange*, and add capacity for tracking outcomes.

Outcomes This effort will allow additional entrepreneurs to benefit from the IdeaXchange system and will allow aggregate tracking of outcomes and results. As part of a design/build approach, goals will be refined as more is learned about the types of assistance being requested. Currently IFA is projecting that each regional IdeaXchange will:

- Be represented by at least five key organizations/entities in region (such as SBDC, leading investment bank, technical educator, large employer, business educator, governmental representative, dept of commerce, entrepreneurship educator, etc).
- Assess individual inquiries and community needs to determine topics and present at least one stand alone workshop or training/informational event related to opportunity identification, assessment, venture development, or commercial launch themes.
- Engage directly and provide specific recommendations/guidance to at least 24 inquiries per year and representing at least 12 separate new/emergent entrepreneurial or growth oriented firms. It is likely that firms receiving recommendations will return to the IdeaXchange for subsequent inquiries.
- Engage with other regional IdeaXchanges in the identification of region-wide emergent themes and will participate in theme specific strategy identification

The effort also will increase awareness of rural entrepreneurship, better connect rural entrepreneurship assets, and better connect rural communities to non-rural business, academic and other assets, including regional IdeaXchange. It also will address cultural barriers to entrepreneurship, celebrating rural entrepreneurs and presenting entrepreneurship as a viable career alternative. As mentioned in an earlier section, the science fair concept will entail outreach to 60 high schools and 200 middle schools (which touch almost 3,000 students) for integration of the science-methodology-based business concept development and competition. The goal is to engage 10%, or approximately 6 high-school and 20 middle-school professionals and 300 students.

Leveraged funds: Same as previous strategy.

**GOAL 3: COLLABORATION: Create a regional knowledge exchange, maximizing learning, assets, and transformation capacity across all four counties.**

- STRATEGY: Create a Regional Knowledge Exchange system charged with:
  - intelligence gathering and dissemination (including resource mapping, economic analysis, and leading-practice identification) across regional partners;
  - communications and engagement;
  - regional identity building and branding;
  - initiative management and partner coordination; and
  - results tracking and reporting.

**GOAL: Collaboration through a regional knowledge Xchange (ReX) system**

Regional Knowledge Exchange is intended to interlace previously siloed initiatives and facilitate the scale of promising transformation efforts to the regional level. It also is meant to share information internally, among funded and un-funded partners, and externally, with other regional stakeholders, the community at large, and beyond.

The exchange of data, information, and knowledge around exemplary practices, processes and other efforts will occur both horizontally—among like institutions (e.g., community colleges and four-year university education system )—and vertically—among distinct institutions (e.g., education, workforce, and economic development). Regional Knowledge Exchange will occur in support of various ends, including

- informed project implementation (e.g., market analysis, data gathering and needs assessment),
- success monitoring and tracking (e.g., monthly reporting and evaluation), and
- partner engagement (e.g., communications, events, committee participation), which, ultimately supports initiatives' organizational adoption, funding, and other forms of growth and sustainability.



Tasks associated with ReX include:

- intelligence gathering and dissemination (including resource mapping leading-practice identification) across regional partners;
- industrial workforce needs assessment and economic analysis;  
Tucson Regional Economic Opportunities will play a leading role and offer support to other economic development stakeholders in mapping current and future workforce needs in targeted industries. A regional Economic Development Innovation Fund will make modest grants available for additional partners to join the effort to conduct outreach to employers to determine their labor and skill needs related to current and future economic growth opportunities in aerospace-defense, border security and related industries. TREO and the Innovation Fund Grantees will undertake sector-based asset mapping to identify businesses associated with targeted industrial sectors. Companies will be targeted for workforce-related response planning and early-stage interaction, with additional facilitation around operations expansion or re-location. Information will be searchable in the web-based BusinessLINC. TREO will conduct regional outreach to help IFA partners connect to mapped business assets; encourage participation of other regional partners in use of BusinessLINC, and field train other economic development organizations to support border business buyer/seller initiatives. The regional EDC innovation fund, administered by the One Stops in each county, will help connect other regional EDCs to these resources.
- communications and engagement;  
stakeholder and community engagement and awareness will be the cornerstone of IFA's success. Activities to engage stakeholders outside of the initial IFA stakeholder list include:
  - Survey to benchmark regional attitudes and views around transformation
  - Regional transformation summits (1 per year) to expand the circle of stakeholders and raise general awareness of IFA activities
  - Ongoing media and other public relations and awareness building associated with IFAActivities targeted to internal and potentially external IFA audiences include:
  - Interactive, stakeholder maintained website
  - Monthly e-newsletter
  - Quarterly video documentation and distribution through website and e-newsletter
  - Distance technology dissemination for long-distance partner engagement
  - Miscellaneous partner and community engagement
- regional identity building and branding;  
Regional stakeholders will work to develop a brand identity and awareness around Innovation Frontier Arizona, consistent with WIRED grant restrictions on allowable outreach costs.
- initiative management and partner coordination;  
The Innovation Frontier Arizona Advisory Board will monitor overall progress on the goals and strategies, with committee chairs convening work-groups to coordinate partner efforts around each aspect of the mission. Pima One-Stop, as fiduciary, will administer the grant, with support from Cochise, Santa Cruz and Yuma counties. The State of Arizona, the grant recipient, will monitor and engage in activities, conduct outreach, connect initiatives to state programs, and serve on the Executive Committee.
- results tracking and reporting.

Regional one-stops will report on quarterly objectives for their regions, with final results aggregated and submitted to ETA by Pima County. Pima County will develop an automated results tracking system, which will be available online for partner access.

- **Lead organization:** As project manager and fiduciary, Pima County will assume an important lead role in coordinating and supporting ReX activities. Innovation Frontier Arizona will form a committee explicitly dedicated to this purpose (chaired by Roy Lingo, Cochise County Workforce Development), yet the advisory board, project staff, initiative leads, and every other stakeholders all, in some way, will have a role to play in the Regional Knowledge Exchange system.

**Outcomes** ReX will engage and better coordinate the activities of regional partners, including the workforce investment system, education at all levels, economic development, business, various levels of government and others. Connecting organizational dots—in terms of knowledge, effort, and passion to support economic transformation—will lead to long-term system alignment and change, while connecting dots among various stakeholders and the community at large will lead to system utilization and, ultimately, investment. ReX, fundamentally, is the glue that makes the various initiatives identified in the implementation plan a single transformational effort.

**Leveraged funds:** Small Business Administration and Arizona Department of Commerce support for TREO's BusinessLINC development (\$100,000); existing staff time for TREO's BusinessLINC administration (\$32,400); TREO's Economic Blueprint (\$100,000); Pima County staff time for asset mapping activities (e.g. labor market opportunities/rapid response coordinator, employer outreach manager) and outcomes tracking (\$75,000); Yuma, Cochise and Santa Cruz Counties commitment to participate/staff learning communities and outcomes tracking (\$70,000); state Department of Commerce liaison (\$50,000) TOTAL LEVERAGED: \$527,400.

### **Initiative matrices**

The following matrices describe the strategies that will be undertaken to achieve the region's goals: talent, entrepreneurship, and collaboration. Strategies represent a particular direction, family of action, or basket of tactics taken to support a goal. Concurrent strategies form a comprehensive approach to achieve an individual goal or multiple goals simultaneously. Each strategy contains specific tactics (actions) to guide implementation. Responsible parties include organizations that will take a leading role in carrying out a strategy. The timeframe represents the expectation for when and how fast a strategy is to get underway, and necessary resources highlight the assets that will be called on to make implementation possible. Desired outcomes are the products intended to result from successful implementation of a strategy.

**GOAL 1: TALENT—Create a home-grown talent pipeline for emerging and existing high-technology industries.**

**STRATEGY: Develop articulated career ladders in engineering technology and information technology, featuring common curriculum and training for certification and associates degrees**

*TACTIC #1: Map occupational career ladders and develop common curriculum and training for certification and associates degrees (engineering technology and information technology)*

Employers in aerospace defense, information security, and border management\* will define career paths and skill requirements in engineering technology and information technology. The region’s community colleges (Pima, Cochise and Arizona Western) will collaborate on common curriculum and training for certification and associates degrees designed to move workers up their industry’s career path. Students will be able to obtain core education locally and then commute or participate in distance learning to complete the final coursework for a more specialized degree that, before, might only have been available through full attendance at a single, remote institution. The colleges will develop and/or make available six specializations (a mix of existing and new programs) in engineering technology and information technology, framed around homeland security—aerospace defense, information security, and the border\*—with consideration given also to biotechnology, a regionally emerging growth cluster. Universities will coordinate articulation with 4-year degree programs and explore delivery mechanisms for working students.

<p><b><u>Funding per year:</u></b>                  Y1:\$267,551                  Y2:\$380,347                  Y3:\$401,222</p> <p><b><u>Total 3-year funding:</u></b>                  \$1,049,120</p>	<p><b><u>TA Needs</u></b>                  Industry needs assessment and asset mapping                  Technical training inventory</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Six specializations in regional degree bank</li> <li>➤ 100 incumbent and future workers will receive program degrees</li> <li>➤ \$3-\$4/hour increase in average wage per level of credential achieved</li> <li>➤ 4-county system alignment around engineering and information technology</li> <li>➤ Common, regionally articulated core curriculum and career ladder awareness around engineering and information technology</li> <li>➤ More institutional efficiency around specialties</li> <li>➤ Better availability, accessibility, choice and best-practice sharing in specialty fields relating to study core</li> <li>➤ Broader pool of workers with skills in knowledge specific to demand-driven employer needs</li> <li>➤ More workers prepared for career advancement</li> <li>➤ Acceleration through alignment with K-12 and postsecondary institutions</li> </ul>
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<b><u>Responsible parties</u></b>	<b><u>Quarterly benchmarks</u></b>
Pima County Pima Community College	<b><u>1<sup>st</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>➤ Convene community college, university, industry, workforce development and other engineering and information technology stakeholders</li> </ul>
Arizona Western College Cochise Community College Pima Community College	<ul style="list-style-type: none"> <li>➤ Inventory and compare existing curriculum</li> <li>➤ Conduct external assessment of industry needs, training process (subject matter, degree of difficulty, method of payment)</li> <li>➤ Conduct gap/opportunity analysis of needs/assets</li> <li>➤ Discuss desired system change (flexibility, cost, content) based on industry feedback</li> </ul> <b><u>2<sup>nd</sup>-3<sup>rd</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>➤ Identify core curriculum and targeted specializations</li> <li>➤ Identify plan for aligning core and initial framework for sharing specializations</li> <li>➤ Develop as many as 6 specializations commonly shared by the community colleges (e.g., aerospace defense, information security, border/logistics, biotechnology)</li> <li>➤ Determine criteria for degree vs. certificate attainment</li> </ul>
Arizona Western College Cochise Community College Pima Community College NAU-Yuma UA UA-South	<ul style="list-style-type: none"> <li>➤ Establish articulation agreements among two and four-year higher education and K-12 institutions</li> </ul>
Arizona Western College Cochise Community College Pima Community College Pima County Cochise County YPIC	<b><u>3<sup>rd</sup>-4<sup>th</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>➤ Inventory, coordinate and align WIREED tuition/training matching funds with available individual training account (ITA) funds, state training dollars, student financial aid, employer tuition reimbursement, and other funding sources</li> </ul>
Arizona Western College Cochise Community College Pima Community College Regional Knowledge Xchange system	<ul style="list-style-type: none"> <li>➤ Conduct student, employer and K-12 system outreach</li> </ul>
Arizona Western College Cochise Community College Pima Community College	<b><u>Year 2</u></b> <ul style="list-style-type: none"> <li>➤ Implement scholarship program</li> <li>➤ Develop and align a system for distance learning to allow full regional access for all specializations</li> <li>➤ Explore possible (exam based) prior learning assessment to provide credit for verifiable skills obtained on the job</li> <li>➤ Technology certifications online</li> </ul>

**STRATEGY: Develop articulated career ladders in engineering technology and information technology, featuring common curriculum and training for certification and associates degrees**

*TACTIC #2: Prior learning assessment*

Community college partners will research and explore how to provide credit for skills gained on the job. This likely will involve exam-based assessment that allows individuals to test out of core requirements. The colleges will consider programs like SpaceTech and map other communities that have adopted such initiatives.

<p><b><u>Funding per year:</u></b> Y2: 47,370 Y3: 47,370  <b><u>Total 3-year funding</u></b> \$94,740</p>	<p><b><u>TA Needs</u></b> Research for possible models; strategies for possible implementation</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Possible acceleration of degree achievement through credit offering based on experience</li> <li>➤ Regional research product and possible strategy plan for implementation, pending study results</li> </ul>
<p><b><u>Responsible parties</u></b></p>	<p><b><u>Quarterly benchmarks</u></b></p>	
<p>Arizona Western College Cochise Community College Pima Community College</p>	<p><b><u>Year 2</u></b> Develop RFP to assess appropriateness and possible models for prior learning assessment in the region. Research should examine internal company training in the region; review testing that may not be formally recognized; and assess programs like SpaceTech as possible models for inclusion in the region.</p>	

**STRATEGY: Develop articulated career ladders in engineering technology and information technology, featuring common curriculum and training for certification and associates degrees**

*TACTIC #3: High technology, border, and entrepreneurship articulation coordinator; needs assessment study for Arizona Defense Intelligence and Security Initiative (AZDISI)*

University of Arizona will ensure articulation and coordination of its many university programs with related initiatives connected to the WIRED initiative, including entrepreneurship, high technology careers (engineering and information technology and border and transportation/logistics). Also, in collaboration with Cochise Community College’s information security program, UA will conduct a needs assessment study to support the AZDISI, which will be developed through in-kind support from the State of Arizona and the University of Arizona Board of Regents, and result in additional courses, certificates and specializations in degrees relevant to regional defense, intelligence and security entities.

<p><b>Funding per year:</b></p> <p>Y1: \$47,605 Y2: \$79,812 Y3: \$70,250</p> <p><b>Total 3-year funding:</b></p> <p>\$197,037</p>	<p><b>TA Needs</b></p> <p>Defense Intelligence needs assessment</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ 15 enrollees in initial AZDISI program offering</li> <li>➤ Better awareness of training and education needs associated with the AZDISI</li> <li>➤ Partnership development around a center of excellence relating to defense intelligence and security</li> <li>➤ Launch of advanced degrees or degree specializations aligned and articulated with community college offerings and associated with a defense, intelligence, or security career path</li> </ul>
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<b>Responsible parties</b>	<b>Quarterly benchmarks</b>
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<p>University of Arizona</p>	<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Hire articulation outreach coordinator</li> <li>➤ Identify and convene development partners, including industry/defense/homeland security</li> <li>➤ Develop needs assessment parameters and strategy</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Launch regional needs assessment</li> <li>➤ Inventory defense-intelligence related offerings at regional community colleges</li> <li>➤ Convene partners to assess needs assessment and inventory results</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Identify common skills needed for degree program</li> <li>➤ Determine technical training needs</li> <li>➤ Identify degree vertical</li> <li>➤ Develop degree articulation agreements</li> <li>➤ Launch degree development</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Assess project progress</li> <li>➤ Develop outreach strategy and materials</li> <li>➤ Launch outreach and degree offerings pending progress</li> </ul>
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**STRATEGY: Develop articulated career ladders in engineering technology and information technology, featuring common curriculum and training for certification and associates degrees**

*TACTIC #4: Northern Arizona University's integrated engineering program*

Northern Arizona University-Yuma, with support from regional industry partners, will develop an integrated bachelor of science degree in engineering.

<p><b>Funding per year:</b></p> <p>Y1: \$75,000 Y2: \$65,000 Y3: \$55,000</p> <p><b>Total 3-year funding:</b></p> <p>\$195,000</p>	<p><b>TA Needs</b></p> <p>Defense Intelligence needs assessment</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ 15 enrollees in initial program offering</li> <li>➤ Availability of an industry-driven, alternative engineering degree program available in Southern Arizona</li> <li>➤ Alignment and articulation with high school STEM and community college technical degree offerings</li> </ul>
<p><b>Responsible parties</b></p>		<p><b>Quarterly benchmarks</b></p>
<p>Northern Arizona University-Yuma</p>		<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Develop faculty coordinator profile</li> <li>➤ Solicit and hire faculty coordinator</li> <li>➤ Identify and convene development partners</li> <li>➤ Identify</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Convene degree development partners</li> </ul>
<p>Northern Arizona University-Yuma (lead) Yuma Proving Grounds General motors Greater Yuma EDC</p>		<p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Identify common skills needed for degree program</li> <li>➤ Determine technical training needs</li> </ul>
<p>Northern Arizona University-Yuma (lead) Arizona Western College Cochise Community College Pima Community College ASU Polytechnic (PLTW)</p>		<ul style="list-style-type: none"> <li>➤ Identify degree vertical with regionally aligned engineering technology curriculum, Project Lead The Way and other STEM offerings</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <p>Develop degree articulation agreements</p>
<p>Northern Arizona University-Yuma</p>		<ul style="list-style-type: none"> <li>➤ Launch degree development</li> <li>➤ Assess project progress</li> <li>➤ Develop outreach strategy and materials</li> <li>➤ Launch outreach and degree offerings pending progress</li> </ul>

**STRATEGY: Regional professional development center for K-12 teachers in STEM education and contextual learning.**

*TACTIC #1: Awareness and dissemination of Project Lead The Way (PLTW) and alignment with other STEM programs*

Project Lead the Way (PLTW) is a national, state-of-the-art initiative designed to create a pipeline of students prepared to pursue engineering and technology related careers, with tracks in aerospace-defense and biotechnology, which align with priority industry sectors. In partnership with ASU Polytechnic, the region will coordinate pilot implementation of the program (PLTW targets the top 80% of students) in school districts throughout the region, including teacher training and counselor coaching in STEM careers. A matching grant fund will be administered by the One Stop in each Local Workforce Investment Area, for school districts to apply for gap financing for equipment costs that are required to implement PLTW and are not covered by existing resources. Requests for equipment with a cost of \$5,000 or more will also be reviewed by the US Department of Labor. School districts may also apply for assistance with teacher/administrator travel costs that are needed to implement PLTW and are not covered by existing school district resources. Key to the success of the program is partnerships with the corporate sector and post secondary institutions to assure that students and teachers learn about the practical applications for the subjects that they study every day. The region will pursue a 2+2 model with the program, so that students graduating from PLTW tracks can articulate their learning into associate- and bachelor-level credit. The region will inventory and, where possible, align PLTW activities and curriculum with other existing STEM-education programs targeting the P-20 education system, including traditional in-class room and non-traditional out-of-class experiences. This tactic targets high-school students aged 14 and older.

<p><b><u>Funding per year</u></b></p> <p>Y1: \$75,400 Y2: \$80,400 Y3: \$80,400</p> <p><b><u>Total 3-year funding</u></b></p> <p>\$236,200</p>	<p><b><u>TA Needs</u></b></p> <p>Alignment of PLTW with U.S. Dept. of Defense and other federal government or national STEM-related scholarship programs</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Twenty-four teachers and twenty-four counselors trained over three years, with representation from all four counties</li> <li>➤ Exposure of 600+ students over three years to proven curriculum, access to articulated credit, and possible scholarship opportunities</li> <li>➤ Alignment, awareness, spread of regional STEM efforts</li> <li>➤ Added rigor to P-20 math, science and related reading programs</li> <li>➤ Elevated enrollment, retention, and graduation rates of high school students in post-secondary engineering or engineering technology programs</li> </ul>
<p><b><u>Responsible parties</u></b></p>	<p><b><u>Quarterly benchmarks</u></b></p>	
<p>Arizona State University Polytechnic ASU Polytechnic (lead) Regional STEM stakeholder group (three community colleges, four county intermediate school districts, other STEM programs, P-20 Council)</p>	<p><b><u>1<sup>st</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Convene regional STEM stakeholders to continue discussion about PLTW and relationship to other STEM-education programs</li> <li>➤ Design process for and conduct regional STEM education initiative mapping</li> <li>➤ Continue exploring PLTW alignment with other STEM initiatives</li> <li>➤ Assess current outreach efforts and develop collaborative outreach plan</li> <li>➤ Form outreach team for ISDs, teachers, counselors, students, industry, governor's P-20 Council, foundations (SFAZ, SME), Department of Defense, others</li> <li>➤ Develop outreach materials for eligible PLTW students, protocols, outreach tracking system</li> </ul>	



ASU Polytechnic (lead) Northern Arizona University-Yuma (lead) University of Arizona Arizona Western College Cochise Community College Pima Community College 4-county ISDs	<ul style="list-style-type: none"> <li>➤ Assess 2+2+2 articulation and begin negotiation (ongoing)</li> </ul>
ASU Polytechnic (lead) Regional STEM stakeholder group (three community colleges, four county intermediate school districts, other STEM programs, P-20 Council)	<u><b>2<sup>nd</sup> Quarter</b></u> <ul style="list-style-type: none"> <li>➤ Conduct external STEM resource inventory, including college and other scholarships</li> <li>➤ Explore alignment of traditional/non-traditional STEM programs, including college scholarships</li> <li>➤ Ongoing student and student-influencer outreach (counselor trainings); PR effort if appropriate</li> </ul>
ASU Polytechnic	<u><b>3<sup>rd</sup> Quarter</b></u> <ul style="list-style-type: none"> <li>➤ First round of teacher training (late summer 2008)</li> <li>➤ First classes begin</li> <li>➤ Other activities ongoing as needed</li> </ul> <u><b>4<sup>th</sup> Quarter</b></u> <ul style="list-style-type: none"> <li>➤ All activities ongoing as needed</li> <li>➤ Document student experiences in the classroom to share with additional regional stakeholders</li> <li>➤ Assess first-year activities, yr 2 recommendations</li> </ul>

**STRATEGY: Regional professional development center for K-12 teachers in STEM education and contextual learning.**

*TACTIC #2: K-8 teacher professional development in applied math and science*

The regional community colleges and various unified school district and industry partners will collaborate in developing an aligned professional development program for K-8 teachers seeking to integrate more applied, inquiry-based, contextual learning in math/science. This will create pipelines of students for later, middle- and high-school participation in PLTW and general math and science programs. Curriculum, including online offering, will be available for adoption and delivery by other regional community colleges in subsequent years: fully online, highly interactive, scientific inquiry, possible discipline strands, usable classroom content, project based assessment, delivered regionally (and even nationally). Teacher training is the only cost budgeted under the WIRED grant for this tactic. Any other costs will be leveraged from school district funds and other sources.

<u>Funding per year</u>	<u>TA Needs</u>	<u>Outcomes</u>
Y1: \$63,000 Y2: \$63,000 Y3: \$63,000  <b><u>Total 3-year funding</u></b>  \$189,000	NA	<ul style="list-style-type: none"> <li>➤ Approximately 300 teachers will participate in the professional development training (with thousands of students benefiting from the curriculum)</li> <li>➤ 15 online contextual learning programs in science</li> <li>➤ 15 online contextual learning programs in math</li> <li>➤ Teachers better prepared and supported to provide applied science and math education</li> <li>➤ K-8 pipeline into identified high-school STEM programs</li> </ul> <p>NOTE: Science only in year 2; math in year 3</p>
<b><u>Responsible parties</u></b>		<b><u>Quarterly benchmarks</u></b>
Pima Community College Arizona Western College Cochise Community College		<b><u>1<sup>st</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>• Identify potential development partners, including master teachers, potential STEM-related industry partners, Science Foundation AZ</li> <li>• Convene partners</li> </ul>
Pima Community College (co-lead) Arizona Western College (co-lead) Cochise Community College (co-lead) ASU Polytechnic (PLTW) Other STEM partners Industry partners Science Foundation Arizona		<ul style="list-style-type: none"> <li>• Define goals for curriculum development and early practical needs</li> <li>• Consider possible synergies with PLTW and/or other identified STEM programs identified through regional STEM inventory</li> </ul>
Pima Community College Arizona Western College Cochise Community College		<b><u>2<sup>nd</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>• Ongoing curriculum development</li> <li>• Initial planning of outreach efforts and awareness</li> </ul> <b><u>3<sup>rd</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>• Ongoing curriculum development, including online delivery components</li> <li>• Finalize outreach strategy</li> </ul> <b><u>4<sup>th</sup> Quarter</u></b> <ul style="list-style-type: none"> <li>• Launch program awareness and outreach strategy; begin teacher enrollments</li> </ul> <p><b><u>Year 2:</u></b> Math courses</p>

**STRATEGY: Regional professional development center for K-12 teachers in STEM education and contextual learning.**

*TACTIC #3: Science fair and entrepreneurship skills (detail in later table)*

McGuire Center and other regional partners will collaborate with middle and high-school educators to integrate critical entrepreneurship skills—idea management and decision support—in existing science fairs and other potential youth programs.

**STRATEGY: Border Professional Preparedness Program (BP3) to foster 21st Century digital, basic, ESL and other literacy skills to enhance career opportunities in border navigation and security and ensure the safe, smooth and legal flow of goods and people.**

*TACTIC #1: Border contextual digital and other workplace literacy*

WIRED will fund border-contextual digital literacy components (see explanation in earlier narrative) for integration into Pima Community College’s lauded Workplace Literacy program and other adult education programs that emphasize basic literacy and soft skills needed to perform in the 21st Century. The funding will provide for custom workplace training grants and outreach for employers in each county to experiment with and adapt workplace literacy to the needs of their workforce. Besides the digital literacy component, participants will benefit from English as a second language and basic reading, language and math skills in the context of learners’ everyday jobs.

<p><b>Funding per year</b></p> <p>Y1: \$ 6,500 Y2: \$122,900 Y3: \$130,100</p> <p><b>Total 3-year funding</b></p> <p>\$259,500</p>	<p><b>TA Needs</b></p> <p>Border asset and stake-holder inventory; border industry growth and needs assessment; identification of digital literacy needs based on current and upcoming technologies</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ 80 enrolled employees with 60 program completions</li> <li>➤ Estimated average wage increase of \$3/hour</li> <li>➤ skills for individuals entering digital-dependent (not necessarily high-tech) border-related professional occupations (customs management, transportation, logistics, public safety, etc.)</li> <li>➤ Basic literacy development and support (reading, language, math) for border-related positions</li> <li>➤ Preparation for movement up talent career ladder</li> <li>➤ More agile, flexible workforce ready to meet growing employment needs</li> <li>➤ Enhanced awareness, alignment and networking of adult education and literacy program initiatives, as well as existing border-related professional development programs</li> </ul>
<p><b>Responsible parties</b></p>	<p><b>Quarterly benchmarks</b></p>	
<p>Santa Cruz One-Stop (co-lead) Yuma Private Industry Council (co-lead)</p> <p>Border stakeholder group:</p> <ul style="list-style-type: none"> <li>➤ Pima Community College</li> <li>➤ Arizona Western College</li> <li>➤ Cochise Community College</li> <li>➤ U.S. Customs and Border Protection</li> <li>➤ University of Arizona Center of Excellence for Border Immigration and Security</li> <li>➤ Border-related business</li> <li>➤ Others TBD</li> </ul>	<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Convene border stakeholder group</li> <li>➤ Review Pima CC’s Workplace Literacy initiative</li> <li>➤ Conduct border profession analysis to determine key industry training targets</li> <li>➤ Assess industry representation and develop strategy for improvement</li> <li>➤ Develop regional adult education and literacy mapping plan</li> <li>➤ Continue identifying needs, opportunities and stakeholders associated with targeted border professions</li> <li>➤ Verify appropriate initiative staffing levels</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ If deemed necessary, identify needed staff profiles and conduct search</li> <li>➤ Work with partners to identify digital literacy curriculum needs not covered in Pima CC’s program; assess other CC and partner offerings for potential integration</li> <li>➤ Align project with Department of Defense-funded Center of Excellence (U of A)</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Begin identifying targeted employers</li> <li>➤ Test concepts with employers, including custom training grant needs and requirements</li> <li>➤ Refine concepts as needed</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Develop launch strategy, including outreach to recruit training participants</li> <li>➤ Launch outreach for year 2 implementation</li> </ul>	

**STRATEGY: Border Professional Preparedness Program (BP3) to foster 21st Century digital, basic, ESL and other literacy skills to enhance career opportunities in border navigation and security and ensure the safe, smooth and legal flow of goods and people.**

*TACTIC #2: Border careers pre-academy*

Under leadership of Santa Cruz County One-Stop and Yuma Private Industry Council, partners will support planning and development of a pre-academy for professionals interested in pursuing such careers as federal customs and border-patrol, but for which there is a 40% wash-out rate. DHS reports indicate that southwest border staffing will climb 43 percent from 2006 to 2009. DHS spends \$187,000 to recruit and train each new agent, with an additional \$14,700 spent in a training academy. Most common wash-out points occur during early assessment, then again at 7 and 10 months, particularly because of deficiency in language skills and awareness of criminal justice law.

<p><b>Funding per year</b></p> <p>\$ 87,813 \$107,653 \$122,544</p> <p><b>Total 3-year funding</b> \$318,000</p>	<p><b>TA Needs</b></p> <p>Border asset and stakeholder inventory ; top-level political support from broader federal department (DHS)</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ 100 enrollees with 75 program completions</li> <li>➤ Pilot of a border professionals pre-academy with possible national applicability</li> <li>➤ Reduce washout rates for border academy enrollees</li> <li>➤ Redirection for individuals interested in other border-professional, public safety or related careers</li> <li>➤ Alignment of workforce and education development systems with government and other border-related employers</li> </ul>
<p><b>Responsible parties</b></p>		<p><b>Quarterly benchmarks</b></p>
<p>Santa Cruz One-Stop (co-lead) Yuma Private Industry Council (co-lead)</p> <p>Border stakeholder group:</p> <ul style="list-style-type: none"> <li>➤ Pima Community College (Public Safety Institute)</li> <li>➤ Arizona Western College</li> <li>➤ Cochise Community College</li> <li>➤ U.S. Customs and Border Protection</li> <li>➤ University of Arizona Center of Excellence for Border Immigration and Security</li> <li>➤ Border-related business</li> <li>➤ Others TBD</li> </ul>		<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Determine most appropriate alignment with University of Arizona Center of Excellence for Border Immigration &amp; Security</li> <li>➤ Convene border stakeholder group (may be same or similar to border contextual-literacy initiative)</li> <li>➤ Determine points of synergy and departure between Yuma and Tucson sectors</li> <li>➤ Identify primary skill, knowledge and eligibility deficiencies that border-professionals most often face and that prevent their eligibility for targeted border staffing position</li> <li>➤ Identify and assess current efforts to overcome deficiencies</li> <li>➤ Determine if additional staffing will be needed; if so, develop description and conduct search</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Work with partners, including federal government departments, to identify priority pre-academy instruction needs, based on earlier overall need analysis</li> <li>➤ Continue to gain key stakeholder buy-in and involvement</li> <li>➤ Agree on desired curriculum needs and outcomes</li> <li>➤ Draft concept for border-careers referral/redirection system for those not eligible for or who wash out of Academy training</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Begin pre-academy curriculum development and delivery plan</li> <li>➤ Finalize concept for border careers referral/redirection system</li> <li>➤ Develop and refine concept for pre-academy outreach seminars</li> <li>➤ Conduct ongoing border stakeholder outreach</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Promote pilot launch, including border pre-academy seminars</li> <li>➤ Finalize pre-academy curriculum, delivery plan, and career redirection/referral system</li> </ul> <p><b>Year 2:</b> Pilot new curriculum</p>

## GOAL 2: ENTREPRENEURSHIP— Create entrepreneurial culture and pipelines to foster innovation and diversify regional career opportunities.

**STRATEGY: Share common entrepreneurship curriculum principles and modularized/segmented training to address “just in case” and “just in time” education needs.**

*TACTIC #1: Modular entrepreneur-ship curriculum, regional curriculum principles*

Regional community colleges (Pima, Cochise and Arizona Western), the McGuire Center and other possible institutions will collaborate to expand their entrepreneurship and education training programs through development of manageable curriculum segments/ modules that can stand alone but also build to an associate's degree and even articulate with the McGuire Center, UA-South's Commerce degree, or NAU-Yuma's BA in Entrepreneurship. For existing, stand-alone entrepreneurship programs, the community colleges and McGuire will inventory promising practices, develop shared regional principles and tools for program enhancement and possible articulation. It also will work with area academic institutions to certify faculty as regional entrepreneurship scholars based on agreed on entrepreneurship education principles.

<p><b><u>Funding per year</u></b></p> <p>Y1: \$188,431 Y2: \$190,180 Y3: \$181,158</p> <p><b><u>Total 3-year funding</u></b></p> <p>\$559,769</p>	<p><b><u>TA Needs</u></b></p> <p>Curriculum mapping; regional entrepreneur ship asset inventory Industry needs assessment to confirm modular training needs</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ An estimated 1,000 people region-wide will receive training through modular entrepreneurship curriculum and other training developed</li> <li>➤ Leading practices identification and sharing among regional entrepreneurship educators</li> <li>➤ Agreement on core principles relating to existing programs and future enhancement</li> <li>➤ Development of modular-based curriculum for “just in time” training/education needs of existing entrepreneurs</li> <li>➤ Articulation of credit between community colleges and four-year institutions</li> <li>➤ Institutional efficiency in addressing curriculum needs</li> </ul>
<p><b><u>Responsible parties</u></b></p> <p>UA McGuire Center for Entrepreneurship Pima Community College Arizona Western College Cochise Community College</p>	<p><b><u>Quarterly benchmarks</u></b></p> <p><b><u>1<sup>st</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Identify appropriate initiative staffing</li> <li>➤ Convene partner meeting</li> <li>➤ Ensure appropriate outreach to economic development and Small Business Development Center, and other stakeholders</li> <li>➤ Begin regional entrepreneurship curriculum mapping (degree and non-degree)</li> <li>➤ Brainstorm potential modular curriculum offerings; begin exploring online offerings; review existing models for possible adoption/customization</li> <li>➤ Develop questionnaire or survey for business research to identify modular curriculum needs</li> </ul> <p><b><u>2<sup>nd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Complete curriculum mapping; identify promising practices</li> <li>➤ Launch business-based research/inquires to identify curriculum needs and desired delivery mechanisms</li> <li>➤ Analyze mapping and business research outcomes</li> </ul> <p><b><u>3<sup>rd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Develop work plan for curriculum modules</li> <li>➤ Assess any additional funding resource or other needs</li> <li>➤ Identify promising practices among existing degree/credential-offering programs</li> <li>➤ Draft principles and explore tools for existing degree/credential-related program enhancement practices among existing</li> </ul>	

	<ul style="list-style-type: none"> <li>➤ programs</li> <li>➤ Draft principles for program articulation, enhancement</li> <li>➤ Begin developing principle-based faculty credentialing curriculum needs and desired delivery mechanisms</li> <li>➤ Analyze mapping and business research outcomes</li> </ul> <p><b><u>3<sup>rd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Develop work plan for curriculum modules</li> <li>➤ Assess any additional funding resource or other needs</li> <li>➤ Identify promising practices among existing degree/credential-offering programs</li> <li>➤ Draft principles and explore tools for existing degree/credential-related program enhancement practices among existing programs</li> <li>➤ Draft principles for program articulation, enhancement</li> <li>➤ Begin developing principle-based faculty credentialing</li> <li>➤ Begin module development</li> </ul> <p><b><u>4<sup>th</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Continue faculty-credentialing effort</li> <li>➤ Ongoing development of modules and tools</li> <li>➤ Ongoing articulation activity</li> <li>➤ Ongoing integration of promising practices, enhancement principles and tools.</li> </ul>
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**STRATEGY: Network and align system stakeholders to provide technical expertise and direction to current and aspiring entrepreneurs.**

*TACTIC #2: Idea Xchange inquiry and results intervention tracking, rural network extension*

McGuire Center for Entrepreneurship, working in partnership with the region's community colleges, SBDCs, and others, will expand on local and regional networks to coach entrepreneurs, offer solutions, make referrals and study the nature of entrepreneurial support needs in the region. Grant funds will be used to provide the architecture necessary to track inquiries received through *IdeaXchange* and the results of each intervention, as well as to support outreach for rural network extension.

<p><b>Funding per year</b></p> <p>Integrated in the previous table (Tactic #1, modular curriculum)</p>	<p><b>TA Needs</b></p> <p>Regional entrepreneurship asset inventory</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ At least 40 new/emergent enterprises served per year</li> <li>➤ Ability to track inquiries and interventions for regional IdeaXchange</li> <li>➤ Engagement of additional partners in IdeaXchange system</li> <li>➤ Extension of successful IdeaXchange initiative into rural areas</li> <li>➤ Enhanced awareness of IdeaXchange, enhanced usage</li> </ul>
<p><b>Responsible parties</b></p>	<p><b>Quarterly benchmarks</b></p>	
<p>UA McGuire Center for Entrepreneurship (lead)</p> <p><i>IdeaXchange partners: regional community colleges, SBDCs, chambers of commerce, business leadership groups, industry associations, investors, businesses, other entrepreneurship stakeholders</i></p>	<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>• Solicit coordinating staff</li> <li>• Hire staff</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>• Engage IdeaXchange partners in tracking system design</li> <li>• Inventory regional entrepreneurship assets</li> <li>• Begin rural outreach</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>• Begin tracking system design</li> <li>• Continue rural network outreach and development</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>• Launch tracking system</li> <li>• Ongoing rural network outreach and development</li> </ul>	



**STRATEGY: Raise awareness of entrepreneurship by promoting success stories and hands-on learning**

*TACTIC #1: Rural entrepreneurial society (WIRED funding) and award (non-WIRED funding)*

Partners will form a rural entrepreneurial society to define and recognize best-practices in rural entrepreneurship and connect business and academia. The partners will secure private donations for a best-practice award program to recognize rural entrepreneurs.

<p><b><u>Funding per year</u></b></p> <p>Integrated in a previous table (Tactic #1, modular curriculum)</p>	<p><b><u>TA Needs</u></b></p> <p>Regional entrepreneurship asset inventory</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Increased awareness of rural entrepreneurship</li> <li>➤ Better connected of rural entrepreneurship assets</li> <li>➤ Better connection of rural communities to non-rural business, academic and other assets, including regional IdeaXchange</li> <li>➤ Celebration of rural entrepreneurs and presentation of entrepreneurship as a viable career alternative</li> </ul>
<p><b><u>Responsible parties</u></b></p>		<p><b><u>Quarterly benchmarks</u></b></p>
<p>UA McGuire Center for Entrepreneurship (lead)</p> <p><i>Society partners: regional community colleges, SBDCs, chambers of commerce, business leadership groups, industry associations, investors, businesses, other entrepreneurship stakeholders</i></p>		<p><b><u>3<sup>rd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Consider results of regional entrepreneurship asset inventory</li> <li>➤ Identify rural stakeholders</li> <li>➤ Begin convening and planning around society and develop criteria for the award</li> </ul> <p><b><u>4<sup>th</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Identify and solicit society candidates</li> <li>➤ Plan criteria for award</li> </ul> <p><b><u>Year 2</u></b></p> <ul style="list-style-type: none"> <li>➤ Grant first award</li> <li>➤ Media and other public relations around awards program and recipients</li> </ul>

**STRATEGY: Raise awareness of entrepreneurship by promoting success stories and hands-on learning**

*TACTIC #2: Teacher professional development around and implementation of applied entrepreneurship learning in K-12 science-fair and other settings*

WIRED funds will support teacher training to integrate the IdeaFair entrepreneurship learning model into existing science fairs. McGuire Center will collaborate with middle and high-school educators to integrate critical entrepreneurship skills—idea management and decision support—in existing science fairs and other youth entrepreneurship programs (e.g., summer camps, 4H, Junior Achievement), as applicable. The science-fair learning process will culminate in an annual region-wide competition, where students will pitch their concepts to a panel of “venture capitalists/judges” and receive non-WIRED funded prizes.

<p><b>Funding per year</b></p> <p>Integrated in a previous table (Tactic #1, modular curriculum)</p>	<p><b>TA Needs</b></p> <p>Regional entrepreneurship asset inventory</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ Outreach on entrepreneurship to 60 high schools and 200 middle schools (which touch almost 3,000 students) for integration of the science-methodology-based business concept development and competition.</li> <li>➤ Engagement of 10%, or approximately 6 high-school and 20 middle-school professionals and 300 students.</li> <li>➤ Learned integration scientific principles in business development, including concept (hypothesis) formulation, testing and validation, final and written analysis, and communication.</li> <li>➤ Broader hands-on awareness of entrepreneurship among students interested in STEM</li> </ul>
<p><b>Responsible parties</b></p>	<p><b>Quarterly benchmarks</b></p>	
<p>UA McGuire Center for Entrepreneurship (lead)</p> <p><i>Engaged partners:</i> Southern Arizona Science and Engineering Fair (SARSEF), Douglas USD, Nogales USD, Pima JTED, Santa Cruz USD, Sierra Vista USD, Tucson USD, Yuma UMSD, regional community colleges, SBDCs, chambers of commerce, business leadership groups, industry associations, investors, businesses, other stakeholders</p>	<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Solicit and hire coordinating staff</li> <li>➤ Partner engagement meeting</li> <li>➤ Draft and begin outreach strategy</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Continue outreach, participant solicitation</li> <li>➤ Prepare teacher training materials</li> <li>➤ Plan agenda for business plan competition</li> <li>➤ Solicit judges</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Conduct teacher training</li> <li>➤ Launch competition</li> <li>➤ Document, report results through ReX relations around awards program and recipients</li> </ul>	

**GOAL 3: COLLABORATION: Support a culture of regional knowledge exchange, maximizing learning, assets, and transformation effects across all four counties.**

**STRATEGY: Regional Knowledge Xchange (ReX) System**

*TACTIC #1: Intelligence gathering and dissemination (including resource mapping, economic analysis, benchmarking, and leading-practice identification) across regional partners.*

IFA partners have identified a range of data and information needs and anticipate identifying more as the initiative moves forward. Identified needs to date include: regional economic analysis and competency assessment; adult education and literacy asset mapping; entrepreneurship asset mapping; regional benchmarking

A modest, research fund will cover unanticipated information collection costs over the duration of the grant. All information will be collected and shared under the umbrella of the Regional Knowledge Xchange. NOTE: Mapping of engineering and information technology education, STEM education, and entrepreneurship education programs are imbedded under the related strategies in Goals 1 and 2, above.

<p><b><u>Funding per year</u></b>          Y1: \$129,833          Y2: \$ 42,500          Y3: \$ 42,500</p> <p><b><u>Total 3-year funding</u></b>          \$214,833</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Regional access and strategy with regard to research and data collection</li> <li>➤ More informed, intelligence driven project implementation</li> <li>➤ Improved, data-based awareness of regional strengths, weaknesses, opportunities and challenges</li> </ul>
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<b><u>Responsible parties</u></b>	<b><u>Quarterly benchmarks</u></b>
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<p>Pima County on behalf of ReX, with leadership from Committee Chairs/workgroup leads</p>	<p><b><u>1<sup>st</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Inventory available regional data and inventories</li> <li>➤ Verify appropriateness of TA needs identified in implementation plan</li> <li>➤ Develop TA request protocol, including need identification, research methodology, lead agency and budget</li> <li>➤ Identify research priorities for 1<sup>st</sup> quarter and opportunities for research synergy</li> <li>➤ Develop and issue RFPs for research or identify other research completion strategy</li> <li>➤ Select TA/research vendors</li> <li>➤ Launch research</li> </ul> <p><b><u>2<sup>nd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Monitor TA progress and research progress</li> <li>➤ Report out research findings as they are available</li> <li>➤ Ongoing vendor solicitation as needed</li> <li>➤ Ongoing research needs identification</li> </ul> <p><b><u>3<sup>rd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Monitor TA progress and research progress</li> <li>➤ Report out research findings as they are available</li> <li>➤ Ongoing vendor solicitation as needed</li> <li>➤ Ongoing research needs identification</li> </ul> <p><b><u>4<sup>th</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Ongoing research needs identification</li> <li>➤ Incentive or sustainability plan to keep data and other information current</li> <li>➤ Refer to past research; identify need for clarification or updates</li> </ul>
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**STRATEGY: Regional Knowledge Xchange (ReX) System**

*TACTIC #2: Industrial workforce needs assessment and supply chain mapping*

TREO will convene a business industry committee to devise strategies to improve access to key industry partners, expand regional networking, support supply chain development, better identify workforce need projections, and develop workforce development impact measures. It also will undertake sector-based asset mapping to identify businesses associated with targeted industrial sectors. Companies will be targeted for workforce-related response planning and early-stage interaction, with additional facilitation around operations expansion or re-location. Information will be searchable in the web-based BusinessLINC. Further, TREO will conduct regional outreach to help IFA partners connect to mapped business assets; encourage participation of other regional partners in use of BusinessLINC, and field train other economic development organizations to support border business buyer/seller initiatives. A regional Economic Development Innovation Fund will make modest grants available for additional partners to join the effort to conduct outreach to employers to determine their labor and skill needs related to current and future economic growth opportunities in aerospace-defense, border security and related industries. The regional EDC innovation fund, administered by the One Stops in each county, will help connect other regional EDCs to WIRED talent development activities. Finally, TREO will oversee and/or conduct initial industry needs assessment in support of high technology career ladders, AZDISI, and other programs as identified/appropriate. This will involve employer surveys/interviews about key occupations; required skills, degrees, credentials; use of internal/external training; movement from skilled to technical operations. TREO will engage other regional economic development organizations in the process as needed/possible/appropriate and provide reports and other updates to IFA partners.

<p><b>Funding per year</b>          Y1: \$295,000*          Y2: \$ 85,000          Y3: \$ 70,000</p> <p><b>Total 3-year funding</b>          \$450,000</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ Access to targeted industry key players</li> <li>➤ Direct interaction and assistance regarding potential supply chain development opportunities for regional businesses</li> <li>➤ Direct interaction and assistance regarding workforce needs projections and associated educational requirements</li> <li>➤ Informed development of workforce-readiness related impact measurements</li> <li>➤ Better input and awareness of industry workforce needs</li> <li>➤ Enhanced regional cooperation and alignment of efforts, including EDCs</li> <li>➤ Maximum utilization of program resources</li> </ul> <p>*Year 1 includes \$125,000 for EDC innovation fund and \$55,000 for additional start up needs assessment in defense intelligence, high-technology career ladders, and other areas as identified.</p>
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<p><b>Responsible parties</b></p>	<p><b>Quarterly benchmarks</b></p>
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<p>Tucson Regional Economic Opportunities (TREO) (lead)</p> <p><i>Initial needs assessment partners:</i>          Aerospace, Manufacturing and IT cluster (AMIT); UA (AZDISI); Community Colleges (high-tech career ladders); UA McGuire Center (entrepreneurship education needs)</p>	<p><b>1st Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Convene industry committee</li> <li>➤ Conduct outreach to other regional economic development councils</li> <li>➤ Meet with IFA executive committee, fiduciary and other key partners (left) to identify sector mapping and needs assessment priorities, clarify strategy, and ensure alignment with WIRED needs and objectives</li> <li>➤ Begin sector-based asset mapping IFA partner outreach</li> <li>➤ Launch high-tech career ladder and AZDISI industry needs assessment (possible RFP issuance)</li> <li>➤ Produce report for high-tech career ladder and AZDISI industry mapping needs assessment</li> <li>➤ Industry mapping status assessment and report</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Update workforce development planning approach and strategies based on outcomes of related regional asset inventory</li> <li>➤ Identify opportunities for updating and improving BusinessLINC; work with IFA partners to identify system development/ improvement needs</li> <li>➤ With other IFA partners, One Stops develop process/parameters for and begin solicitations to other EDCs for the EDC Innovation Fund; issue RFP; select first round bids</li> <li>➤ Conduct other ongoing 1<sup>st</sup> quarter activities</li> </ul> <p><b>3<sup>rd</sup>-4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Begin field training of IFA partners to participate in BusinessLINC and support border business buyer/seller initiative</li> <li>➤ Other activities ongoing</li> </ul>
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## STRATEGY: Regional Knowledge Xchange (ReX) System

### TACTIC #3: Communications and engagement

IFA recognizes that stakeholder and community engagement and awareness will be the cornerstone of ultimate success. Activities to engage stakeholders outside of the initial IFA stakeholder list include: survey to benchmark regional attitudes and views around transformation; regional transformation summits (one per year) to expand the circle of stakeholders and raise general awareness of IFA activities; ongoing media and other public relations (consistent with WIRED allowable costs) and awareness building associated with IFA. Activities targeted to internal and potentially external IFA audiences include: interactive, stakeholder maintained website; monthly e-newsletter; quarterly video documentation of WIRED activities and distribution through website and e-newsletter; distance technology dissemination for long-distance partner engagement; and miscellaneous partner and community engagement.

<p><b>Funding per year</b></p> <p>Y1: \$130,400 Y2: \$ 63,000 Y3: \$ 63,000</p> <p><b>Total 3-year funding</b></p> <p>\$256,400</p> <p>Benchmarking survey: \$29.8 k Regional summits: \$30k Outreach/PR: \$39.6k Website: \$30k Videography: \$25k E-newsletter: \$58.5k Development planning: \$85k</p>	<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>➤ Engaged and aware regional stakeholders and community members (30+ regional partner organizations, outreach to 60+ additional, distribution list of 200+, regional households up to 500 directly touched through survey/interviews, tens of thousands touched through media efforts)</li> <li>➤ Mechanism for sustainability, with awareness resulting in growing stakeholder engagement and investment</li> <li>➤ Growing sense of regional ownership in IFA future</li> </ul>
<p><b>Responsible parties</b></p>	<p><b>Quarterly benchmarks</b></p>
<p>Pima County with support from Corporation for a Skilled Workforce and others as needed</p>	<p><b>1<sup>st</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Determine goals and draft RFP for PR firm (due end of first quarter)</li> <li>➤ Distance communication technology (launch end of first quarter)</li> <li>➤ Benchmarking survey (launch 1<sup>st</sup> quarter, results due 3<sup>rd</sup> quarter)</li> <li>➤ Website to cover functionality, search-ability, social networking, inventory and other research housing, etc. (due third quarter)</li> <li>➤ E-newsletter to include regional leader contributions, multi-media links, photo images, etc. (launch third quarter)</li> <li>➤ Video documentation (launch third quarter)</li> <li>➤ Identify and select staff as needed for above activities</li> <li>➤ Develop work plans for completion by desired timeframes</li> <li>➤ Launch distance technology for ReX communication</li> </ul> <p><b>2<sup>nd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Develop strategy and begin outreach to engage media partner(s)</li> <li>➤ Monitor vendor progress</li> <li>➤ Report findings, output as they become available based on desired time frames</li> </ul> <p><b>3<sup>rd</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Ongoing monitoring of vendor progress</li> <li>➤ Report findings, output as they become available based on desired time frames</li> <li>➤ Begin planning of first annual regional transformation summit/IFA expo (possible national reach)</li> <li>➤ Assess communications/engagement plans and address unanticipated needs</li> </ul> <p><b>4<sup>th</sup> Quarter</b></p> <ul style="list-style-type: none"> <li>➤ Regional transformation summit</li> <li>➤ Review strategy and progress</li> </ul>

**TACTIC #4: Regional identity and branding**

Regional stakeholders will work to develop a brand identity and awareness around Innovation Frontier Arizona, consistent with WIRED grant allowable costs for outreach and program marketing.

<p><b><u>Funding per year</u></b> N/A</p> <p><b><u>Total 3-year funding</u></b> N/A</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Consistency and broad application of IFA branding materials</li> <li>➤ Awareness of IFA activities</li> <li>➤ Broadened and increased interest and support of IFA activities</li> </ul>
<p><b><u>Responsible parties</u></b></p>	<p><b><u>Quarterly benchmarks</u></b></p>
<p>Pima County IFA Advisory Board</p>	<p><b><u>1st Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Develop and agree on principles relating to logo and branding use</li> <li>➤ Request that partners include IFA brand and logo on website main pages, as well as link to IFA website, upon website's completion</li> </ul> <p><b><u>2<sup>nd</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Recruit possible IFA spokesperson(s) that can be identified with region; connect them to earlier-described communication and engagement initiatives</li> <li>➤ Work with PR firm to develop regional media plan with media tool kits (including IFA FAQ and talking points), and media training, if needed</li> </ul> <p><b><u>3<sup>rd</sup>-4<sup>th</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Request development of IFA partner web profile pages (again, once website is developed)</li> </ul> <p><b><u>Years 2-3</u></b> Test IFA brand in repeat community pulse survey</p>

**STRATEGY: Regional Knowledge Xchange (ReX) System**

*TACTIC #5: Initiative management and partner coordination*

Pima One-Stop, as fiduciary, will administer the grant, with support from Cochise, Santa Cruz and Yuma counties.

The State of Arizona, the grant recipient, will monitor and engage in activities, conduct outreach, connect initiatives to state programs, and serve on the Executive Committee.

<p><b><u>Funding per year</u></b>          Y1: \$340,134          Y2: \$340,134          Y3: \$340,134</p> <p><b><u>Total 3-year funding</u></b>          \$1,040,401*</p> <p>Pima: \$400,543*          YPIC: \$197,031*          CPIC: \$188,737*          SC: \$109,090*          State of AZ:          \$125,000*</p>	<p><b><u>Outcomes</u></b></p> <ul style="list-style-type: none"> <li>➤ Effective initiative management</li> <li>➤ On-time report submission</li> <li>➤ Achievement of quarterly goals and performance benchmarks</li> <li>➤ No audit findings</li> <li>➤ Regional collaboration and integration among WIBs</li> <li>➤ Connectivity to statewide initiatives</li> <li>➤ Dissemination of program success and learning assessment (inside and outside of the region)and increased interest and support of IFA activities</li> </ul>
<p><b><u>Responsible parties</u></b></p>	<p><b><u>Quarterly benchmarks</u></b></p>
<p><i>Grant recipient and oversight:</i>          State of Arizona</p> <p><i>Fiduciary and overall management:</i>          Pima County One-Stop</p> <p><i>Strategic direction and advice:</i>          IFA advisory board and chair</p>	<p><b><u>Ongoing</u></b>          Activities will include:</p> <ul style="list-style-type: none"> <li>➤ Providing staff support for the IFA chair and executive committee, as well as the Regional Knowledge Xchange and its committees and working groups</li> <li>➤ Coordinating funds disbursement</li> <li>➤ Monitoring funded partner progress</li> <li>➤ Conducting quarterly DOL reports</li> <li>➤ Coordinating attendance at WIRED Academies</li> <li>➤ Monitoring overall initiative progress (including oversight for communications/engagement and data/information needs) and tracking results</li> <li>➤ Liaising with DOL, its evaluators, and other WIRED partners\</li> <li>➤ Travel reimbursement (inside and outside of the region)and increased interest and support of IFA activities repeat community pulse survey</li> </ul>



**STRATEGY: Regional Knowledge Xchange (ReX) System**

*TACTIC #6: Results tracking and reporting*

Regional one-stops will report on quarterly objectives for their counties, with final results aggregated and submitted to ETA by Pima County. Pima County is developing an automated results tracking system, which will be available online for partner access.

<p><b><u>Funding per year</u></b></p> <p>Y1: \$20,000</p> <p><b><u>Total 3-year funding</u></b></p> <p>\$20,000</p>	<p><b><u>Outcomes</u></b></p> <p>More efficient, timely and accurate results tracking and reporting</p>
<p><b><u>Responsible parties</u></b></p>	<p><b><u>Quarterly benchmarks</u></b></p>
<p><i>Pima County One Stop</i></p>	<p><b><u>1<sup>st</sup> Quarter</u></b></p> <ul style="list-style-type: none"> <li>➤ Develop electronic tracking system with input from partners</li> <li>➤ Train partners on system use and reporting requirements</li> <li>➤ Identify opportunity for broader national WIRED dissemination</li> </ul> <p><b><u>Ongoing</u></b></p> <ul style="list-style-type: none"> <li>➤ Use tracking system for quarterly DOL reports</li> </ul>

## C. BUDGET

Innovation Frontier Arizona will own, catalyze and encourage various regional initiatives all leading up to a deliberate transformation initiative for the region.

WIRED Budget	Strategies
<b>WIRED Owns</b> (Largely funded by WIRED)	<ul style="list-style-type: none"> <li>➤ High tech core curriculum and specializations</li> <li>➤ Project Lead The Way</li> <li>➤ Modular entrepreneurship curriculum and principles</li> <li>➤ Border contextual digital and other workplace literacy</li> <li>➤ Border careers pre-academy</li> <li>➤ Modular entrepreneurship curriculum/principles</li> <li>➤ Regional Knowledge Xchange (ReX)</li> </ul>
<b>WIRED Catalyzes</b> (Small to medium WIRED funding)	<ul style="list-style-type: none"> <li>➤ NAU-Yuma integrated engineering program</li> <li>➤ Arizona Defense Intelligence and Security Initiative</li> <li>➤ Prior learning assessment</li> <li>➤ Entrepreneurship integration in regional science fair</li> <li>➤ Rural entrepreneurship society</li> <li>➤ IdeaXchange results tracking</li> </ul>
<b>WIRED Encourages</b> (No WIRED funding, but supported through WIRED partners and efforts)	<ul style="list-style-type: none"> <li>➤ Regional K-12 STEM alignment</li> <li>➤ P-20 education standards improvement</li> <li>➤ Center of Excellence for Border Immigration and Security</li> <li>➤ Transportation and logistics initiative</li> </ul>

The IFA advisory board will preside over a process to make adjustments to the budget as needed, depending on the success of IFA's various program initiatives. This may entail encouraging resource development where more investment in an initiative is warranted, or withholding WIRED investment if the intended/desired return is not clear or being realized.

**WIRED 3-YEAR BUDGET DETAIL**

<b>STATE OF ARIZONA - DEPARTMENT OF COMMERCE</b>	
<b>SALARIES</b>	<b>\$84,000</b>
<b>FRINGE</b>	<b>\$30,000</b>
<b>SUPPLIES</b>	<b>\$800</b>
<b>TRAVEL</b>	<b>\$10,200</b>
<b>SUBCONTRACTS - PIMA COUNTY</b>	
Administration, coordination and tracking	\$400,543
Tracking system development	\$20,000
UNIVERSITY OF ARIZONA (UA)	
McGuire Entrepreneurship	\$240,050
Outreach campus high tech career ladders	\$197,037
TOTAL UA	\$437,087
ARIZONA STATE UNIVERSITY (ASU)	
Project Lead the Way teacher training	\$85,000
Counselor/STEM expo	\$10,200
Project Lead the Way outreach	\$9,000
TOTAL ASU	\$104,200
TUCSON REGIONAL ECONOMIC OPPORTUNITIES	
Workforce and supply chain mapping	\$270,000
PIMA COMMUNITY COLLEGE: Course design/curriculum development/coordination	
Entrepreneurship	\$63,000
Technology career ladder training	\$189,000
K-8 teacher training	\$63,000
TOTAL PIMA COMMUNITY COLLEGE	\$315,000
TUITION/TRAINING FUNDS	
Entrepreneurship	\$43,200
Technology career ladder training	\$120,000
Border professionals workplace/digital lit	\$60,000
TOTAL TUITION	\$223,200
K-12 SCHOOL DISTRICT ASSISTANCE GRANTS	
Project Lead the Way equipment	\$30,000
Teacher travel reimbursement	\$3,000
TOTAL K-12 ASSISTANCE GRANTS	\$33,000
TOTAL PIMA COUNTY	\$1,803,030
<b>SANTA CRUZ COUNTY</b>	
Coordination and tracking	\$109,090
Border pre-academy - Tucson Sector	\$161,200
TUITION/TRAINING FUNDS	
Entrepreneurship	\$10,800
Technology career ladder training	\$20,000
Border professionals workplace/digital lit	\$60,000
TOTAL TUITION/TRAINING	\$90,800
K-12 SCHOOL DISTRICT ASSISTANCE GRANTS	
Project Lead the Way equipment	\$30,000
Teacher travel reimbursement	\$3,000
TOTAL K-12 ASSISTANCE GRANTS	\$33,000
TOTAL SANTA CRUZ COUNTY	\$394,090

<b>COCHISE COUNTY WORKFORCE DEVELOPMENT</b>	
Coordination and tracking	\$188,737
COCHISE COLLEGE: Course design/curriculum development/coordination	
Entrepreneurship	\$63,000
Technology career ladder training	\$189,000
K-8 teacher training	\$63,000
TOTAL COCHISE COLLEGE	\$315,000
TUITION/TRAINING FUNDS	
Entrepreneurship	\$27,000
Technology career ladder training	\$90,000
Border professionals workplace/digital lit	\$60,000
TOTAL TUITION/TRAINING	\$177,000
K-12 SCHOOL DISTRICT ASSISTANCE GRANTS	
Project Lead the Way equipment	\$30,000
Teacher travel reimbursement	\$3,000
TOTAL K-12 ASSISTANCE GRANTS	\$33,000
TOTAL CPIC-CCWD	\$713,737
<b>YUMA PRIVATE INDUSTRY COUNCIL</b>	
Coordination and tracking	\$197,032
Border Pre-Academy Yuma Sector	\$86,800
NORTHERN ARIZONA UNIVERSITY-YUMA	
Integrated Engineering 4-year degree	\$195,000
ARIZONA WESTERN COLLEGE: Course design/curriculum development/coordination	
Entrepreneurship	\$63,000
Technology career ladder training	\$189,000
K-8 teacher training	\$63,000
TOTAL AZ WESTERN	\$315,000
TUITION/TRAINING FUNDS	
Entrepreneurship	\$27,000
Technology career ladder training	\$90,000
Border professionals workplace/digital lit	\$60,000
TOTAL TUITION/TRAINING	\$177,000
K-12 SCHOOL DISTRICT ASSISTANCE GRANTS	
Project Lead the Way equipment	\$30,000
Teacher travel reimbursement	\$3,000
TOTAL K-12 ASSISTANCE GRANTS	\$33,000
TOTAL YPIC	\$1,003,832
<b>CORPORATION FOR A SKILLED WORKFORCE (CSW)</b>	
Plan development	\$15,000
Communication management, other TA	\$45,000
e-newsletter	\$58,500
Videography	\$25,000
TOTAL CSW	\$143,500

<b>NOT YET ALLOCATED</b>	
Prior learning assessment	\$94,740
Online course design	\$128,042
Economic data analysis	\$30,000
Asset mapping	\$70,000
Needs assessment	\$55,000
Benchmarking analysis	\$29,833
Benchmarking follow-up, continuity & development planning	\$85,000
Regional transformation summits	\$30,000
General initiative outreach	\$39,600
e-ship outreach	\$22,718
tech training outreach	\$34,078
contextual adult ed outreach	\$19,500
BP3 expo	\$30,000
BP3 outreach	\$40,000
Website	\$30,000
Distance technology	\$13,300
Economic development innovation fund	\$125,000
<b>TOTAL UNALLOCATED</b>	<b>\$876,811</b>
<b>TOTAL SUBCONTRACTED</b>	<b>\$4,935,000</b>
<b>GRAND TOTAL</b>	<b>\$5,060,000</b>

Southern Arizona is fortunate to present an ambitious budget and implementation plan because of the significant leveraged funds partners are bringing to the table. An accounting of leveraged funds—albeit not exhaustive—appears below.

<b>Innovation Frontier Arizona Leveraged Funds</b>	
<b>High Technology Degrees &amp; Certification</b>	
Pima County Individual Training Account Funding	\$350,000
Cochise and Yuma workforce investment system resources	\$70,000
Cochise Community College scholarships	\$50,000
Cochise Community College staff time	\$25,000
Pima Community College teacher time and online technology	\$140,692
Pima College teacher time for classroom education	\$90,276
AZ Western staff time, space	\$75,000
UA articulation coordination staff	\$15,000
Employer matching contribution	\$200,000
Arizona Western College dislocated worker funds	<u>\$25,000</u>
	<b>\$1,040,968</b>
<b>Entrepreneurship</b>	
Mcguire staff and other in-kind	\$209,669
Pima County One-Stop outreach	\$37,500
UA-south Commerce Degree development/articulation	\$500,000
Cochise and Yuma workforce investment system resources	\$70,000
Arizona Western College staff time and outreach (Small Bus. Dvlpt Cntr)	<u>\$90,802</u>
	<b>\$907,971</b>
<b>P-20 Professional Development Education Center</b>	
ProjectLead The Way (curriculum and staff)	\$141,000
Pima County (Youth Works Funds)	\$500,000
Professional time (school employees, counselors)	\$73,850
ASU Polytechnic (staff time for PLTW)	\$40,000
SARSEF and school system time	\$80,000
Pima County staff and other development time	\$111,668
Az Western College WIA title 1 funds for juniors/seniors 2+2	<u>\$38,000</u>
	<b>\$984,518</b>
<b>Border Professionals Preparedness Program (BP3)</b>	
Pima One-Stop funded programs (10x\$35,000)	\$350,000
Pima Community College	\$90,276
Employer matching funds	\$200,000
Cochise and Yuma workforce investment system resources	<u>\$70,000</u>
	<b>\$710,276</b>
<b>Regional Knowledge Transfer System</b>	
Pima County staff time for asset mapping activities	\$75,000
Cochise and Yuma workforce investment system resources	\$70,000
TREO Business LINC	\$100,000
TREO staff and resources	\$32,400
TREO Economic Blueprint	\$100,000
Business LINC	\$100,000
Arizona Department of Commerce Liaison	<u>\$50,000</u>
	\$527,400
<b>SUBTOTAL LEVERAGED FUNDS</b>	<b>\$4,171,133</b>
<b>Major High-Technology Degree &amp; Certification Programs/Initiatives</b>	
UA: State of Arizona allocation and prop 301 funds for defense-intel degree offerings	\$1,800,000
DoD: Center of Excellence for Border Immigration and Security at UA	\$18,000,000
DOL: CBJT grant for transportation, distribution and logistics	\$2,000,000
<b>SUBTOTAL LEVERAGED FUNDS</b>	<b>\$21,800,000</b>
<b>TOTAL LEVERAGED FUNDS</b>	<b>\$25,971,133</b>

## D. GOVERNANCE

The governance of Innovation Frontier Arizona consists of State roles, County roles, and IFA Advisory Board roles. The IFA Advisory Board was appointed by Governor Janet Napolitano and has a mix of funded-partner and private-sector representatives from all four counties. The IFA Advisory Board held its first meeting on March 4<sup>th</sup>, 2008, where it adopted governance roles and a leadership structure for the initiative. Michael Bellotti from Raytheon Missile Systems was selected to be the Chair of the IFA Advisory Board, with James B. Manson of Pacific Brokerage Company serving as Vice-Chair.

The IFA Advisory Board will guide the implementation of the WIRED grant within the framework of the mission of Innovation Frontier Arizona. A combination of fiscal, performance and programmatic accountabilities will allow the group to maintain leadership of the initiative and ensure its ongoing growth and progress toward the IFA mission. The IFA Advisory Board will initiate recommendations on modifications to the IFA plan or budget, policies; resource development efforts; and other key decisions. Such decisions will require the approval of both Pima County and the State of Arizona. Pima County is the project lead responsible for implementation of the WIRED grant with the oversight and support of the Arizona Department of Commerce.

### Board composition

To maximize input and representation across the region, the Advisory Board has seven members spanning all four southern Arizona counties and five key stakeholder groups: business and industry (3), education (1), workforce (1), economic development (1), and state government (1). The initial appointments to the Advisory Board were made by the State of Arizona in consultation with Pima County.

### Board agenda

Regular agenda items for the board will include: WIRED grant quarterly programmatic report; WIRED grant financial report; resource

### IFA Advisory Board Roles

- Provides leadership, advice, and oversight for Innovation Frontier Arizona;
- Monitors adherence to the mission, goals, budget and strategies of the Innovation Frontier Arizona WIRED Implementation Plan;
- Monitors the WIRED grant's operational implementation;
- Makes recommendations to Pima County (grant fiduciary) and the Arizona Department of Commerce (grant recipient) regarding:
  - Modifications to the WIRED Implementation Plan and/or budget,
  - Staffing and technical assistance needs,
  - Other WIRED-related policies
- Identifies and engages stakeholders;
- Defines needed workgroups and establishes meeting schedules and processes necessary to carry out the WIRED implementation Plan;
- Presides over development of long range regional objectives;
- Supports initiative growth, resource development, and strategies for continuation;
- Ensures alignment with and leveraging of other regional innovation initiatives;
- Does not have program and/or fiscal liability

### IFA Advisory Board Composition

CATEGORY	NAME	COMPANY/ORG.	COUNTY
BUSINESS	James ("JB") Manson	Pacific Brokerage	Santa Cruz
BUSINESS	Mike Bellotti	Raytheon	Pima
BUSINESS	Steve Pedigo	Northrop Grumman	Cochise
EDUCATION	Karen Nicodemus	Cochise College	Cochise
WORKFORCE DEVELOPMENT	John Morales	Yuma Private Industry Council	Yuma
ECONOMIC DEVELOPMENT	Larry Hecker	Tucson Regional Economic Opps.	Pima
STATE	Jody Ryan	AZ Commerce Dept.	NA

development report; modifications to plan or budget (if any); and reports from the Committee Chairs of the Talent, Entrepreneurship, and Regional Knowledge Exchange Committees.

### **Organizational Structure**

The Advisory Board, in consultation with the State and Pima County, has identified a committee structure to support its activities, ensuring the appropriate balance between Innovation Frontier Arizona's operations and mission-oriented objectives. The Talent, Entrepreneurship, and Regional Knowledge Exchange Committees, will determine whether and when to convene subcommittees to provide more-in-depth focus on particular topics and provide additional input and opportunity for stakeholder engagement.

The Advisory Board has consulted with Pima County on the staffing for Innovation Frontier Arizona and has supported a recommended model presented by Pima County. This model is shown in the diagram on the next page and explained further under Executive Management Team, fiscal agent/project lead team.

### **Arizona Department of Commerce Roles**

- Serves as the grant recipient on behalf of the Governor of Arizona;
- Approves (with Pima County) modifications to the WIRED Grant and Implementation Plan.
- Provides monitoring and oversight to ensure that the WIRED grant achieves its goals;
- Coordinates with other State programs and offices to provide support to the WIRED initiative and to align their efforts with Innovation Frontier Arizona.
- Submits all required program performance reports to the US Department of Labor, Employment and Training Administration.
- Provides regular briefings to the Governor's office, Commerce/DES leadership and the Governor's Council on Workforce Policy regarding the success and milestones accomplished by the WIRED activities.

### **Pima County Roles**

- Serves as the fiscal agent for the WIRED grant, drawing funds from the Federal Payment Management System, tracking expenditures and submitting fiscal reports to the U.S. Department of Labor, Employment and Training Administration.
- Approves (with Arizona Department of Commerce) modifications to the WIRED Grant and Implementation Plan.
- Executes contracts and/or inter-governmental agreements with sub-recipients and make expenditures as required to implement the WIRED Grant in accordance with the WIRED Grant Agreement.
- Monitors subcontracts and expenditures to ensure compliance with the WIRED Grant Agreement and all applicable regulations and cost principles.
- Tracks progress, activities, and outcomes for the WIRED Grant and submit quarterly performance reports to the ADOC.



### Executive Management Team

Innovation Frontier Arizona will implement initiatives and communicate with responsible parties funded by, supporting, and relevant to the WIRED grant. The executive team, including Arizona Department of Commerce and Pima County, will oversee and manage the progress of key strategies and report on progress of fulfilling the three goals previously outlined in the strategy matrices. Funding will be routed through the 4 county and one-stops and each WIB will be responsible for performance tracking and reporting for each county, with reports submitted to Pima.

#### Grant Recipient – State of Arizona

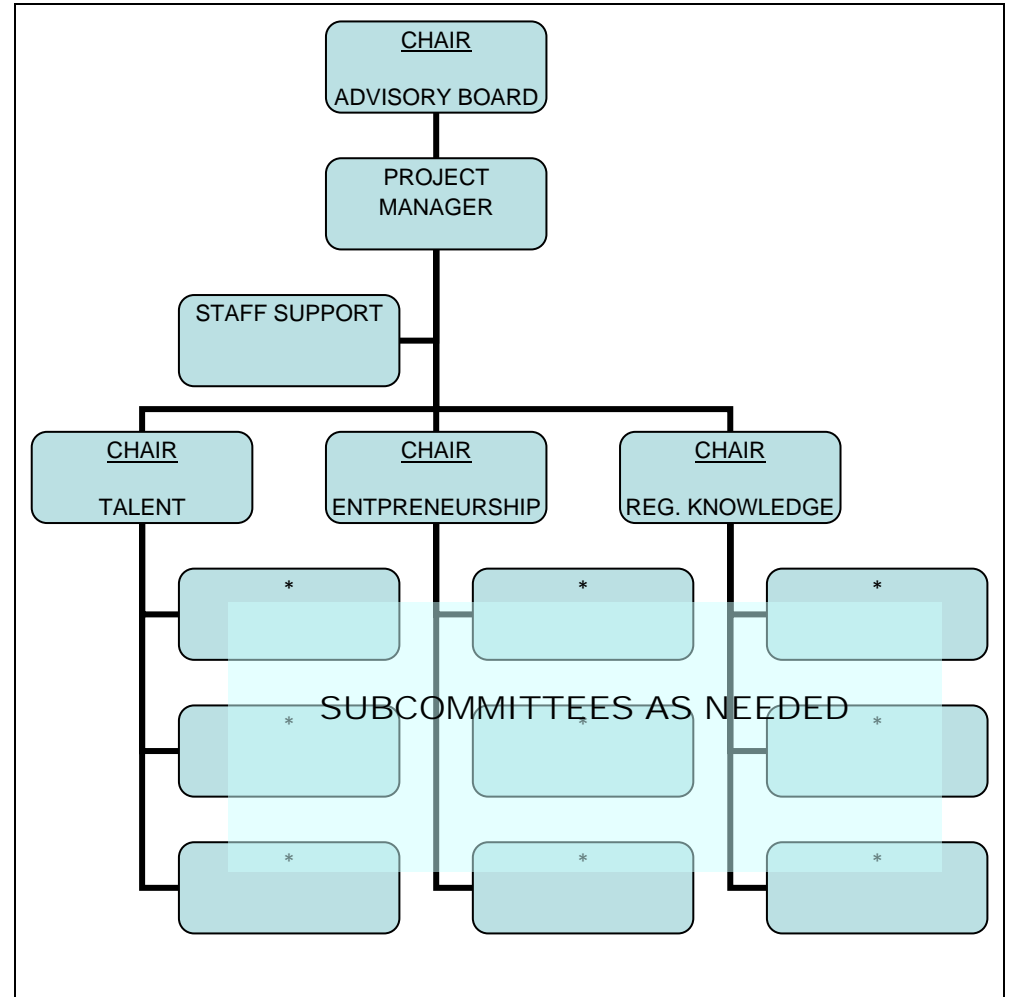
Jan Leshner, Director of Commerce  
Jody Ryan, Executive Director of Workforce Policy

#### Fiscal Agent/Project Lead – Pima County

Dorothee Harmon, Innovation Frontier Arizona Project Manager  
Debra Mulvey, Partnership Coordinator  
Charles Casey, Administrative Manager

#### Sub recipient Local WIBS

Roy Lingo, CPIC dba Cochise County Workforce Development  
John Morales, Yuma Private Industry Council  
Patricia Wallace, Santa Cruz County One Stop



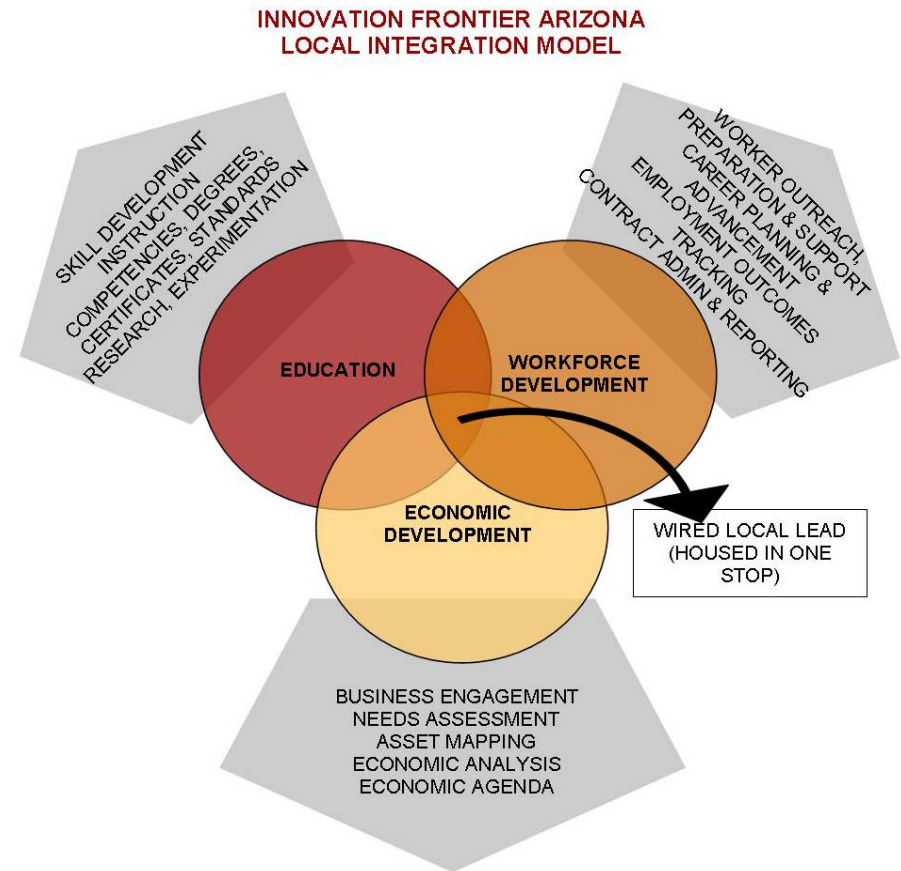
## Operations

The operations model for Innovation Frontier Arizona links local partnerships with regional workgroups that align and combine activities. WIRED projects will be developed and carried out in two dimensions: that of local integration and that of regional integration.

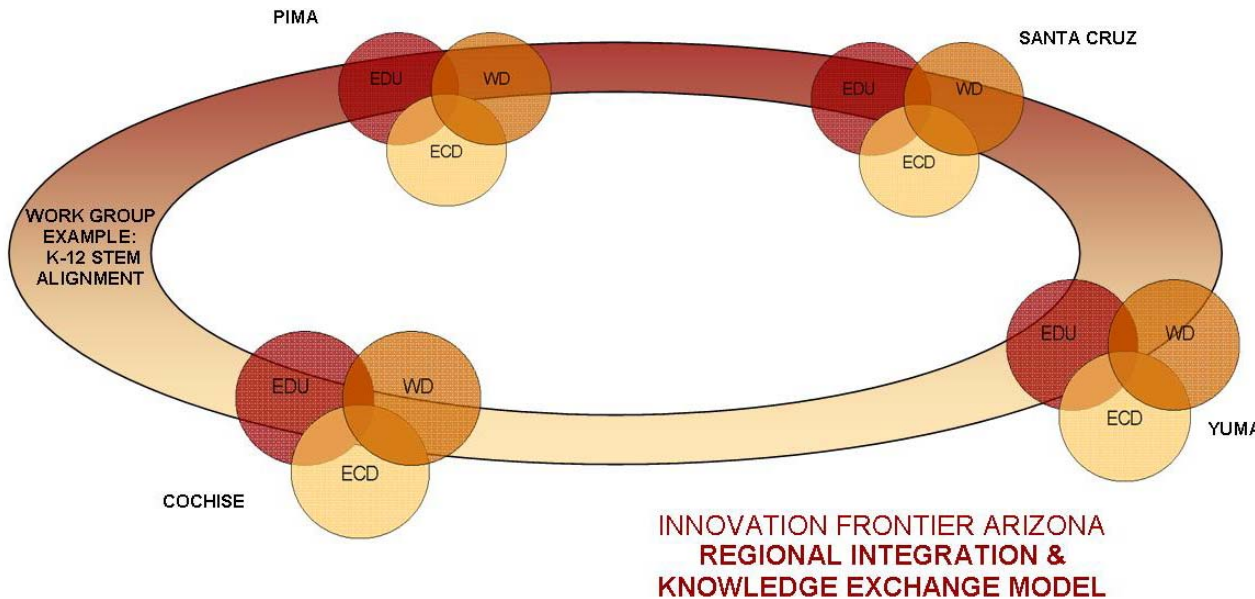
At the **local** level, economic development stakeholders will engage industry partners, gathering and synthesizing feedback on priorities, as local one stop centers engage job seeker/worker populations and develop career-advancement plans and local educational entities design and deliver customized education and training products. This activity will be coordinated by the IFA lead in each local One Stop Center, and tracked and reported under contracts with each One Stop/local WIB administrative entity. Successful local One Stop Centers are the building blocks of the WIRED partnership. The public workforce system in each County has served as the convener of education, economic development and community-based partners and used WIA funding to hold these partnerships accountable to employment-focused outcomes. The infrastructure of subcontracts, referral networks, and service-delivery protocols is a leveraged resource to WIRED.

As training gets underway dedicated staff in each of the four local will coordinate and deliver services for people who do not meet the eligibility criteria for WIA but who would be good candidates for career-ladder training in the engineering technology, information technology and border management occupational pathways being established under WIRED. This activity consists not only of direct tuition assistance, but also identifying potential candidates for training.

A Workforce Development Specialist will conduct an assessment of each candidate's vocational skills and aptitudes, career interests, academic skills and potential barriers to completing a training program and entering and retaining employment, and match these factors with appropriate employment goals and training opportunities. Each training candidate will be guided in the development of an individual plan to attain his or her employment goals, They will conduct informational interviews with employers in the field and with training providers; analyze course schedules, credentialing requirements, and budgets and family obligations to make sure the training plan is solid. The One Stops may provide some pre-employment training, such as job retention skills, interviewing skills or resume development. Once enrolled in school, participants will stay in close



contact with their Workforce Development Specialists. The One Stops will receive a monthly grade and attendance reports for all classes from the college, so that they can intervene early to address a problem if the student does not appear to be progressing. If the training program is a partnership with an employer, the Workforce Development Specialist will also spend time coordinating recruitment and training activities with the employer and training provider.



At the **regional** level, stakeholders from multiple jurisdictions will work together in committees to develop integrated plans, measurement tools, outreach materials, service menus, etc. for each WIRED strategy described in the preceding pages. The three committees – Talent, Entrepreneurship, and Regional Knowledge Exchange – will report on progress at the regional level to the IFA Advisory Board. Sub-committee workgroups will likely meet on specific strategies (such as STEN K-12 education) within each work to focus on specific strategies or even tactics within each goal area; these will be convened on an ad-hoc basis as determined by each committee chair.

Currently, the following committee chairs have been appointed by the IFA board:

1. Talent – Jana Kooi, President, Pima Community College Community Campus
2. Entrepreneurship – Sherry Hoskinson, Executive Director, McGuire Center for Entrepreneurship, University of Arizona Eller College of Management
3. Regional Knowledge Exchange – Roy Lingo, Director of Adult Programs, Cochise County Workforce Development

Committees will comprise initiative leads and other stakeholders associated with IFA efforts. Committees will ensure alignment of resources and efforts across tasks; adherence to objectives, goals and deliverables; and strategies for resource development associated with growth and sustainability. Initiative leads will work with committee chairs to coordinate internal communications to the advisory board as well as external

communications such as press releases and other media outlets. It is important to note the substantial amount of team cross-over and integration, indicative of the fact that Innovation Frontier Arizona is not presenting a series of isolated projects but a robust transformation initiative with many interlocking and connected parts (and partners).

Following are sample topics for sub-committee work groups. Some of these projects already have established leadership and active regional work groups that began meeting during the implementation planning process; some unforeseen topic areas will no doubt be identified as the IFA effort unfolds.

Initiative	Committee	Initiative lead(s)
High tech career ladders	Talent (high tech)	Karen Nicodemus, Cochise College; Mike Proctor, University of Arizona
High tech curriculum and training	Talent (high tech)	Jana Kooi, Pima Community College; Karen Nicodemus, Cochise College; Lynn LaBrie, Arizona Western College
Prior learning assessment	Talent	Jana Kooi, Pima Community College; Karen Nicodemus, Cochise College; Lynn LaBrie, Arizona Western College
Arizona Defense Intelligence and Security Institute	Talent (high tech)	Mike Proctor, University of Arizona
Integrated Engineering—NAU-Yuma	Talent (high tech)	Krista Rodin, Northern Arizona University-Yuma
Project Lead The Way and STEM education	Talent (STEM)	Joe Tidwell, Arizona State University Polytechnic
K-8 teacher development	Talent (STEM)	Jana Kooi, Pima Community College; Karen Nicodemus, Cochise College; Lynn LaBrie, Arizona Western College

Border contextual digital and workplace literacy	Talent (Borders)	Patricia Romant, Yuma Private Industry Council, Patricia Wallace, Santa Cruz County
Border careers pre-academy	Talent (Borders)	Patricia Romant, Yuma Private Industry Council, Patricia Wallace, Santa Cruz County
Regional entrepreneurship principles and modular curriculum development	Entrepreneurship	Sherry Hoskinson, McGuire Center for Entrepreneurship, University of Arizona; Jana Kooi, Pima Community College; Karen Nicodemus, Cochise College; Lynn LaBrie, Arizona Western
Idea Xchange inquiry and results intervention tracking, rural network extension	Entrepreneurship	Sherry Hoskinson, McGuire Center for Entrepreneurship, University of Arizona
Rural entrepreneurship society (WIRED) and award (privately funded)	Entrepreneurship	Sherry Hoskinson, McGuire Center for Entrepreneurship, University of Arizona
Applied entrepreneurship in K-12 science fair and other settings	Entrepreneurship	Sherry Hoskinson, McGuire Center for Entrepreneurship, University of Arizona
Intelligence gathering and dissemination (including resource mapping, economic analysis, benchmarking, and leading-practice identification) across regional partners.	Regional Knowledge Xchange	Roy Lingo, Cochise County Workforce Development
Industrial workforce needs assessment and supply chain mapping	Regional Knowledge Xchange	Lee Smith, TREO
Communications and engagement	Regional Knowledge Xchange	Lisa Katz, Corporation for a Skilled workforce
Regional identity building and branding	Regional Knowledge Xchange	Dorothee Harmon, Pima County One Stop

Initiative management and partner coordination	Regional Knowledge Xchange	Roy Lingo, Cochise County Workforce Development
Results tracking and reporting	Regional Knowledge Xchange	Dorothee Harmon, Pima County One Stop
Distance conferencing and website	Regional Knowledge Xchange	Roy Lingo, Cochise County Workforce Development

**ETA Lead and State Representative**

In addition to operational roles of Innovation Frontier Arizona stakeholders, the Employment and Training Administration lead for Innovation Frontier Arizona will continue to provide guidance and act as a direct liaison to the U.S. Department of Labor. Like the ETA lead, a state representative will ensure that WIRED in Innovation Frontier Arizona remains privy to policy and initiatives at the state level as well as provide additional guidance in leveraging local initiatives to improve the overall state's economy and workforce.

Mike Gilroy – Employment and Training Administration lead  
 Jody Ryan – State Representative

## E. COMMUNICATIONS, ENGAGEMENT, AND AWARENESS

One of Innovation Frontier Arizona's three major goals is collaboration, underpinned by the Regional Knowledge Exchange, which seeks to maximize learning, assets and transformation effects across the region. To achieve the level of collaboration and result transformation the partnership hopes to achieve, a solid communications effort is essential. With this in mind, Innovation Frontier Arizona's communication goals include:

- Sharing of a clear, consistent messaging platform that IFA partners and constituencies understand and embrace.
- Increased awareness of, and participation in, IFA projects, programs and initiatives.
- Engagement of partners and constituencies in a timely and meaningful fashion.
- "Deputization" and empowerment of new champions in the region to advance the IFA mission, vision and purpose.
- Broad-based sharing and understanding of IFA success stories and utilization of them to advance regional culture shift.
- Adoption of a shared regional identity and goals that support regional transformation objectives.

To assist in achieving the described goals, IFA will make/have available various tools:

- Web/wiki site: this tool will serve as a resource repository (news and information, grant opportunities, data, asset inventories/maps); project archive (meeting minutes, agenda, photos and video, reports); and social networking base of operations for the IFA partnership (calendars, partner-maintained profiles, telecommunications/videoconferencing portal). The site will:
  - be developed in modules prioritized by the partnership,
  - be tag-friendly and easily searchable,
  - include a "my favorites" section so partners can customize and easily reference information most important to them,
  - incorporate the online reporting system, and
  - allow partners to directly contribute their own information.
- Quartly e-newsletter: this tool will aggregate successes and other stories around the region and be available to both internal and external audiences. It will incorporate video vignettes to allow a more visual, and emotionally evocative understanding of and connection to various regional projects that add up to the IFA initiative.
- Video conferencing system: Innovation Frontier Arizona spans four large, rural counties. While face-to-face interaction is most desirable, it is not always feasible. Partners will have available the ability to connect by video conference, which adds a more personal element to the traditional teleconference.
- Media partners and spokespersons: IFA will recruit media partners to help tell the region's transformation story, ensuring that the initiative's activities are made known to the broader public. Such awareness can encourage initiative support (political, financial and other), and

encourage participation from members of the public who stand to gain from talent and entrepreneurship initiatives that will drive regional innovation.

Keeping the above goals and tools in mind, Innovation Frontier Arizona will engage in both internal and external communications:

### Internal Communications

Internal communications fall into three identified categories of need:

1. Compulsory—communications activities required to fulfill obligations and expectations of the Department of Labor WIRED initiative. These communications activities are required by and expected of the Innovation Frontier Arizona partnership.
2. Informational—communications activities that are meant to augment the understanding and awareness of the IFA partners and support the higher-level goals of the Regional Knowledge Exchange (ReX).
3. Region building/motivational—communications activities intended to build buy-in and enthusiasm among partners, versus the general public and external stakeholders.

Compulsory Communications	Frequency/ How?	Flow / Who's Responsible?
Written project status reports	Monthly/e-mail/ @ Steering Committee meetings/post to website or wiki	IFA Partners> <b>Pima County</b> > Executive Team
USDOL reports	Quarterly/online reporting system	IFA funded partners > <b>Pima County &amp; State</b> > USDOL
Liaison to USDOL, outcomes/ information from USDOL calls, emails, meetings, etc.	Ongoing/e-mail/ phone	<b>Pima County</b> > Executive Team > IFA partners
Agendas and minutes for executive team meetings	Monthly/e-mail/ post to website	<b>Pima County</b> > website/wiki
Agendas and minutes for working committee meetings	TBD/e-mail/post to website/wiki	<b>IFA workgroup leads</b> > website/wiki
Regular conference calls or videoconferences with IFA partners	As needed	<b>Pima County</b> > IFA partners <b>Executive committee</b> > IFA partners



<b>Informational Communications</b>	<b>Frequency/ How?</b>	<b>Flow / Who's Responsible?</b>
Announcements of funding or partnership opportunities	Ongoing by e-mail, website/wiki	<b>Pima County</b> > IFA partners, sustainability/development group <b>IFA Partners</b> >Pima County, sustainability & development group
Announcements of awareness raising sessions and participation opportunities in IFA partner programs, events, etc.	Ongoing by e-mail, website/wiki	<b>IFA partners</b> > Pima County <b>Pima County</b> >IFA Partners
Archived policies, project deliverables, tools, reports, etc.	Ongoing/IFA website/wiki, USDOL shared web space	IFA partners > <b>Pima County</b>
IFA initiative, partner and project information	Ongoing/Website/wiki	<b>Pima County</b>

<b>Region-building Communications</b>	<b>Frequency/ How?</b>	<b>Flow / Who's Responsible?</b>
Key awareness and branding messages for IFA partners to internalize and use	As needed/pocket cards, brochure, website, etc.	<b>Pima County</b> > Communications/engagement Committee > IFA partners
Meet regularly with DOL sub-contractors and other IFA partners to document successes and challenges	Ongoing/face-to-face/telephone	<b>Pima County</b> > IFA partners
E-newsletter to partners	Monthly/e-mail	<b>Pima County/CSW</b> > IFA partners
IFA partner town hall meetings and celebrations	Face-to- face	< <b>IFA partners</b> >
Protocol for communicating intent, impact and performance of grant and partner deliverables	July, then as needed/ TBD	<b>Pima County</b> > <b>Advisory Board</b> > IFA partners

## External Communications

Many of the resources and tools available for internal communications also will greatly assist in external communications. The partnership will be able to leverage the website to share information and materials with the public and to house resources that internal partners can reference and use as they develop external relations. Some of these resources might include:

- Key messages, frequently asked questions, talking points
- Protocols for using the Innovation Frontier Arizona logo, guidelines for messaging and branding
- Media lists, tips for talking with the media, media kits

IFA will undertake strategies to engage the media, including developing various media partnerships, conducting editorial board visits, encouraging media distribution of project articles and videos, and other means. Similar strategies will be in place to ensure that legislators and other policymakers are well informed of the Innovation Frontier Arizona efforts, encouraging their ongoing support of these efforts.

Besides web-based and various media strategies, IFA envisions an array of other public engagement and outreach efforts:

- The IFA executive team, fiduciary, and other key partners will participate in targeted outreach and engagement (one-on-one, meetings, events, conferences, etc.) to continually grow the circle of those buying into and engaged in the partnership.
- Outreach also will extend to target industry sectors, which will be regularly engaged to assess training and staffing needs and make connections to various relevant IFA and other initiatives. (NOTE: As noted in the implementation matrices, Tucson Regional Economic Partnership will undertake this effort and work with other regional economic development partners to expand the practice).
- Several of the project initiatives have embedded funding to develop awareness materials to encourage regional workers to participate in training and education opportunities.
- The initiative will undertake constituency and asset mapping to raise awareness and interaction among various target initiatives (e.g., adult education/literacy, entrepreneurship, high-technology training).
- Partners will undertake an initiative benchmarking effort to gauge people's attitudes and opinions about Innovation Frontier Arizona's priorities and to raise awareness and better understand perceived opportunities and threats.
- There will be at least an annual town hall meeting/regional transformation summit to bring IFA partners and other stakeholders together to discuss opportunities for regional transformation, raise awareness, and celebrate successes.

## Technical Assistance

To accomplish its objectives, Innovation Frontier Arizona will rely on technical assistance provided by a mix of regional and national partners. Identified assistance needs tend to focus around (A) research/information gathering and asset/needs assessment and (B) communications, outreach, and regional identity building. Below are key areas identified for which IFA has planned to pursue technical assistance, particularly with cost implications as defined in the budget:

- **Economic data analysis:** industry and occupational modeling with refining research in regional investment, credentialing, R&D, etc. to paint a picture of a region’s knowledge and competency assets; the result will be a picture of occupations and industries that workers can be transitioned into and out of, enabling identification of career opportunities and the transferability of knowledge, skills, and abilities across industries.
- **Web-based entrepreneurship, workforce development/technical training, and adult education/literacy asset map:** after conducting an inventory of regional assets in the identified areas, information will be made available in a web-based tool. This resource, developed through open-source technology, will house owner-maintained, tag-friendly, and key-word-based service-provider and other organizational profiles businesses and other regional partners can search, save, share, and reference on demand. Stakeholders also will be able to share their profiles to help suppliers, customers, and partners find them.
- **Website:** The information in the above bullet will be easily integrated into the IFA website, which will provide a common platform for information sharing and gathering. In the spirit of Web 2.0, the “next” version of the internet which emphasizes online collaboration and interactivity, the resource will incorporate social networking opportunities (e.g., blogs, chat spaces, self-profile pages) meant to cultivate a community of stakeholders who are simultaneously producers and consumers of content and active participants in the tool. Building this virtual community will support and model collaboration and intellectual and economic activity, in ways both virtual and physical. The site also will provide practical resources to regional partners, including access to the results-tracking and reporting system under development by Pima County.
- **Benchmarking analysis:** In the later section titled “Measuring Performance,” there are several indicators of how IFA intends to meet the specified DOL success indicators, as well as several other, regionally-defined success indicators. IFA partners will undergo self-benchmarking to determine where the region views its current status with regard to these “other” factors, for example, degree of alignment and synergy among programs. We will track this information over the course of the project, likely through surveys and interviews,” to determine whether objectives around regional identity and knowledge exchange have been satisfactorily met as a result of the WIRED grant.
- **Continuity, development, and sustainability planning fund:** Technical assistance in this area will consist of identifying projects in need of additional development and growth of resources, as such. It also will focus on the longer-term sustainability of Innovation Frontier Arizona beyond the course of the WIRED grant.
- **Prior learning assessment:** IFA community college and other partners will solicit research and analysis around the appropriateness of (and possible models for) giving individuals college and other credit for measurable skills gained on the job, for example, through formal professional development and credentialing efforts. Pending results of this assessment, regional partners may determine whether to move forward with adopting a model, which could accelerate individuals’ career pathways and achievement of academic standing.
- **Industry needs assessment, mapping:** Tucson Regional Economic Opportunities (TREO) will conduct ongoing surveys, assessing targeted industry sectors, to determine workforce needs, as well as technical training, supply chain, and other mapping. At the onset of the WIRED grant, TREO will conduct special needs assessment relating to defense intelligence (in support of AZDISI) and high-technology career pathways, particularly engineering and information technology.
- **Outreach:** As indicated above, IFA anticipates much activity around internal and external communications. The partnership will engage technical assistance providers to help development strategies, develop tools, and manage this activity as needed.
- **Public relations:** In addition to various outreach efforts identified in the implementation plan, IFA will identify and work with a public relations firm to craft and disseminate specific messages, with a focus on regional media relations, as needed.

- Online course design: The regional community colleges have expressed the desire to create online courses out of the core curriculum and specializations they develop around high-technology curriculum, K-8 STEM teacher professional development, and entrepreneurship. IFA has established a matching fund to facilitate this goal and attract additional investment in this important strategy.
- **Federal relationship brokering:** IFA will rely on relationships with the Department of Labor and other federal partners to assist with making connections with various other federal agencies and departments, for example, the Department of Defense for STEM initiatives, Department of Homeland Security for border-related developments, Economic Development Administration for industry-initiatives and economic development strategies, etc.

## F. Measuring Performance

The U.S. Department of Labor requires that each region tracks job creation, retention, and wages as measures of performance of the WIRED initiative. In addition to this, Innovation Frontier Arizona will use several other metrics to determine the impact of strategies on the regional economy and workforce.

### Education/training

1. Number began WIRED workforce education/training
2. Number completing WIRED workforce education/training
3. Number attained degree, certificate, or industry certified credential as a result of WIRED workforce education/training
4. Number of individuals participating and/or completing WIRED workforce educating/training placed in target industry employment
5. Total investment in incumbent worker training

### Capacity building

6. Number of educators prepared for instruction in identified industries and projected number of additional students trained as a result
  - Twenty-four teachers and twenty-four counselors trained in PLTW methods over three years, with representation from all four counties; exposure of 600+ students over three years to proven curriculum, access to articulated credit, and possible scholarship opportunities
  - Approximately 300 teachers will participate in the K-8 STEM professional development training (with thousands of students benefiting from the curriculum)
  - Outreach on entrepreneurship to 60 high schools and 200 middle schools (which touch almost 3,000 students) for integration of the science-methodology-based business concept development and competition; engagement of 10%, or approximately 6 high-school and 20 middle-school professionals and 300 students in entrepreneurship training connected to science fairs and other STEM-related academic programs.
7. New curriculum developed and projected number of additional students that will be trained annually as a result
  - Core technology competency and six high-technology specializations in regional community college degree bank
  - 100 incumbent and future workers will receive program degrees in engineering/information technology

- Advanced degree in defense/intelligence/security aligned and articulated with community college offerings Center of excellence relating to defense, intelligence, and security; 15 enrollees in initial AZDISI degree offering
  - Availability of an industry-driven, alternative engineering degree program available in Southern Arizona; 15 online teacher professional development programs relating to contextual learning programs in science
  - 15 online teacher professional development programs relating to contextual learning programs in math
  - 8-12 custom border-contextual digital literacy programs developed for employers
  - Pilot of a border professionals pre-academy with possible national applicability; 100 potential employees enrolled and 75 completely trained through the border careers pre-academy
  - Development of modular-based curriculum for “just in time” training/education needs of existing entrepreneurs; An estimated 1,000 people region-wide will receive training through modular entrepreneurship curriculum and other training developed between the regional colleges and McGuire.
8. Work-based strategies developed/implemented and projected number of additional students trained annually as a result
- 80 employees enrolled and 60 completely trained through funded border-contextual literacy workplace projects
9. Career guidance strategies developed/implemented
- Career ladder strategy for high-technology employment areas, particularly information and engineering technology
  - Career counselor education provided for careers in STEM fields
  - Border workforce needs assessment. Redirection for individuals not eligible for Department of Homeland Security border careers but interested in other border-professional, public safety or related careers
10. Instructional equipment purchased and number trained as a result
- PLTW software licenses and related equipment purchases

### **Economic Indicators**

11. Number of new jobs created by occupation/industry
12. Average wage
13. Unemployment rate
14. Performance improvement on common measures by workforce investment system region wide
  - Entered employment rate
  - Employment retention rate
  - Average earnings

### **Promising Innovation Processes**

#### System alignment

4-county system alignment around centers of excellence in engineering and information technology; defense/intelligence/security; integrated engineering; entrepreneurship

- Common, regionally articulated core curriculum and career-ladder awareness (engineering/information technology)
- Common, regionally shared principles connected to entrepreneurship education programs
- Improved institutional efficiency/less redundancy in specialty fields
- Acceleration through alignment with K-12 and postsecondary institutions
- Better availability, accessibility, choice and best-practice sharing in specialty fields
- Better awareness of training and education needs associated with engineering and information technology; defense/intelligence/security; integrated engineering; entrepreneurship

### Goal 1: Talent

#### *STEM Education*

- Alignment, awareness, spread of regional STEM efforts
- Added rigor to P-20 math, science and related reading programs
- Elevated enrollment, retention, and graduation rates of high school students in post-secondary engineering or engineering technology programs (see Project Lead The Way track record)
- Teachers better prepared and supported to provide applied science and math education
- K-8 pipeline into identified high-school STEM programs

#### *Border-contextual literacy and career-preparedness program*

- Improved digital literacy skills for individuals entering digital-dependent (not necessarily high-tech) border-related professional occupations (customs management, transportation, logistics, public safety, etc.)
- Basic literacy development and support (reading, language, math) for border-related positions
- Preparation for movement up talent career ladder
- More agile, flexible workforce ready to meet growing employment needs
- Enhanced awareness, alignment and networking of adult education and literacy program initiatives, as well as existing border-related professional development programs
- Reduce washout rates for border academy enrollees
- Alignment of workforce and education development systems with government and other border-related employers

### Goal 2: Entrepreneurship

- Ability to track inquires and interventions for regional IdeaXchange
- Extension of successful IdeaXchange initiative into rural areas
- Enhanced awareness of IdeaXchange, enhanced usage

- Increased awareness of rural entrepreneurship
- Better connected of rural entrepreneurship assets
- Better connection of rural communities to non-rural business, academic and other assets, including regional IdeaXchange
- Celebration of rural entrepreneurs and presentation of entrepreneurship as a viable career alternative
- Learned integration scientific principles in business development, including concept (hypothesis) formulation, testing and validation, final and written analysis, and communication.
- Broader hands-on awareness of entrepreneurship among students interested in STEM

### Goal 3: Collaboration, Regional Knowledge Xchange (ReX)

#### *Data and information*

- Regional access and strategy with regard to research and data collection
- More informed, intelligence driven project implementation
- Improved, data-based awareness of regional strengths, weaknesses, opportunities and challenges

#### *Communications, engagement, regional identity*

- Engaged and aware regional stakeholders and community members
- Mechanism for sustainability, with awareness resulting in growing stakeholder engagement and investment
- Growing sense of regional ownership in IFA future
- Consistency and broad application of IFA branding materials
- Awareness of IFA activities
- Broadened and increased interest and support of IFA activities
- Dissemination of program success and learnings

#### *Initiative management*

- Effective initiative management
- On-time report submission
- Achievement of quarterly goals and performance benchmarks
- No audit findings
- Regional collaboration and integration among WIBs
- Connectivity to statewide initiatives
- More efficient, timely and accurate results tracking and reporting

#### *Industry mapping and needs assessment*

- Access to targeted industry key players
- Direct interaction and assistance regarding potential supply chain development opportunities for regional businesses
- Direct interaction and assistance regarding workforce needs projections and associated educational requirements

- Informed development of workforce-readiness related impact measurements
- Better input and awareness of industry workforce needs
- Enhanced regional cooperation and alignment of efforts
- Maximum utilization of program resources

## **G. CONCLUSION, SUSTAINABILITY, AND CONTINUITY**

WIRED in Innovation Frontier Arizona will catalyze a structural change for easier pathways to job skills and opportunities, with a special emphasis on high-technology, STEM-related careers and entrepreneurship. It also will be a catalyst for regional development and collaboration building, essential for community transformation. Already, IFA partners see beyond WIRED and look to the grant as a spark for ongoing activity. Nearly all grantees have expressed already various ideas and strategies for ensuring their programs last well-beyond the three-year grant period, including formal integration of new programs into existing institutional efforts, additional grant inquiries, fee-based models, legislated funding support, and other models. IFA will continually review and assess sustainability status over the lifetime of the grant and looks forward to providing ongoing updates well after the next three years. The table below helps identify possible sustainability options for several of the identified initiatives:

<b>Initiative</b>	<b>Potential sustainability strategy</b>
High technology core curriculum and specializations	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Tuition/fees</li> <li>➤ Employer training funds</li> </ul>
Prior learning assessment	<ul style="list-style-type: none"> <li>➤ Development of strategy, integration into practices</li> </ul>
U of A articulation coordination Arizona Defense Intelligence and Security Initiative	<ul style="list-style-type: none"> <li>➤ University resources and ongoing legislative support for related initiatives (already \$1 million in support)</li> </ul>
Northern Arizona University-Yuma integrated engineering	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Tuition/fees</li> <li>➤ Employer training funds</li> </ul>
Project Lead The Way and other STEM program alignment	<ul style="list-style-type: none"> <li>➤ Early wins=&gt; <ul style="list-style-type: none"> <li>○ encouragement for schools to assume tuition costs</li> <li>○ industry support/investment initiative</li> <li>○ foundation grants, other support</li> </ul> </li> </ul>
K-8 teacher professional development (math and science)	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Tuition/fees</li> <li>➤ Employer and foundation investment</li> </ul>



Entrepreneurship integration in regional science fair	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Employer, foundational investment</li> <li>➤ Student fees</li> </ul>
Border contextual digital and other workplace literacy	<ul style="list-style-type: none"> <li>➤ Employer fees</li> <li>➤ Workforce investment system investment</li> <li>➤ Other federal departmental investment (e.g., DHS)</li> </ul>
Border careers pre-academy	<ul style="list-style-type: none"> <li>➤ Other federal departmental investment (e.g., DHS)</li> <li>➤ Other grants</li> <li>➤ Possible fees/tuition (minimal)</li> </ul>
Modular entrepreneurship curriculum, regional curriculum principles	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Tuition/fees</li> </ul>
IdeaXchange inquiry and results intervention, rural network extension	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Partner investment/member fee</li> <li>➤ Foundation investment</li> </ul>
Rural entrepreneurship society	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Partner investment/member fee</li> <li>➤ Entrepreneurship community investment</li> </ul>
Regional knowledge Xchange (ReX) Intelligence gathering/dissemination Industrial needs assessment/supply chain mapping Communications and engagement Regional identity building/branding Initiative management and partner coordination Results tracking/reporting	<ul style="list-style-type: none"> <li>➤ Institutional adoption</li> <li>➤ Partner membership/fees/investment</li> <li>➤ Workforce investment system investment</li> <li>➤ Employer or foundation investment</li> </ul>

In general, Innovation Frontier Arizona is focused on investments that are inherently sustainable by means of the following strategies:

<b>Investment type</b>	<b>Sustainability</b>
Curriculum development/instructional design	One-time cost to develop aligned training to be sustained by the market
College tuition assistance	Helps to build the market so that training will be sustained by employee tuition reimbursement and students' own resources, as well as WIA funds
Customized adult education	Will be used to develop and test models that can be purchased by employers in future
Research, asset mapping	One-time costs to develop unified agenda and consolidated service menu for future talent development efforts by existing local workforce systems
Software, teleconferencing	One-time set-up costs with smaller ongoing costs
Workforce development services, tracking	Sustained for specific populations under WIA formula funds and discretionary grants

Southern Arizona has a strong regional identity based on shared culture, assets, opportunities and challenges. Stakeholders across jurisdictions, disciplines and wide expanses of desert were quick to embrace the WIRED concept coming out of the U.S. Department of Labor, and get to down to work on a regional talent development initiative. We share a commitment to the mission of Innovation Frontier Arizona to drive innovation-based economic prosperity. But the success of this mission rests upon our ability to develop authentic, sustainable strategies that address our region of contrasts – between isolated rural communities and fast-growing population centers, high-tech promise and underdeveloped talent, top-down and grassroots approaches. This document represents a substantive effort in that direction. Recognizing that our goals are ambitious and the issues are complex, Innovation Frontier Arizona views this WIRED Implementation Plan as a living document to be modified and expanded as we learn more about our mission in the process of carrying it out.

