

PlanET Economy and Workforce Demonstration Project

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I. Addressing the Plan ET Middle Skills Shortage for Medical Equipment and Specialty Foods

Workforce Connections and its collaborating partners outlined below submit the following proposal to build capacity for addressing middle skills workforce issues in the PlanET Region. Support of the proposed project will allow PlanET leadership to:

- Tackle concerns raised by the Economy and Workforce working group,
- Address needs voiced by business leaders during a high-profile symposium,
- Support priorities of regional economic development efforts,
- Build on efforts previously funded through PlanET, and
- Focus on an area of priority to potentially leverage federal or state resources for the region.

PROJECT RATIONALE

Specific Needs

1) The PlanET Economy and Workforce Working Group has identified **workforce issues** as one of the most significant challenges facing the region in achieving long-term prosperity. There are several concerns related to this topic, one of which focuses on the **challenge low-income and/or low-skilled workers have in achieving a viable career pathway** to a job that pays family-sustaining wages.

2) During the *ETCompetes!* symposium, several business leaders, noted the **“middle skills” shortage** that exists with companies unable to find workers with the right skills for emerging occupations. National and regional research (including research published in the Plan ET Economy and Workforce White Paper dated February 2012) has highlighted this middle skills shortage in Eastern Tennessee.

Sector-based workforce strategies have demonstrated success nationally for addressing skills shortages for employers while providing opportunities for low-income and low-skilled workers to gain entrée to high-skilled, high-wage, demand occupations.

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Regional Priorities

1) Important economic development plans for the region appear in Innovation Valley's (IV) recently announced Blueprint 2.0 strategies. Two of Innovation Valley's strategic priorities include **Increase Focus on Talent Retention and Development Regionally** and **Implement New Aggressive Business Recruitment and Retention Programs**. This latter priority includes an action step to *Support business retention efforts regionally*. Targeted recruitment clusters identified by Innovation Valley include Advanced Technology and Manufacturing; two of the four areas under advanced technology and manufacturing are **Medical Equipment and Specialty Foods**.

2) Additionally, the PlanET Existing Conditions Memo identified plastics manufacturing and optical equipment and instruments as **emerging and potential clusters** respectively in their identification of Industry Clusters and Economic Development Potential. These areas are closely related to the Medical Equipment sector.

These manufacturing sectors represent areas of growth in the region and the possibility for additional job creation. Linking with employers in these sectors to build capacity for addressing middle-skills shortages and worker preparation contributes to the mission and priorities of Innovation Valley as well as addressing specific concerns uncovered during the Plan ET process.

Contribution to Plan ET Efforts

The *ETCompetes!* symposium generated a great deal of energy and high profile attention among business and economic development leaders in the region. By addressing the workforce issues identified by the Economy and Workforce Working Group, PlanET leadership can also address concerns raised by business and economic development leaders at the *ETCompetes!* Symposium. Furthermore, these concerns are a priority of federal and state government, and numerous resources are being made available through the US Department of Labor, US Department of Education, and other national partners focusing on regional collaboration and sector strategies as mechanisms to address workforce issues and skills shortages.

This proposed project also dovetails with the Knoxville Chamber project funded by PlanET. As identified in the chamber's proposal, there are insufficient workers in the PlanET region who are adequately prepared for high-demand, high-wage, skilled jobs. The Chamber's project builds capacity for improving the pipeline of workers; it focuses on developing curriculum and programs of study to prepare secondary students for entrance into advanced manufacturing sectors. This project will focus on linking adults to higher-skilled jobs; the project will work with employers, workforce development entities, and educational institutions to identify ways to improve skill sets for existing employees and low-skilled applicant groups.

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PROJECT PROPOSAL

Project Partners and Focus

Workforce Connections and the Workforce Investment Board (WIB) for local Workforce Investment Area 3, working in collaboration with the Smoky Mountains Workforce Investment Board, Walter State Community College, and Pellissippi State Community College, propose using a workforce sector strategy to build capacity for improving middle skills development in the region. Workforce Connections will function as the lead agency and administrative entity for the project. This effort will focus on advanced manufacturing, particularly the medical devices / health sciences and specialty food sectors. These sectors are part of Innovation Valley's Advanced Technology and Manufacturing cluster, have strong employer representation in the region with anticipated growth, and are not already being addressed by other initiatives in the region.

Building on Success

Existing sector-based initiatives in the region include the Automotive Manufacturing Technical Education Collaborative, a multi-state effort aimed at redesigning higher education curriculum for automotive sector workers (including leadership from Pellissippi State Community College), the Advanced Manufacturing and Prototyping Center of East Tennessee, a Tech 20-20 initiative, and Roane State Community College's Advanced Materials and Education Center, dealing with composite fibers and related manufacturing. This proposed Middle-Skills Project for Medical Equipment and Specialty Foods will incorporate lessons learned from these efforts, as well as from a body of national research on sector based approaches. Additionally, Workforce Connections staff includes a Fellow of the Aspen Institute's National Sector Skills Academy, providing further access to leadership in the implementation of sector based initiatives.

The region has a number of employers in the identified Advanced Manufacturing sectors. While many are located in Knox County, a number are distributed throughout the counties served by PlanET. Additional employers located in contiguous counties may also choose to participate in the sector initiative. Taking into account regional labor sheds and commuting patterns, it is reasonable to identify companies within the broader MSA or even the Combined Statistical Area for possible participation. The collaborating partners already have working relationships with many of the employers, increasing the likelihood of engagement of those employers. A proposal for funding would include a list of potential employers, and other employers would be identified during the initiative.

Project Operation

Phase I involves providing outreach to companies in the targeted industries to identify their middle skill job needs and shortages, as well securing companies' buy-in to support workforce strategies related to their cluster. The collaborating workforce and education partners will provide staff support for this business outreach. Requested funding will be used to underwrite related staff cost as well as to support convening the industry groups, and collecting relevant data in the process.

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Phase II will include further refining the industry groups, developing leadership among the employer participants to sustain sector efforts, establishing long-term goals and action plans for the sectors, and seeking resources to implement identified objectives. Objectives are likely to include broader identification of skill requirements and existing skills gaps within each sector, identifying needed education and training refinements to address these gaps, and identifying potential applicant pools that, with improved training and preparation, can provide candidates for in-demand careers. The workforce partners will work to identify and coordinate grant writing and other resource development activities to generate funding for sustaining sector strategy efforts and implementation of the sector group's objectives. During this phase, PlanET funding will support ongoing meetings of the Sector groups, strategic planning of sector goals, and grant writing and resource development. Phase II work may also include 1) identification and refinement of relevant training curriculum and 2) developing systems for identifying, linking with, and preparing applicant pools.

Background about Sector Strategies

Sector strategies are a common approach to addressing a problem – such as the middle skills worker shortage – in a customized way for the industry that has identified the problem. Sector based initiatives bring together workforce development entities, educational institutions, and private sector businesses. The initiatives identify company leaders willing to step up and provide not just a synopsis of the problem, but more importantly guidance in determining practical solutions. These are solutions aimed at not just a single company's needs, but also the needs of other companies in the cluster. An industry leadership team would include 5-10 company representatives from the Medical Equipment and related industries as well as another leadership team focused on the Specialty Foods and related industries. Each of these leadership team would include companies that have similar skill requirements (e.g., a "cluster" of companies that all need machine operators or industry maintenance or specialized aluminum welders, etc.).

The private sector companies provide and help to interpret data about which occupations are most critical. They also help to: determine most critical skills, define what knowledge and skills should be taught within education/training, and identify what knowledge and skills would be company specific. They help to guide and update the curriculum, identify jobs that would be available at the end of the training, identify the foundational skills and abilities a candidate might need, and hire successful candidates. In some cases, companies may provide funding to assist with sector initiatives and particularly to pay for training offered to candidates who may already be employed with participating companies.

Workforce development organizations serve as conveners of the sector initiatives, bringing together relevant partners. They are also often the link to job applicant pools; they collaborate with community organizations to identify those lower skilled candidates who can benefit from opportunities being created by the sector initiative. Education/training entities work to customize, develop, and deliver training that will meet the identified needs of the employers and the job applicants.

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Project Timelines and Expected Outcomes

Phase I will begin upon project approval and will last 3 – 4 months. Outcomes of phase I include

- 1) Identifying companies in each of the two selected sectors willing to commit time and effort to help guide a sector partnership
- 2) Determining a private sector “chair” for each of the two sector partnerships (Medical Equipment and Specialty Foods)
- 3) Specifying a leadership group of 3-5 companies for each of the two sectors willing to commit to identifying common occupations in demand across the companies as well as the number of workers that they would employ if they could find them.

Phase II of the project will continue for 9 - 12 months following the completion of Phase I. Phase II outcomes include

- 1) A strategic plan/identified objectives for each sector group
- 2) Pursuit of external resources to support the ongoing work of the sectors (grant applications submitted, etc.)
- 3) Commitment of private sector members to continue to expand network of participants and to explore avenues for addressing skills gaps

Resources Requested from Plan ET

Phase I: \$20,000 to be used largely in business outreach activities and in supporting meetings of the businesses and/or the sector partners.

Phase II: \$30,000 for grant writing support, sector strategy meetings, out-of-town collaborations with other partners, and staff support for the targeted sector strategy.

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II. YES! – Young Entrepreneurs in Science

Statement of Need

Anchor institutions in the Knoxville region (i.e. University of Tennessee and Oak Ridge National Lab) have great potential as sources for spinoff firms that build on science and technology assets and products. The region already seeks to foster a greater entrepreneurial spirit and to growing entrepreneurial networks. For entrepreneurs in science, their companies are replete with leaders who have great technical skills but those individuals could use help in enhancing their business management skills and identifying established mentors with real-world business experience.

Professional Development

YES! – Young Entrepreneurs in Science is designed as a networking program established to enhance current efforts to support the growth and development of existing, small science or technology based firms. The emphasis for this network is not on spurring new business start-ups, but rather on helping existing entrepreneurs who operate already established young companies. The YES! Network would organize under this initiative with facilitated support from a Plan ET regional champion (To Be Determined). The purpose of the Network is to create opportunities for participants to learn through peer-to-peer exchanges and through mentor-protégé networking activities.

The Network would start out by recruiting an initial peer cohort in the first several months of its formation. That peer cohort would participate in a series of activities designed to enhance the business and management skills of participating entrepreneurs. The initial YES! entrepreneurial cohort will connect its members to national resources, including:

Participation in “innovation engineering” skill development

This facilitated training process is designed to help participants to develop a process for idea generation and implementation. Using a process designed by the Eureka Ranch in collaboration with the UT Center for Industrial Services, the participating YES! entrepreneurs would develop internal processes for developing and testing new idea generation and build skills in business process associated with idea generation, product development, and marketing. Developed experts in business ideation and product marketing in collaboration with NIST, “Innovation Engineering” promotes the development of a business culture where innovation to drive profitable growth is the norm. Developing these skills in an intentional way is particularly important for entrepreneurs in this space as commercialization is often difficult and/or scientific inventors do not often think in terms of market opportunities. Resources would be required to recruit and manage the YES! cohort companies’ collaborative activities and to subsidize the companies’ participation in an off-site innovation engineering facilitation process.

Connection to external technology networks

No regional firm can operate in a vacuum. Thus, it is important for YES! members to create connections and increase their knowledge of specific areas of expertise outside of their existing peer connections

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and local networks. To facilitate this, each YES! Participant will be required to attend a professional conference (with the help of some subsidy from this project) that they might not otherwise have considered and that may not be directly related to their technology. The idea is for the entrepreneur to consider new networks and find complementary fields – focused on business management and marketing or in new product development. Furthermore, the goal is to expose companies to new networks and expand their thinking about their technology and its possibilities. The selected conference may be a trade show or exhibition designed to provide an opportunity for the entrepreneur to present their products to potential customers. Multiple members of the YES! cohort will also be encouraged to participate in the same event and collaborate in developing their marketing efforts – creating an opportunity to learn from one another. An important anticipated outcome is exposure to potential customers and feedback on what they view as the unique and meaningful advantage offered by the entrepreneur’s product or technology.

Develop a YES! Capstone Project

Using skills and networks through the professional development opportunities identified above, each YES! member will work with the area SBDC or some other partner to refine their business plan and refine their pitch for equity financing. The goal would be to create an event at the end of the year in which a group of angel or venture investors are provided an opportunity to hear the pitch and offer their feedback about a core product idea and/or opportunity. This could be for the development of a new product identified through Innovation Engineering exercises, or to expand the business by entering a new market.

Collaboration and Integration

While no champion has been identified as yet, YES! would ideally involve a collaboration among regional chambers of commerce, Entrepreneurs of Knoxville (EOK), the area SBDC, area incubators, UT Knoxville’s Center for Industrial Services, and related anchor institutions. Focus areas could be integrated with the Advanced Composites Employment (ACE) Accelerator grant received by Roane State Community College. This project already brings together several partners throughout the region, which could be leveraged through YES! with a focus on providing specific opportunities for identified entrepreneurs.

Getting Started

- Identify an area champion to lead the initiative
- Secure resources for professional development activities
- Expand network of partners and service providers
- Recruit a class of 10 to 15 entrepreneurs in a pilot cohort

Timeline

The initial cohort would meet for the period of one year, beginning once funding has been acquired.

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Funding Request

Funding required would be an estimated at about \$150K to \$200K including the cost of managing the project. Potential sources of funding need to be explored, including the U.S. Economic Development Administration (for up to 50 percent of the costs) and recent multi-agency accelerator funding. Participating entrepreneurs should be asked to contribute a portion of the costs (e.g., 10%-20%) to ensure that they are committed to participating.

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III. Plan East Tennessee Recreation and Tourism Trail

Statement of Need

The Plan ET region is located just west of one of the nation’s greatest treasures. Furthermore, it is brimming with numerous recreational assets such as easy access to the Great Smokey Mountains, Tennessee River reservoirs, and outdoor locations for boating, fishing, hiking, biking, and many other outdoor activities. These same assets make the place attractive for high skill talent seeking these amenities, second home investments, and as a retirement destination. In particular, the region’s rural communities provide some of the most important assets that travelers and vacationers seek, including charming places to play, live, and even work.

Demonstration Project Concept Overview

This proposed project seeks to build on those assets and create commercial opportunities for the rural communities of the region. This activity will focus on identifying the region’s assets that are most critical to market for this purpose, create a “product development” plan targeted to people already living in the region’s smaller communities about possible entrepreneurial opportunities – from developing second home investment opportunities to providing recreation guides to themed restaurants to biking and hiking excursions – and then develop a broader marketing plan to create greater demand for the services of existing (or new) rural enterprises in the region through an expanded recreation and tourism industry. By conducting an in-depth market assessment for existing companies that are in these businesses and identifying potential new business opportunities, the region’s economic developers can encourage in rural communities throughout the Plan ET region.

The first component of this effort is to identify resources to hire a product development and market intelligence gathering consultant to analyze the current rural tourism market opportunities. This analysis would examine the current spending patterns of the region’s tourists and begin to identify new products or services that could potentially complement existing offerings. However, rather than the marketing firm doing this research in a vacuum, it would be asked to do this in collaboration with the rural firms already competing in this space. The goal of this collaboration is to determine which firms that already exist are willing to use the market intelligence gathered to potentially take on a new product or service offering. (This approach would be used as a first step before trying to create a new entrepreneurial start-up or trying to attract a new firm to the region.)

The second component would be to hire a marketing firm (perhaps the same as above or perhaps different) that would provide technical assistance and consulting help to those firms willing to take a risk on expanding into new markets. The marketing firm would assist in helping to bring the expanded product or service to market and to target market of that activity to new customers. (The product or

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service would have a significant web presence and integrate the availability of arts and crafts with access to outdoor recreational experiences. Firms that are successful would, then and only then, pay a modest fee (perhaps 5 to 10% of total new sales) for the help they received in increasing their revenues.

The third component of this effort would focus on helping to provide access to angel or seed capital for those firms that require equity capital to help in developing a new product concept or in overcoming any limitations. The goal is to provide a small infusion of cash that can help get the idea off the ground with a quick repayment (perhaps with a lump sum due within 1 to 3 years) of principal plus a fee once the idea is successful.

The fourth component of this activity is to create a regional marketing plan (including creation of a regional web presence, a proactive marketing campaign, and an aggressive outreach effort) for the relevant recreation and tourism assets. By implementing an integrated marketing campaign that combines all the region's recreational assets, the goal would be to build a brand for the region as a recreational destination for tourists or second home investors. Attracting these individuals would expand the customer base for rural companies being assisted.

Considerations for Funding Request

Funding required would focus on providing resources to hire expertise in business and market intelligence (with an emphasis on the outdoor recreation and tourism markets). The program would also require some seed capital as well as marketing dollars. It is anticipated that this activity may require \$100,000 for preliminary research and consulting and an additional \$150,000 to \$250,000 for marketing and equity investment, depending on the number of opportunities developed.

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IV. East Tennessee Accelerator Hub Network

Statement of Need

The Plan ET region has committed to becoming an entrepreneurial hub for Tennessee as part of its economic development strategy. To date, much of the vim and vigor has focused on creating technology-related start-ups, yet some of the most important companies and most highly visible success stories that have grown up in eastern Tennessee have actually had little to do with technology and more to do with finding a unique, competitive business model. This proposed effort seeks to reinforce that entrepreneurial spirit among non-technology companies who could be the region's future high growth firms.

Demonstration Project Concept Overview: Initial Thoughts

This proposed effort would build on existing efforts to encourage entrepreneurship by creating a network of local accelerator programs combined with some facility support for small entrepreneurs in each of several communities around the region. In each of five selected communities, local leaders would help to identify a common-use facility for networking events and to access services – building on the capabilities of the SBDC network, the chambers' respective young entrepreneurs networks, and the Entrepreneurs of Knoxville (EOK). This activity would also seek to integrate existing incubation facilities and entrepreneurial acceleration programs into a cohesive regional network.

The goal is to create a physical place and social network that can serve as the hub for each community's entrepreneurs to get information, get help, and access resources (including facilities if necessary) to be successful. Furthermore, the accelerator hubs (as these local efforts would be called) would be linked together through programming and resources that are delivered at a regional level – either through events held around the region, services offered for all entrepreneurs in the region, or virtual support (through a shared web portal).

This proposed activity would also require partners in each community who would serve as the local coordinator and would help to identify a physical place for the hub participants (entrepreneurs and intermediaries alike) to convene. In certain communities where the need is greatest, the leaders may also want to provide access to a physical facility to serve as incubation space for new companies. This proposed activity would also require a regional coordinator and the identification of regional facilities that could be made available to support programming and consulting assistance (to the entrepreneurs as well as to the local intermediary partners).