

Abstract

New App for Making It in America

Applicant Name: Three Rivers Workforce Investment Board

Applicant Category: Regional WIB

Lead Applicant City/State: Pittsburgh/Pennsylvania

Areas Served: Commonwealth of Pennsylvania, housed in Pittsburgh, Allegheny County

Project Name: New App for Making It in America

Funding Level Requested: \$2,580,000 - technical costs
\$420,000 - evaluation costs

Project Type: Project Type A

Description of Proposed Project:

This project is a new application for workforce development. It will create a pool of cutting edge 21st century skills which connects to new market employers at their earliest stages – at the start-up or spin-off stage from a university or when they seek to establish a manufacturing operation. The project will marry skill-based manufacturing unions with spin-offs to accelerate technology speed to market – with the collaboration of the workers on the front lines of adopting new technology. Moreover, the New App for Making It In America is about how we land more new manufacturers in America. How will it be possible for us to make these new products of the future here in America? What will be the technology and who will have the skills to perform this work? How can we adapt union apprenticeship to this new highly skilled arena and compete globally? How can we, at the same time, attack the root causes of manufacturing skill shortages, by elevating the status, employment security, wages, benefits, and “cool” of manufacturing work? This project hopes to answer these questions and to demonstrate solutions which can be adopted and outcomes that can be achieved across the United States.

The two goals of this project are to (1) design and build a New App (as in Apprenticeship) for Making It in America—a new, multi-firm manufacturing apprenticeship, training, and employment system that (2) grows production for new markets in America. As well as training, the new system will encompass three other components: employment (job matching, credentialing, career ladders), business development (ongoing communication with existing and emerging businesses to identify new skills needed to accelerate market growth), and technology/economic development (with skilled workers teaming with those who create new equipment, at centers such as Carnegie Mellon University’s Robotics Institute, to discover new applications for the

equipment, and also providing input early in the commercialization process so that products are designed for ease of manufacture).

The fully functional system created by the Making It in America project will:

(a) Establish a “sector connector” that links workers, employers, and other participants in dynamic new manufacturing sectors from the start-up labs, to state and local economic development agencies (now able to market the industry training and skilled labor system to attract more start-up manufacturers), to workforce systems serving workers and employers, while also ensuring a “future cast” to training that reflects where markets are moving, not where they were.

(b) Develop a flexible apprenticeship and training system that supports affiliated businesses, including advanced manufacturers generally as well as new start-ups. This system would use modular certifications, and training linked with stackable credentials to make workers’ skills portable, reduce unemployment spells, and enable manufacturers to meet their skills needs;

(c) Capitalize on the software and on-line learning expertise of Carnegie-Mellon University and on best practices culled from building trades unions to create an industry-wide job matching system consisting of an electronic registry complemented, as necessary, by counselors that provide job search/career support. This job-matching system would become the first place workers go when looking for another position that will use their experience/skills and the first place manufacturers go when they new skills, including to capitalize on an unanticipated market opportunity;

(d) Articulate training courses for the New Apprenticeship with college credit, with the goal of making a manufacturing career an affordable route to a college degree. (One model: the IBEW Local 5 apprenticeship leads to an Associate’s Degrees from the Community College of Allegheny County.)

(e) Lift the wages, benefits, employment security, and status of skilled manufacturing workers, thereby addressing the structural challenges leading to skill shortages.

(f) Implement new techniques in training based on “learning-by-doing” through multi-disciplinary teams coming together to solve problems, create prototypes, or elevate skills across silos of work such computer science, electronics, robotics and machining. (These approaches are associated with the burgeoning “Makers Movement,” described in the body of the proposal.) Such approaches show promise for producing the workers of the future, with skills training across fields, spanning the traditional white- and blue-collar divide, and credentialing in both white- and blue-collar fields.

Description of Proposed Evaluation Strategy:

Our proposal entails the design and then implementation of a complex new employment and training system for advanced manufacturing: a new manufacturing apprenticeship in conjunction with a re-employment and job matching system that includes both internet-based and counseling/case management supports. In the first 18 months of the project, it is only realistic to analyze process, output, and outcome data, not to conduct a rigorous evaluation. It may be possible in this period to compare actual re-employment times for dislocated workers served by our project with predicted time to re-

employment using the PA Department of Labor and Industry PREP model—to find out whether our new employment and training system can reduce layoff periods for dislocated manufacturing workers.

By the second half of our project, the training and re-employment supports (electronic and human) for dislocated manufacturing workers will have been implemented. As a result, it should be feasible to conduct a more rigorous analysis. We do not, however, plan a random assignment evaluation because we think it ethically untenable for the participating unions to deny some members services that other members receive.

We will design the program evaluation to maximize knowledge that can be used to enhance the broader workforce system. In particular, we will seek to construct comparison groups of dislocated manufacturing workers that allow evaluation of the outcomes (length of unemployment, re-employment wage in absolute terms and relative to prior wages, retention) that result from workers receiving (a) reemployment and (b) training services delivered through our project (alone and together) compared to outcomes that result from using the baseline One-Stop (CareerLink® in Pennsylvania) services. We will also explore outcomes that result from using the reemployment and training services created by this project (again separately and together) *in conjunction with* CareerLink® services. As a result of the large number of permutations of service or treatment combinations, we will seek to develop a “grounded theory” for the most important distinctions and limit our quantitative analysis primarily to those groups. We will also explore the feasibility of using the evaluation to compute cost-benefit calculations for the reemployment training services delivered, alone and together.

Although guided by two nationally recognized third-party evaluators, our evaluation in year one will rely on the internal evaluation team to implement the data collection. As the implementation plan for the project becomes clearer, we will engage stakeholders in detailed discussions about how to measure success, expanding and refining the initial list of outcome measures listed in the body of the proposal. We will also use our external evaluators to finalize the evaluation plan for years two and three that emerges from year one stakeholder input. Towards the end of year one, we expect to procure an additional external advisor with greater capacity to perform labor-intensive data analysis and scrubbing. Following deliberation with the two external advisors, we will draft an RFP and solicit bids. To lower the cost of this evaluation, we will seek to add some Pennsylvania academics to the list of potential bidders. When possible to lower the cost of the evaluation we will use Keystone Research Center and deploy interns to collect data or do other tasks on which neither complexity nor conflict of interest dictate using a third party.

Public Contact Information: Vera Krofcheck, Director, Three Rivers WIB
VKrofcheck@trwib.org