

Innovation Adoption Program (IAP) Overview

1 IAP Background

A 2004 study of Pennsylvania's manufacturing sector by Deloitte Consulting found that PA's manufacturers "need help developing new long-term business strategies or ways to innovate and develop new products that bring higher margins and help move firms away from commoditization." According to the study, there was an opportunity to "build programs that link educational institutions with manufacturers to provide R&D resources or help develop more technology-intensive industries in the state."

The Innovation Adoption Grant (IAG) program was created by Innovation Works in 2006 to fulfill this opportunity – a program that helps these companies work with the R&D centers of excellence to keep a competitive edge, retain important manufacturing jobs, and create new jobs for southwestern PA. The program was renamed in 2011 to now be the Innovation Adoption Program (IAP).

There has been a renewed and growing focus on manufacturing in West Virginia, with state leaders urging action to increase the number of manufacturing jobs through on-shoring, increased exports, retraining, and support for small business.

TechConnectWV (TCWV) was borne out of a recognition that West Virginia needed to build a high-technology economy. Through three landmark studies funded by the Benedum Foundation, a blueprint was created for the development of West Virginia's high-tech sector. TechConnectWV, along with a number of other organizations, universities and foundations – including the Benedum Foundation – are spearheading the implementation of this blueprint throughout the state.

As part of our on-going TBED efforts, TCWV plans, with the help of a grant from the Benedum Foundation and in collaboration with Innovation Works, to design, implement, and roll-out an Innovation Adoption Program, based on IW's successful model, which will be tailored to West Virginia's manufacturing sector.

2 IAP Overview

2.1 Objective

The objective of the Innovation Adoption Program (IAP) is to help manufacturers located in West Virginia develop cutting-edge technologies that will accelerate their business development and growth, and enable them to gain a competitive advantage in local and global markets.

The IAP is a project-based initiative that will provide a source of funding necessary to address the technology and/or new product development needs of existing manufacturers by connecting them with the prototyping, design, testing, and analytical capabilities of the State's higher education institutions and non-profit Centers of Excellence. The desired outcome of this initiative is to make manufacturers in West Virginia more technologically innovative, productive, and profitable through the creative use of the State's non-profit and university technology commercialization resources.

TechConnectWV, as a statewide technology-based economic development organization, is well positioned to orchestrate these connections and provide the financial assistance necessary to make these relationships successful.

2.2 Stakeholders

The IAP involves three main stakeholders:

- **Manufacturing companies.** Manufacturing companies need to introduce new, technologically advanced products, reduce the time-to-market of new products, and continuously improve production processes in order to maintain or increase market share and improve profitability.
- **Colleges/Universities and non-profit Centers of Excellence.** The State's colleges, universities, non-profit centers of excellence have the capacity to do rapid prototyping for new product design, analyze production processes, and suggest new technologies and techniques to increase efficiencies on the plant floor. They also have an ample supply of well-educated workers in the form of professors and students to perform these analyses and to educate industry workers.
- **Non-profit economic development organizations.** Many regional economic development organizations are also tasked with providing business and technical assistance to existing manufacturers.

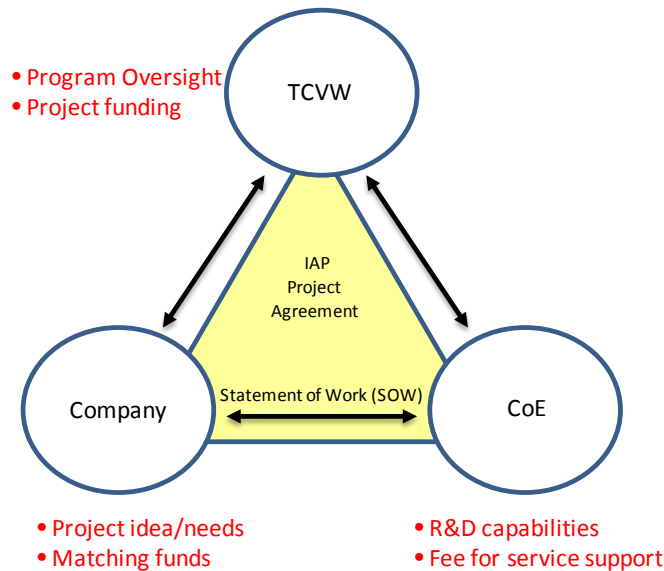
2.3 Program Structure

The Innovation Adoption Program provides funding (up to \$25,000, matched by the company's own funds) to help small-to-medium sized (less than 250 employees) manufacturing companies in West Virginia gain a competitive edge in the marketplace. The program is project-based and driven by the needs of manufacturing companies. The IAP also has a requirement that each project must be supported by a non-profit Center of Excellence (CoE) located in the State.

So, each IAP project involves a 3-way partnership (see below graphic), which is formalized in an IAP project agreement, between:

1. TCVW, who provides program oversight and funding,
2. the Company, who has a qualified project to execute, and

- a non-profit CoE, who provides R&D capabilities to help the Company accomplish the project goals through a well-defined statement of work (SOW) collaboratively defined with the Company.



The program provides funding for enterprise-wide projects that are part of a company's long-term strategy and that are supported by their senior management. IAP projects to be funded by TCWV will be those likely to result in bottom line improvements, increased market share, new products or processes, and lower costs for the company. There are many types of projects that can be supported through the IAP, including: mechanical, chemical, or electrical product engineering and design; rapid prototyping of product design; robotic assembly or machinery design for new manufacturing processes; industrial analysis and overhaul of existing manufacturing processes; product validation and testing; and machine customization for specific product manufacturing.

TCWV will use its network of advisors, service providers, partners, etc., including the university and non-profit partners that will perform the services, to identify potential IAP projects. TCWV will also help existing manufacturing companies identify those resources in the State's non-profit and academic centers that can assist them in overcoming the technology commercialization hurdles that they are facing. Through the IAP, TCWV can then provide up to 50% of the funding necessary for existing manufacturing companies to engage the services of those university resources or non-profit economic development resources in the context of a well-defined project. The academic or non-profit partners will perform services such as market analysis, rapid prototype design and development, product testing, and business process analysis and optimization.

In summary, the key elements of the program are:

- A small-to-medium sized manufacturing company in the State has a project they want to execute that fits the criteria of the program
- TCWV pairs that small manufacturing Company with a non-profit Center of Excellence located in West Virginia who has relevant capabilities to bring to bear in executing the Company's project
- The Company and Center define a SOW (tasks, schedule, deliverables, budget) and the Center works on the project for the Company on a fee-for-service basis
- TCWV provides up to \$25,000 in project funding to help the Company pay for the Center's services; the amount of IAP funding allowable is also capped at 50% of the total project costs

2.4 How IAP Works in Practice

The following steps are typical for the life cycle of an IAP project:

1. **Qualification** – because the IAP pairs small-to-medium manufacturing companies with non-profit Centers of Excellence, the first major activity that occurs as part of the program is for the IAP Program Manager to meet regularly with companies, county economic development groups, and Centers of Excellence to build and maintain a deal flow pipeline.
2. **Project Identification and Definition of a SOW** – when an appropriate project is identified, the IAP Program Manager then works with the Company to identify a Center of Excellence that can provide the relevant R&D capabilities to accomplish the project goals.

The IAP Program Manager also works with both the Company and the Center of Excellence to create an appropriate statement of work (tasks, schedule, deliverables, and budget) for the project that is acceptable to all parties.

3. **Application to TCWV for IAP Funding** – after a SOW is defined for the project, the Company can then apply for IAP funding.
4. **IAP Project Execution** – once an IAP project is approved for funding, the SOW drives the execution of the project from that point forward.
5. **Post Project Reporting** – when an IAP project completes, TCWV takes the lead to close out the project. TCWV works with the Company and the CoE to reconcile all project-related finances. TCWV then prepares a draft final report and sends it the Company, and the Company completes the narrative sections of the final report, signs it, and returns it to TCWV.

For up to five years after the completion of the project, the Company completes an annual Impact Survey issued by TCWV, in order to document their annual revenue (used for repayment calculations for 3 years after project completion), new job creation, job retention, new product creation, new manufacturing process creation, etc.

3 Summary

The Innovation Adoption Program (IAP), as implemented in SWPA by Innovation Works, has been a significant win-win situation for everyone involved. The companies benefit by cost-effectively bringing new products to market or making existing products better, faster and/or cheaper. The Centers of Excellence benefit because, in most cases, their services and capabilities were not well known in the commercial sector until IW began to play matchmaker. The Centers of Excellence affiliated with universities have also benefited as they have been able to expose students to real-world projects with real companies that can provide future employment opportunities. The participating companies see the program as a way to improve their global competitiveness, and the economic development professionals who represent the communities where these companies are located see the program as a way to bring jobs and economic revitalization to areas that desperately need a boost.

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The objective of the IAP is to help manufacturers located in West Virginia develop cutting-edge technologies that will accelerate their business development and growth, and enable them to gain a competitive advantage in local and global markets.