

A Regional Innovation Grant in Support of the Packaging Industry in South Central PA

In this project, three workforce investment boards in south central PA – Berks, Lancaster, and Southcentral – propose that they will use the occasion of a very large dislocation by Hershey Foods in locations in each of the workforce investment areas to bring together over a dozen existing industry partnerships to explore ways to integrate dislocated workers into career paths that support the rapidly-growing and multi-faceted packaging industry. Virtually every industry that makes consumer products including food processing, pharmaceuticals, and medical products uses packaging technology in its supply chain, core industry, and distribution channels.

Packaging reaches into areas such as machinery that wraps consumer products at speeds that the human eye cannot see and robots that move product from production line to warehouse. It includes the production of the packaging materials themselves in textile, cardboard, glass, plastics, and wood containers. Logistics systems that move pallets to market with radio frequency identification tracking the flow of goods are another aspect of the industry. The design of three-dimensional packaging uses high-tech, computer-aided design.

Partners in this project intend to pull together many existing resources, identify gaps where new resources need to be developed, and reach out to partners in education and the economic development systems to build an innovation system that supports a forward-looking strategy for packaging technology in the region.

Labor Market and Other Impacts from the Hershey Dislocation

Originating from its traditional agricultural roots, south central PA is a food processing and, in particular, a confectionary manufacturing powerhouse. The Hershey Company has been a leader in the industry for over 100 years. The acquisitions of the Y & S, Luden's, and Reese's brands over the last 20 years allowed the Hershey Company to expand its operations in Hershey, Lancaster, and

Reading. Hershey has been a leader in using new technology to increase productivity. It is also looking to fill its global demand by using more off-shore facilities.

Those factors have led the company to a phased, two-year reduction in force that will see the plant in Reading close with the loss of 250 workers and a substantial reductions in the workforce in Lancaster and Hershey that will total another 350 workers. Most of the dislocations will happen in 2008.

The WIRED Framework in South Central PA

In large measure, the primary planning group for this project have been using the principles of the WIRED framework before they were articulated by the US Department of Labor. We have a history of building partnerships that transcend boundaries. Our vision revolves around demand-driven public systems that support local competitive advantages. We use sound data to guide policy development and the deployment of services. Our economic development and talent development strategies move us toward our common vision.

Regional Economy

As planners take a broader view of the economy, they see Berks, Dauphin, Lancaster, and York Counties as the core of the regional economy with Adams, Franklin, Perry, Cumberland, and Juniata Counties as important close-in contributors. Other regions that include the ten-county Central Workforce Investment Area, the five-county Philadelphia region, the two-county Lehigh Valley, and multi-county areas in Delaware and the Eastern Shore of Maryland are close by and contain many of the key industries that this project addresses.

- Food processing companies in Berks, Dauphin, Lancaster, and York Counties employ nearly 25,000 people or over 3% of the total workforce in an industry that has maintained a location quotient in excess of 2.50 over the last decade. The cluster continues to see economic growth in the region with one new food processor already breaking ground in Berks County and

another considering a location. The industry is also important in the Central and Lehigh Valley Workforce Investment Areas which are immediately contiguous to the core area.

- In the same region, the plastics industry employs nearly 7,500 people or roughly 1% of the total workforce. The industry has actually increased its location quotient to over 1.50 over the last five years. Packaging materials comprise a large part of the industry in the area.
- Lancaster County is the largest agriculture producing county in the United States that does not use irrigation. It is a national leader in the dairy and poultry industries. Local estimates are that one in four jobs in the local economy is tied to the supply, processor, and distribution chain of the agricultural industry.
- While pharmaceutical manufacturing in the core area is limited, the supply chain connects very directly to the industry in the Delaware Valley and surrounding states which make up one of the largest biotechnology clusters in the world. Nearly 20,000 people work in the pharmaceutical industry in southeast Pennsylvania.
- There is a substantial medical device industry within the core area that extends into the Lehigh Valley. Over 3,000 people work in the manufacture and distribution of medical supplies in the area with location quotients that range from 3.00 (surgical and medical instrument manufacturing) to nearly 12.00 (dental equipment manufacturing).
- Logistics and transportation is a growing sector (22% in five years) within the core region with employment in excess of 20,000 or nearly 3% of the total workforce. Location quotients in the region have climbed to 1.19 with warehousing and storage leading the way.

Core Regional Leadership Group and Key Project Partners

Our common practice has been to use leaders in the workforce development system as the primary stakeholders of our joint projects and then to add other stakeholders that can contribute to the overall goals of the project. Additional partners for this project would include the Lancaster, Reading, York,

and Harrisburg chambers of commerce; the three Manufacturing Extension Partners (aka Industrial Resource Centers in PA) that serve the region; the Ben Franklin Partnership; the PA Department of Community and Economic Development; the Technology Council of Central PA; and business representatives from the 12+ industry partnerships that exist in the region.

Additional partners in adjacent regions could be added if the planning process evolves in that direction.

Initially, the Lancaster County Workforce Investment Board would function as project manager and fiscal agent for the project. If we decide to apply for an NEG, one of the other boards would function as project manager and fiscal agent for that part of the project.

Assets and Implications

This region has many assets that exist separately. However, the primary goal of this initiative would be to identify the existing resources, explore gaps that exist, and engage other partners that may not currently be involved.

- Over forty food processors participate in the Food Manufacturing Consortium that is resourced by the Berks County, Lancaster County, and the South Central Workforce Investment Boards. Additional consortia in the Central and Lehigh Valley Workforce Investment Areas are forming;
- Two large regional partnerships which include the seven workforce investment areas in southeast Pennsylvania and five workforce investment areas in central and south central Pennsylvania are working with plastics manufacturers as a part of the PA Statewide Plastics Initiative;
- Berks and Lancaster County Boards are working with Reading Area Community College (RACC) and eight career and technology center to offer the Industrial Maintenance Training Center, a program in industrial maintenance and mechatronics technology, now serving

incumbent workers in over 20 companies as well as young people entering the workforce.

Harrisburg Area Community College and RACC have just received a Community-Based Job Training Grant to replicate the Berks and Lancaster County model in the South Central Workforce Investment Area;

- In conjunction with the Lancaster Prospers economic development collaborative, the Lancaster County Workforce Investment Board runs a Center of Excellence in Production Agriculture (with the Lancaster Chamber, Penn State University Cooperative Extension, the Lancaster County Blue Ribbon Commission on Agriculture, and the Lancaster County Conservation District) to support local research and development, technology transfer activities, entrepreneurial development, incumbent worker training, and the development of a pipeline from school to work;
- Within the region, the Life Science Career Alliance coordinates incumbent worker programming in the biotechnology and health care industries in the Delaware Valley, Berks County, and Lancaster County. The Alliance recently received a WIRED grant to support workforce and economic development in the biotechnology industry;
- Industry partnership projects in logistics and transportation have been in operation in the South Central Workforce Investment Area and in a joint project between Berks County and the Lehigh Valley over the last year. Logistics systems have a close connection to industries that produce consumer goods;
- An emerging partnership in Berks and Lancaster County is examining the information technology needs of multiple industries as a way of addressing the common need for IT skills with survey and skill set identification scheduled to be completed by late August.

An Economic Vision for Packaging

As the planners of this project (who are also the organizers of these local initiatives) look to the network of services that they have created over the last several years, they see that **packaging** has become a unifying theme that brings food processing, plastics, agriculture, biotechnology, medical devices, and logistics and transportation together. The technologies that support **packaging operations, packaging materials, packaging design, and the preparation of agricultural and biotechnology products** move through these key industries (as well as their supply and distribution chains) which have a heavy consumer product focus. The skill sets for these technologies also find demand in other advanced manufacturing sectors.

Our experience says that packaging is our local competitive advantage in the food, pharmaceutical, medical devices, and consumer products industries that are so important to our local and regional economies. Our ability to do packaging more efficiently and effectively is what makes an item produced in our area more competitive in the global marketplace.

If we are able to meld these individual programs into an innovation system that uses our resources, builds new ones, and brings new partners to the table, we will create an opportunity to invent and re-invent the knowledge resources that we need to keep the technology that drives these process on the cutting edge of innovation for the future.

Transformational Strategies

Taking the next step to consolidate and grow these efforts involves connecting these current assets to other assets that have not been fully utilized as we **transform the regional economy** by investing in additional industries and new technologies.

Planning Activities and Services to be Procured

As we get into the project, we expect to apply US DOL funding to uses as indicated in the recent TEGL...research, outreach, assessments, developing working agreements, planning and so on using internal and consultant resources.

Most importantly, we have already identified some possible activities that loom large in our initial planning...

- There is a substantial cluster of manufacturers of corrugated cardboard and other paper products in the region that could be better connected to the local packaging supply chain;
- Within the printing cluster, many companies print on the paper and plastic that support the packaging supply chain. A more concentrated focus on these specialty printing processes could lead to a local competitive advantage;
- A good deal of the packaging design to support the industry is done out of the region. Developing a specialty within the region would seem to be a substantial opportunity for local advertising agencies that would support the packaging industry and could be further connected to the capabilities existing at Kutztown and Millersville Universities;
- With much of the packaging machinery being made overseas, there would appear to be an opportunity to reinvigorate the significant existing machine building capacity in Pennsylvania to support packaging;
- Given the prospect of an increasing role for radio frequency identification in logistics management of consumer goods, the region could dominate this technology with the right kind of investments in training and equipment.

While many of these possibilities involve investments in human capital through incumbent worker training, there will also need to be investments in the education system and in companies through economic development efforts as well.

- While several schools around the Commonwealth have programs related to materials, there are no institutions of higher education that have a bachelor's degree or higher in packaging technology or packaging engineering. The projects outlined above would require the

establishment of cooperative programs in a number of institutions around the region and the state;

- Re-inventing the machine tool industry in Pennsylvania will require the investment of new dollars to fund start-ups, joint ventures with foreign manufacturers, and the purchase of the technology to get the job done. This project will reach out to economic developers and venture capitalists to engage them in the financing that will be required as well as the Keystone Innovation Zones in the region;
- Helping Pennsylvania companies to become more competitive in the packaging supply chain will involve a concentrated effort to first identify the supply chain and then to examine and remove the barriers to competitiveness;
- In some cases, there needs to be a focused initiative to actively recruit companies that support the packaging supply chain but which are located outside of the region.

Collaboration and Coordination and the Roles of the Partners

At this point, we envision the development of a stakeholder group that would be involved in overall planning, bring resources to the table, and reach out to other partners. We know that we will need consultant and in-house staff to drive many of the activities. Beyond that, we will let the organization of the project emerge from the functions that need to be completed.

Leveraged Resources for Implementation

Ultimately, the ability to follow the implications of the findings of this project will rest with resources that will come from a variety of other sources. We see public sector resources from the federal and state government in agriculture, manufacturing extension, education, energy, and technology development as possible financial partners, especially if those funding sources follow the model developed by the WIRED (Gen 1) project. Resources from angel networks and early stage investors would be attracted by the products of our innovation inquiries. Business and industry are

the end consumers of many of the end products and processes of this initiative. We would expect them to be financial partners as we move into the implementation phase of the project.

Of course, our traditional workforce system with its dislocated worker and rapid response funding streams would be a substantial contributor to the project as it moves forward as would our one-stop service system.

Services to Dislocated Workers

Initially, the partners plan to apply for a Regional Innovation Grant and consider whether to apply for an NEG within the first six months of that grant. Any services to dislocated workers would be a part of the NEG, although some preliminary assessment of the potentially affected Hershey workforce using WorkKeys and related systems might be utilized during the Regional Innovation Grant funding period.

Timeline for Implementation and Completion

This would be a worthwhile project for the region whether we apply for the NEG or not. We would expect to make that decision within the first six months of this project.

Given the substantial amount of work that has already been done in relation to packaging, we expect the project to get off the ground quickly and deliver a final report well within the 18 month term of the project.

Projected Outcomes and Impacts

In the end, our proposed project would move the region from having a variety of programs that support industries that do packaging to instead having an innovation system that invents and re-invents the knowledge that is needed to keep an important technology which supports many industries on the cutting edge. The agenda is **transformative** putting investment into areas that can move the local economy ahead in dramatic ways. The proposed project...

- Builds on substantial federal and state investments that have already been made in the region;

- Uses existing industry partnerships (food, plastics, agriculture, biotechnology, medical devices, logistics) as a foundation for industry engagement;
- Reaches out and integrates other important industries (paper, printing, advertising agencies) that have not previously been engaged into the project;
- Focuses on the development of new technology in manufacturing, design, logistics, food science, information technology, and biotechnology as well as the transfer of that technology to the emerging and incumbent workforce;
- Includes the development of new knowledge resources, establishing packaging technology programs in several institutions of higher education around the Commonwealth;
- Offers a jump start for more traditional investments in equipment and technology as it targets the re-invention of the machine tool industry in the region;
- Uses as a foundation well-established regional partnerships between workforce investment boards, technical schools and community colleges, higher education, and industry;
- Includes partnerships and consistency of strategic approaches between workforce investment boards and economic development organizations.

At minimum, we see feasibility studies on retooling the packaging machine sector, improving the local supply chain for packaging materials, establishing a bachelor's level packaging technology program (with articulation to other levels), developing a local RFID center, and building a packaging design specialty into area advertising agencies as deliverables. We would propose that these reports be completed early in the project allowing enough time to begin early stage development of the recommendations that come out of them before the end of the project.