Manufacturing Career Pathways for the Lehigh Valley
“How To” Guide

Education Joining Workforce Development

Lehigh Valley Workforce Investment Board, Inc.
Developed for the Lehigh Valley Workforce Investment Board, Inc.
in partnership with the Pennsylvania Department of Education
Bureau of Postsecondary and Adult Education and
The Pennsylvania State University Institute for the Study of Adult Literacy

Lehigh Valley Workforce Investment Board, Inc.
1601 Union Boulevard, PO Box 20490
Lehigh Valley, PA 18002-0490
http://lvwib.org/
Table of Contents

Introduction .......................................................................................................................... 4

Section 1: Background ........................................................................................................... 6
  Getting Started .................................................................................................................. 8
  Employers, Workers, and Job Seekers ............................................................................. 8
  Workforce Development ................................................................................................. 9
  Educators .......................................................................................................................... 9

Section 2: Creating the Maps .............................................................................................. 10
  PA CareerLink® Lehigh Valley Career Pathways ............................................................ 12
  Manufacturing Career Pathways ..................................................................................... 13

Section 3: Beyond Creating the Guide .............................................................................. 16
  Gap Analysis .................................................................................................................... 18
  Career Pathways Planning .............................................................................................. 18
  Implementation ................................................................................................................ 19
  Continuous Improvement ................................................................................................. 19
  Expand the Pathways ....................................................................................................... 19

References ........................................................................................................................... 20
Introduction
The US Department of Labor Career Pathways Initiative has identified six key elements of Career Pathways. This Initiative provides a framework for development and implementation of career pathways models. Elements of this framework are included in the development of the Manufacturing Career Pathways for the Lehigh Valley guide, in partnership with the Lehigh Valley Workforce Investment Board, Inc., the Pennsylvania Department of Education, Bureau of Postsecondary and Adult Education and The Pennsylvania State University Institute for the Study of Adult Literacy.

The US Department of Labor – Employment and Training Administration defines “career pathway programs” as a clear sequence of education coursework and/or training credentials that include the following components.

- Are aligned with the skill needs of industries important to the regional or state economies in which they are located, and reflect the active engagement of employers in targeted industry sectors regarding the skill requirements for employment or career progression in high demand occupations.
- Include the full range of secondary, adult education, and postsecondary education options, including registered apprenticeship, with a non-duplicative progression of courses clearly articulated from one level of instruction to the next, with opportunities
to earn postsecondary credits and lead to industry-recognized [and/or] postsecondary credentials;

- Include curriculum and instructional strategies that make work a central context for learning (contextual learning) and help students attain work readiness skills;
- Include, as appropriate for the individual, integrated education and training that combine occupational skills training with adult education services, give credit for prior learning, and adopt other strategies that accelerate the educational and career advancement of the participant.
- Lead to the attainment of an industry-recognized degree or credential, which may include stackable credentials of value in the labor market and that articulate progressively to higher-level credentials or degrees.
- Help a worker enter or advance within a specific sector or occupational field, regardless of their skills at the point of entry.
- Include academic and career counseling, wrap-around support services particularly at points of transition, and support the development of an individual career plan.
- Are organized to meet the particular needs of adults, including childcare, accommodating work schedules with flexible and non-semester-based scheduling, alternative class times and locations, and the innovative use of technology.
- Have the goal of increasing an individual’s educational and skills attainment and employment outcomes. (US Department of Labor, 2011b)
Section 1: Background
Successful career pathways systems are built on relationships and clear lines of communication between public and private partners. The Lehigh Valley Workforce Investment Board, Inc. (WIB) is leading an initiative within the region to join education, social service, workforce development, and employer partners in the development and implementation of a comprehensive career pathways initiative.

One of the unique aspects of the Lehigh Valley model is that it has a defined career pathway for job seekers, dislocated workers and incumbent workers who may not be fully prepared to enter traditionally identified career pathways due to lacking the basic skills required for even entry level jobs within an identified sector. By including basic skills development in the pathway model, the Lehigh Valley WIB is recognizing the data which clearly show that without remediation, many adults cannot meet the requirements of postsecondary education and training programs that lead to employer-recognized credentials.

This resource provides a brief introduction to the Manufacturing industry in Pennsylvania and the Lehigh Valley and an introduction to career pathways. However, the features that command the most attention in this resource are the career pathway maps that detail progression from entry level jobs within the manufacturing sector through advanced, degree-required, positions in the field.

**Getting Started**
The development of the resource guide began with the identification of the focus sector. The WIB used previously reported data to determine that the manufacturing sector was targeted for growth within the region and should be the focus of the guide. General information about Manufacturing was incorporated into the guide, along with information specific to Pennsylvania and the Lehigh Valley.

Incorporating a variety of resources, the Career Pathways section of the guide provides an introduction to career pathways and programs; suggestions for referral, intake, and orientation; program design; and the use of career pathways maps. Of particular interest to partners is the section that highlights the use of career pathways maps.

**Employers, Workers, and Job Seekers**
Employers that use career pathway maps within their organizations can help potential employees see the route to where they want to go and be able to advance. When the path is clear, they are more likely to get there—and less likely to leave.
Mapping tools can also be used by human resource departments to strategize for the identification of vacancies. Mapping tools can be customized to communicate job descriptions, education and skill requirements, and experience to ensure that potential employees are prepared for the jobs for which they may be hired. Maps can also be tailored to include degrees, certifications, permits, licenses, and any other credentials required of particular job titles within a company. These tools can be incorporated into interviewing and orientation practices. Within a company, maps can provide job information that can serve as a basis to better recruit, select, coach, develop, train, and reward staff. Early on, employees can be made aware of opportunities for growth and promotion within the company.

Job seekers and those currently employed are increasingly encouraged to update and expand skills that will improve their potential for success in the workplace. Mapping tools can help to identify skills, build skills, and progress to other jobs within the company. Clearly defined career maps are essential to assist workers on establishing career goals.

**Workforce Development**

As career pathway maps are being developed, it is important that the information contained within the tools is clear, up-to-date, and research-based. If thoughtfully constructed, these tools can help workforce development partners move people into secure careers that offer long-term employability. Many resources are available to help identify the best industries and career pathways so partners can offer job seekers sound career options.

**Educators**

Teachers and career counselors can use career pathways maps with students to help them understand the education and experience needed to enter employment within a potential industry and also to gain a perspective on the additional education and experience needed to move up a career ladder once employed within an industry. Career pathway maps show, at a glance, a progression of occupations, salary, education and certifications needed, as well as educational institutions available in the area. Teachers can use these maps to inform students of the variety of occupations available within an industry and the salary they can expect. These career pathway maps may focus on the entry level positions and show potential pathways that could be followed to move up with an employer. These career pathway maps could be used to help students set short and long-term educational and employment goals.
Section 2: Creating the Maps
PA CareerLink® Lehigh Valley Career Pathways

The following career pathway map is a visual representation of services and pathways available upon enrolling in PA CareerLink® Lehigh Valley. Job seekers, dislocated workers, incumbent Manufacturing workers, or high school graduates could enter at various steps in the process and progress through this career pathway. Once they have worked their way through this pathway, job seekers are prepared for entry-level employment in Manufacturing.

This map (above) clearly illustrates the activities and content of adult education programs that are designed to prepare individuals for employment or postsecondary education and training. Adult education providers should be providing career awareness activities and instruction contextualized to the focus sector. As individuals navigating through this pathway may attain a Commonwealth Secondary Diploma (GED®) or a National Career Readiness Certificate.
Upon completion of this pathway, participants may choose to access additional PA CareerLink® services or choose to more fully explore career opportunities within the Manufacturing sector.

Manufacturing Career Pathways
The following maps illustrate the options individuals may choose to follow upon completion of the participation of the activities above. These maps illustrate Manufacturing career pathways. Employees’ levels of education and experience determine where they could enter on the career pathway. If an employee enters with a High School Diploma/Commonwealth Secondary School Diploma/GED®, they might enter at the bottom of the career pathway. If individuals have Manufacturing work experience, a Manufacturing certification, an associate degree, or bachelor degree, they might enter at various steps above entry level. These visual representations show the various entry and exit points available for employees as they continually gain education and experience within their manufacturing career.
The regional High Priority Occupations (HPOs) were a starting point for the creation of the Manufacturing Career Pathways. A local team analyzed the HPOs, added additional job titles, and provided specific information about local certificates and credentials.

As job titles were identified, research was conducted to identify job titles above and below the identified target title. The following websites provided the information necessary to complete the maps:


- Pennsylvania Department of Labor & Industry, Center for Workforce Information and Analysis. 2011 High priority occupations for Lehigh Valley WIA region.


- U.S. Department of Labor, Employment and Training Administration. CareerOneStop. [http://www.careeronestop.org](http://www.careeronestop.org)


Entry and exit ramps were identified by the team as well as educational opportunities that were available locally. The maps were categorized using information from the above sources and the expertise of the team.
Section 3: Beyond Creating the Guide
The Lehigh Valley Workforce Investment Board (WIB) has taken a leadership role in the development of initiating comprehensive career pathways programming in the Lehigh Valley. The WIB supported the development of the *Manufacturing Career Pathways for the Lehigh Valley* guide, a comprehensive resource that provides a building block for further development of career pathways that begin with adult basic education for low-skilled adults and provide entry and exit ramps for individuals at various stages of employment along the pathways.

Strong relationships and a shared vision among all stakeholders is a critical element to successful career pathways programming. Mutual respect among the partners is essential and teambuilding activities should be considered as a preliminary activity.

Successful career pathways systems are built on relationships and clear lines of communication between public and private partners. The five steps for developing and implementing career pathways are described below. At all stages of the process, outreach is imperative, as is support and participation from stakeholders, such as jobseekers, businesses, educational institutions, and government agencies.

**Gap Analysis**
Gather education, workforce development, economic development, employer, and labor groups to identify sectors of importance to local economies, and map the requirements of entry and advancement at successive levels in each sector. Conduct a gap analysis to assess how well existing education, workforce, and social services support worker access and advancement in the target fields, identifying challenges and weaknesses.

**Career Pathways Planning**
With input or guidance from business and industry, convene front-line staff from partner agencies, including education, workforce, and social services, to rethink partner programs and services to support career entry and advancement in the target sector(s). Identify costs and develop a funding strategy.
Implementation
Plan for program development, marketing and recruitment, delivery of programs and support services, job development, and outcomes tracking. Consider implementing strategies in stages.

Continuous Improvement
Systematically track education and labor market outcomes at each level, and continually modify programs and services to support advancement. Continue to evaluate program changes to ensure that they produce the desired improvements.

Expand the Pathways
Bring the pathways model to scale to serve larger numbers of students and employers. Adapt the approach for replication in other sectors of importance to the regional economy or to other populations of jobseekers.

The information and processes described above are essential for the implementation and growth of this career pathways initiative. For further development and implementation of this model, consider further integration of the United States Department of Labor model and associated resources. The model and associated tools provide a framework for partnering, resource sharing, alignment and program design.
References


