

Career Ladder Model for the Northeastern Pennsylvania Logistics and Transportation Industry Partnership

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NE075 Luzerne/Schuylkill Workforce Investment Office**

**In Partnership with:
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Introduction

The Logistics and Transportation industry in Northeastern Pennsylvania has experienced significant growth over the past several years, primarily due to the transportation infrastructure within the State and the proximity of major metropolitan hubs to the region. Governor Rendell has included the Transportation, Distribution, and Logistics industry in the Job Ready Pennsylvania program, which identifies critical, in-demand occupations within the high-growth industry clusters and provides training and education grants to prepare the workforce to meet industry demand and keep Pennsylvania competitive. However, being a high-growth industry cluster provides many workforce challenges: improving the industry image; recruiting and retaining skilled workers; identifying skills gaps and training needs for both new and incumbent workers.

To address these challenges locally, the NE075 Luzerne/Schuylkill Workforce Investment Office applied for and was awarded a grant to establish a Logistics and Transportation Industry Partnership for the Northeastern Pennsylvania region. The Partnership identified key project goals, one of which was to develop Marketing and Outreach Activities designed to promote the industry within the region. The career ladder model was subsequently targeted as a key tool for the Partnership's use in identifying strategies for collaborative employment issues and curriculum development projects. The purpose of this document, therefore, is to address the identified workforce challenges by creating a Career Ladder Model for the NEPA Logistics and Transportation Industry Partnership. The model will identify:

- 1) core competencies and Pathways within the local industry and the occupations contained within those Pathways
- 2) key occupations within the local logistics and transportation industry and the skills and competencies specific to each occupation,
- 3) training and educational requirements required to move between the various occupations ("career lattices"), and
- 4) recommendations and "best practices" for successful implementation of the career ladder.

Methodology

The data collected for this document was derived from extensive Internet searches to determine “best practices” from other transportation, distribution, and logistics companies and organizations across the country. However, with exception of the model developed for the entire cluster by the Career Clusters Initiative, most grants and funded programs are in their infancy, with competency models and career ladders a future deliverable for the intended audience. This led the developer to take a step backward and look at competency models and career ladders in a more general light, and the observations were both unexpected and enlightening. While the Transportation Cluster has only recently (October 2005) received funding from the U.S. Department of Labor’s Employment and Training Administration to address high-growth issues and workforce strategies, several other clusters are in the later stages of development: Healthcare and Advanced Manufacturing. While the technical competencies for movement around a career ladder obviously differ from Transportation for these clusters, the data regarding the basic core competencies required for successful entry into the workforce was consistent across all industries. It is data from these findings that form the basis of this document.

In addition to the Internet searches, four companies within the NEPA Logistics and Transportation Industry Partnership graciously agreed to meet and discuss their organizational structures, their training needs/initiatives, any “best practices” employed, and their individual needs with the developer. The data collected from these interviews helped support and enhance the model framework identified as part of the Internet research.

Also relevant to the training recommendations in this document is the input provided by the 21 Partnership members who completed the Training Needs Assessment Survey. Their identification of training issues was consistent, and supported the recommendation to develop an industry-specific curriculum.

Developing a Career Ladder

What is a Career Ladder?

A career ladder is a graphical representation of an organization that shows the occupations within that organization in a hierarchical fashion based on the skills required to advance to each successive occupation. The traditional perception most people have of a career ladder is a person climbing the steps, or rungs, of an organization from an entry-level position to the very top of the corporation. While this model worked effectively for many years prior to the Technology Revolution, it is a far different and more complex model in today's ever-changing global environment. Today, many workers find it extremely difficult to move-up such a ladder, primarily because they lack the basic skills to advance, corporations no longer fund training and re-training programs as they previously did, and many occupations which previously were "steps" of an organization are now outsourced to other companies. Because of these issues, workers find it difficult to envision a career within the organization and employers cite job turnover and employee recruitment as their biggest workforce challenges.

Career ladders work like a roadmap for both the employee and employer. Employees entering the organization in low-technical skill, low-wage jobs must first attain the basic skills and competencies required for employment and productivity. Once on the job, employees can then gain the necessary technical and industry skills through their work. Employers must subsequently provide training and career path guidance according to the pathways set in the career ladder. This process changes the whole perception of the "entry-level job" and makes it a "life-sustaining career." Simply stated, employees are much more likely to stay on the job, reducing job turnover rates for employers, and employers can use the career ladder as a tool during recruitment to advertise and promote a "career" within the company.

How can a Career Ladder be used by an Industry Partnership?

Several types of career ladders are utilized in today's business environment: single company, employer organization, single-cluster, and cross cluster. Each has differing goals and objectives along the way, but ultimately the focus for the employers is to be able to hire employees with the basic skills and core competencies necessary to be productive and competitive in today's business environment.

Based on input from the participants, the most effective career ladder model for the NEPA Logistics and Transportation Industry Partnership is a regional, single-cluster model (developed by employers and/or their partners and managed by the member employers). Developing a single-cluster career ladder with locally based partners such as chambers of commerce, community organizations, technology centers, one-stop centers, and/or community colleges/universities has many benefits to the local business environment. Employers and their partners already have a pulse on the local labor market, thus enabling all to agree on the skill sets required for productive employability. Such basic employability skills can be identified and then training can be developed by

the partners and disseminated to the local labor market on a much broader basis. In a typical single-cluster career ladder, pre-employment assessment is also conducted, again by one or more of the partner organizations, in an effort to determine whether the potential employee is best suited for work in the cluster based on his general career interests and existing academic skills. In addition to basic/core skills and competencies, occupation-specific skills training can also be developed and customized for jobs within the cluster. Thus, all members can select from a curriculum established specifically for the regional cluster, making training consistent and ultimately improving the competitive marketplace. Some single-cluster career ladder models also utilize skill certifications, which when developed and implemented consistently, can be a very useful tool for career advancement for both the employer and employee.

Utilizing a regional, single-cluster career ladder model has some additional benefits:

- Members have established a trust and are more likely to share their employment issues and needs, and collectively benefit from workforce development funding opportunities.
- Members can jointly use the career ladder model as a recruiting tool to advertise and promote careers within the local industry cluster.
- Members can work jointly with curriculum development specialists in regional high schools, career/technology centers, and community colleges/universities to ensure consistent courses and skills development programs for their potential new hires.
- Members can jointly address changes in skill and competency requirements for specific occupations due to changes in government regulations or technology advancements.

Designing a Single-Cluster Career Ladder Model

Designing and ultimately developing a career ladder for an entire cluster of the economy is a tremendous undertaking. Since the establishment of the 16 high-growth clusters by the U.S. Department of Education Office of Vocational and Adult Education, states and their industry partners have been funding regional and local entities through the States' Career Clusters Initiative (reference <http://www.careerclusters.org>) to develop skills standards, knowledge and career pathways, training initiatives, and industry growth plans across the country. Leading the pack have been the Healthcare, Information Technology, and Advanced Manufacturing Industry Clusters, each of which have developed numerous materials to support their industries in an effort to regain competitiveness and obtain and retain a skilled workforce. Regarding the Transportation, Distribution, and Logistics (TDL) Industry Cluster, a few states/regions have been leading workforce development projects. Of particular interest is the work performed by the states of Oklahoma and Illinois. As part of the original program, proposed by the National Association of State

Directors for Career and Technical Education Consortium (NASDCTEc), Illinois was identified to be the lead state for development of a comprehensive curriculum framework and supporting materials for the entire Transportation, Distribution, and Logistics cluster, including Air/Space Transportation, Rail Transportation, Water Transportation, Road Transportation, Pipeline Transportation, and Transit Systems. An April 2003 report for the Career Clusters Initiative (<http://www.careerclusters.org/ClusterDocuments/trdocuments/TDLFinal.pdf>) identified the knowledge and skills requirements, the TDL pathways, and samples of careers and occupations within each pathway. It is from this report, along with volumes of white papers and informative websites from national/state/local entities and both public and private organizations (see References Section for complete listing) that a career ladder model has been developed for the NEPA Logistics and Transportation Industry Partnership. Other very useful data concerning TDL pathways and core occupational competencies came from the state of New Jersey (Ready for the Job: Understanding Occupational/Skill Demand in NJ's Transportation/Logistics Industry, from <http://www.heldrich.rutgers.edu/>) and the state of Nebraska (their career information website, <http://www.ncis.unl.edu>). In addition, knowledge gained regarding basic employability and workplace skills and basic academic competencies was derived through research of reports created to support the Advanced Manufacturing Cluster (<http://www.doleta.gov/pdf/AdvncdManufactFWK.pdf>, Framework of Competencies by the Advanced Manufacturing Industry and <http://www.workforce3one.org/public/search/index.cfm>, WINs Cross-Cluster Analysis of Workforce Development Needs for Southwestern Pennsylvania: An Analysis of O*Net and WorkKeys). An additional resource was obtained from Pennsylvania's Work-Based Foundation Skills Framework State Leadership Initiative, funded by the Pennsylvania State Department of Education, Bureau of Adult Basic and Literacy Education (ABLE) (<http://www.able.state.pa.us/able/lib/able/fieldnotes03/fn03foundation.pdf>).

The Career Ladder Framework

An effective career ladder is comprised of several tiers of competencies and skills, arranged in a hierarchical manner. The career ladder model developed for the NEPA Logistics and Transportation Industry Partnership combines a tiered competency approach with a “Pathway” model, consistent with career ladders developed for some other high-growth industry clusters. Similar to the arrangement of an organization chart, Pathways allow for skills and competencies to be grouped by similar functions (or departments) within the company. The career ladder then goes one step further and indicates the skills and competencies required for each individual occupation. When laid out in its entirety, both the employee and employer have a clear understanding of what is required to move to another occupation – either within the same Pathway, or into a new Pathway. In addition, a career ladder can also identify job-specific wages, which is another indicator to employees as to what steps need to be taken to increase their pay and thus their standard of living.

Well-conceived career ladders highlight skills and/or competencies and required knowledge for specific occupations. Commonalities in such skills and knowledge indicate areas where lateral career movement (lattices) may be possible, which has become increasingly important in today’s economy, especially for companies and industries which are typically “flat” organizationally. Employees who attain a certain technical skill set for their current job almost always gain valuable industry knowledge and skills which are transferable to other occupations within the company and the industry as a whole. Identifying these common competencies and skills benefits employees, as they can envision a career path and plan for their future with the company. And employers have a tool for succession planning by being able to transfer skilled employees to critical positions in order to meet demand and productivity requirements.

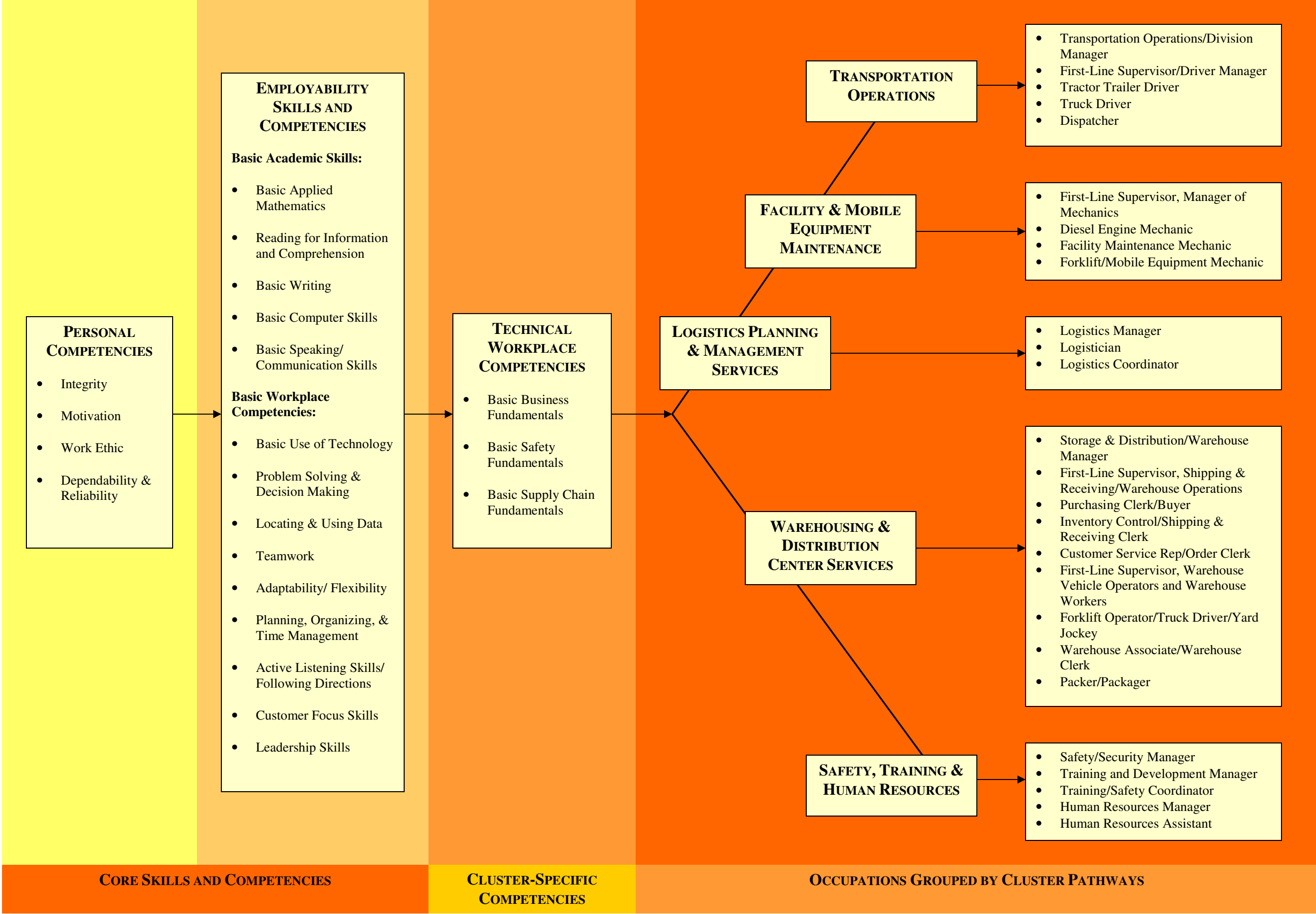
Another identifiable element within an effective career ladder is a “gap” between occupations regarding competencies and skills. These gaps indicate areas where training is needed to enable career movement. Again, identification of these gaps will benefit both the employee and employer, and appropriate curriculum can be specifically designed for the occupations in question.

Competency and Skills Tiers

Figure 1 shows a tiered career ladder model with Pathways, consisting of the following tiers:

- **Personal Competencies**
- **Employability Skills and Competencies**
 - Basic Academic Skills
 - Basic Workplace Competencies
- **Technical Workplace Competencies**
- **Cluster/Occupation-Specific Competencies (Grouped by Pathway)**
 - Transportation Operations
 - Facility & Mobile Equipment Maintenance
 - Logistics Planning & Management Services
 - Warehousing & Distribution Center Operations
 - Safety, Training & Human Resources

Figure 1: Career Ladder Model for the NEPA Logistics and Transportation Industry Partnership



Basic Personal Competencies

One of the key workforce issues identified through NEPA Logistics and Transportation Industry Partnership focus group meetings, the Training Needs Assessment Survey, and individual company interviews was that so many potential entry-level employees lack the basic personal competencies necessary to be productive in the workplace. Internet research supports these concerns, and for practically all single or cross cluster career ladder models and/or competency frameworks developed, basic personal competencies were identified to be the foundation of the model. Such competencies include, but are not limited to:

- ***Integrity*** – being true to one’s responsibility; conducting oneself in an honorable way; being of good character.
- ***Motivation*** – displaying a willingness to work and learn; showing initiative to learn new skills.
- ***Work Ethic*** – believing that the work one does is important and that ultimately it strengthens character; being proud of one’s work.
- ***Dependability & Reliability*** – exhibiting promptness and neatness; avoiding absenteeism; taking responsibility to get one’s own work done, often without supervision.

These basic personal competencies, while difficult to assess in traditional interviews, are increasingly important in today’s dynamic work environment. Because of this, there are pre-employment assessment tools available on the market (too numerous to note) that measure work ethic, integrity, personality, performance indices, aptitude, behavior, etc. In addition, these tests can be developed to be industry and/or cluster specific. Utilizing a pre-employment assessment tool to determine these basic personal competencies was considered a “best practice” by human resource professionals in successful companies. When such tests are developed and/or utilized jointly by a regional industry partnership, one could ensure that all job candidates were consistently screened and evaluated, thus increasing the “quality” of the employees and the overall “integrity” of the regional job market.

Employability Skills and Competencies

Employability skills and competencies encompass a realm of skills which, until recently, were assumed to be mastered as part of the high school/vocational school curriculum. However, as numerous companies across the country have indicated, graduating students today not only lack many of the basic personal competencies listed above, but they also lack the basic employability skills necessary to *apply* their knowledge to their job. Career ladders and competency frameworks vary as to the degree of detail afforded in this area of employability skills and competencies. For the purpose of this regional career ladder model for the NEPA Logistics and Transportation Industry Partnership, this category has been divided into two sections: Basic Academic Skills and Basic Workplace Competencies.

Basic Academic Skills

Basic academic competencies include, but are not limited to, the following:

Basic Applied Mathematics – Being able to apply basic mathematical computation methods (addition, subtraction, multiplication, division) to whole numbers, fractions, decimals, percents, averages, and ratios; Being able to measure and estimate (English and Metric) time, temperature, distances, length, width, height, perimeter, volume, area, weight, speed, and velocity; Being able to correctly record and convert measurements; Being able to apply the correct operation for the problem at hand.

Reading for Information & Comprehension – Being able to read and comprehend a variety of information (memos, emails, letters, documents, spreadsheets, policy statements, bulletins) and understand how they apply to the job and business in general.

Basic Writing – Being able to use correct grammar, spelling, capitalization, punctuation, and sentence structure to create comprehensible documents; Being able to relay a theme in the writing for the correct audience; Being able to clearly communicate ideas, thoughts, or technical data in an organized, persuasive manner; Being able to support the writing with logic and examples.

Basic Computer Skills – Being able to properly navigate on a computer (use of mouse, toolbars, keyboard, scroll bars, dialog boxes), locate files, and switch between applications; Being able to choose and use the correct software application for the job at hand (word processing, spreadsheet, presentation, database, graphic); Being able to create, send, and receive electronic mail; Being able to access and navigate the Internet, utilizing searches and embedded hyperlinks.

Basic Speaking/Communication Skills – Being able to communicate verbally, using the English language, in a clear, concise manner so that supervisors and co-workers understand the message; Being able to effectively use, recognize, and interpret non-verbal cues; Being able to deliver a presentation for the correct audience, that is engaging and holds their attention; Being able to select the appropriate media for a presentation.

Basic Workplace Competencies

Basic workplace competencies include, but are not limited to, the following:

Basic Use of Technology – Being able to utilize technology appropriate for the job function (telephone, cell phone, pager, radio, remote device, handheld computer); Being able to use standard office equipment (printer, copier, fax machine, scanner, shredder); Being able to choose the appropriate technology by which to communicate information to someone.

Problem Solving and Decision Making – Being able to identify and define when a problem exists; Being able to identify potential causes of the problem; Being able to utilize reference systems to gather information relative to the problem and its potential causes; Being able to clearly present the problem to a team and/or supervisor and actively generate ideas and possible solutions to the problem; Being able to define the risks, costs, and benefits of the proposed solutions; Being able to evaluate these risks, costs, and benefits and make a decision regarding the best solution to the problem, in a time-effective manner.

Locating and Using Data – Being able to identify when information is needed and where such information can be found; Being able to organize information and use it concisely in oral and written communications; Being able to reorganize information and correctly document references.

Teamwork – Being able to work with other people to accomplish a common goal; Being able to choose appropriate behaviors/actions that will best help the team achieve its goal; Being able to constructively offer opinions and thoughts, and being respectful of others' opinions and thoughts; Being able to take responsibility for team accomplishments and failures; Being able to negotiate effectively in a group and persuade others.

Adaptability/Flexibility – Being open to change and new ideas in the workplace; Being able to willingly discard “old” methods and welcome “new” methods; Being able to work effectively and respectfully with a diverse workforce; Being able to adjust to unpredictable circumstances or events.

Planning, Organizing, and Time Management – Being able to develop a classification system for multiple pieces of information; Being able to keep and implement a prioritized plan of work activities; Being able to estimate time and resources to most efficiently complete tasks; Being able to rapidly develop alternate plans when projects drift off-course.

Active Listening Skills/Following Directions – Being able to provide full attention, in a respectful manner, when others are speaking; Being able to filter and understand information, and respond using appropriate verbal and nonverbal language; Being able to ask questions or paraphrase to indicate understanding; Being able to understand a task and accomplish that task according to the directions provided.

Customer Focus Skills – Being able to identify both internal and external customers; Being able to gather information, ask questions, and conduct research to determine customer needs and ultimately meet those needs; Being able to respond to a customer's request promptly, with accurate information; Being able to exhibit professionalism when dealing with customers, regardless of the customer's demeanor; Being able to build relationships with customers to collaboratively achieve corporate goals.

Leadership Skills – Being able to provide motivation, elicit cooperation, and negotiate effectively with others; Being able to evenly distribute responsibility and workload; Being able to take responsibility for the team’s shared work, regardless of success or failure; Being able to provide constructive criticism and praise; Being able to manage stress, control emotions, and demonstrate sensitivity; Being able to develop meeting agendas, lead meetings, assign meeting action items, and conduct meetings within scheduled time constraints.

Although many employers assume that job candidates have at least attained the basic academic skills by receiving their high school diploma, many potential entry-level employees lack the ability to apply those skills. And basic workplace competencies generally cannot be assumed either, especially if the job candidate has never held employment before. These employability skills and competencies, therefore, are key areas employers need to target for new employee training. Companies utilizing a “best practices” approach indicate that when new hires were invested in very early in their careers, they tended to stay on the job and become much more productive than their counterparts who did not receive such training. Because of the generic nature of many of the workplace competencies, training can be effectively developed through various partnerships for dissemination to all interested parties.

Technical Workplace Competencies

Technical workplace competencies are cluster specific concepts that are important to all occupations in the career ladder/framework. They build upon the employees’ core competencies and skills, and from a learning theory perspective, provide the contextual cues which the employee can use to understand the industry as a whole, and how their occupation and others fit into the entire industry.

Basic Business Fundamentals – Being able to comprehend the basic economic and financial principles of business in general; Understanding the basic concepts of supply and demand, product costing and pricing, profit and loss; Being able to visualize where they fit within the overall business and how their performance affects the bottom line; Being able to identify the major customers, competitors, and partners within the transportation, distribution, and logistics business; Understanding business ethics and accepted social behaviors in the workplace; Understanding the mission and challenges of the transportation, distribution, and logistics industry as a whole.

Basic Safety Fundamentals – Being able to practice established personal safety measures; Being able to maintain a safe work area by utilizing workplace equipment and machines according to safety procedures; Being aware of first aid procedures, evacuation procedures, fire-safety procedures, and HAZMAT safety procedures (if applicable); Being able to identify and properly report workplace safety issues; Understand the role of regulatory agencies in the transportation, distribution, and logistics industry.

Basic Supply Chain Fundamentals – Being able to understand the overall concept of how products are produced, packaged, transported, shipped, stored, and ultimately received by the end-user; Being able to understand various manufacturing/production methodologies (JIT, LIFO, FIFO, Lean, etc.) and how they affect the supply chain; Being able to understand the constraints of inventory management, the order cycle, and the associated reporting process; Being aware of the various warehouse management systems.

Most employers who implement some form of a career framework agree that by providing their employees with a basic foundation of knowledge, they are investing in the profitability and long-term success of their company. Newly hired employees are generally eager to learn as much about their job, their employer, and their industry as they can. However, as time goes on, and employees have not been provided with this basic foundation of knowledge, they become complacent and do not view themselves to be a part of the “bigger picture.”

These sets of basic industry fundamentals can be easily integrated into a new-hire training program. Because the concepts are relatively generic, they can be developed and delivered via a number of alternative media. Many companies operating a “best practices” approach to training offer similar courses through online corporate universities, as computer-based training modules, or as company/industry association webinars.

Cluster/Occupation-Specific Competencies (Grouped by Pathway)

The information for the occupation-specific competencies was gathered from company interviews, focus group meetings, the Training Needs Assessment Survey, numerous industry reports, the Career Clusters Initiative (<http://careerclusters.org>) and O*Net (Occupational Information Network) Summaries for each identified occupation (<http://online.onet.org>). Because of the vast range of companies in the Partnership (differences in processes, pathway focus, company size, type of customer/industry served, etc.), the occupations identified in each Pathway may not correspond to actual job titles/job descriptions within each company. For example, a Warehouse Associate at “Company A” may primarily be a Stock Clerk, moving items around a warehouse and recording stock data. A Warehouse Associate at “Company B” may also perform these activities, but may also be Forklift Operator Certified. However, the generic skills and competencies required, along with the recommended levels of educational attainment, should correlate closely to be fully-utilized by the majority of companies.

Tables 1 – 5 identify each of the Pathways and the occupations common to each Pathway. Note that some Transportation, Distribution, and Logistics career models also include Pathways for Transportation Systems Infrastructure and Sales and Marketing. However, these Pathways have not been included in this model based on information gained from members in the Partnership through company interviews, focus group meetings, and the Training Needs Assessment Survey. Additionally, some occupations span different Pathways, so for example, while a Dispatcher may be considered part of the Transportation Operations Pathway in one company, he may be grouped under Logistics

Planning and Management Services in another. Regardless of the Pathway the occupation is listed in, the intent of the Tables is to highlight common industry occupations, list the key skills and knowledge required to perform the job, and act as a graphical organizer so that both employees and employers can together determine career paths based on acquiring the necessary skills and/or education for movement around the ladder. And as indicated in Figure 1, *all* of the occupations listed in the Tables assume that the Personal Competencies, Employability Skills and Competencies, and Technical Workplace Competencies have been met, at least at the basic measurable level. Once on the job, then, employees can master these core competencies and skills simply through work experience and supplemental training (corporate in-house or corporate-sponsored).

Descriptions of the five included Pathways are as follows:

Transportation Operations – This Pathway includes occupations related to the transportation of goods from one point to another. Tractor-trailer drivers and truck drivers (light) drive vehicles containing goods, which they transport to customers at remote locations. Also included in this Pathway are dispatchers, who develop transportation routes and schedules to efficiently get the goods to the ultimate customer.

Facility & Mobile Equipment Maintenance – The successful transportation of goods relies on properly running vehicles, equipment, and facilities. Mechanics use their trade knowledge to diagnose, repair, and maintain diesel engines, trucks, forklifts, conveyer/material handling equipment, facilities (mechanical, electrical, and structural components), and grounds equipment.

Logistics Planning & Management Services – Transporting goods across the country on a tractor-trailer only ½ full is not the most efficient use of company resources. Occupations in this Pathway analyze transportation modes, routes, schedules, carriers, packaging, production, and storage facilities to optimize the entire supply-chain process. They negotiate with customers and other carriers to develop logistics solutions that are mutually beneficial, yet still keep the process competitive.

Warehousing & Distribution Center Services – Receiving, storing, and distributing goods to be delivered to the ultimate customer is the focus of this Pathway. Employees use a wide range of skills in numerous occupations to make sure that customer orders are filled correctly, get to the right location, and are delivered on-time. Because of the number of employees and customers involved in this operation, safety is a primary concern, and all occupations adhere to strict safety guidelines when conducting their work.

Safety, Training, & Human Resources – Occupations in this Pathway focus on implementing Safety Policies, Employee Benefits, and Training. It is usually an “overhead” function in most organizations, and not typically utilized in most Transportation, Distribution, and Logistics (TDL) career models. However, because of the inclusion of Safety Policies, Procedures, and Training, it can be a natural career progression for some employees. Workers who desire a job change, due possibly to

physical constraints, interest, work environment, or monetary reasons, already have received a tremendous amount of training, especially in the area of safety. It is often a good match to have employees from other Pathways share their experience by instructing others.

Each Table identifies the specific occupations in each Pathway. A description of the occupation, along with the base knowledge and the well-developed skills needed for that job, is included. An industry average summary of the basic educational requirements and the estimated salary of each occupation was obtained from O*Net. Salary estimates were compiled by O*Net from 2004 Pennsylvania employer-provided data.

Table 1: Transportation Operations Pathway

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Transportation Manager	Plan, direct, and coordinate the transportation operations and services within an organization	<ul style="list-style-type: none"> • Knowledge of principles and methods for moving goods • Knowledge of methods and processes for performing cost/benefit analyses of transportation operations • Knowledge of best practices for customer service and quality • Knowledge and application experience with leadership, human resource management, resource allocation, and strategic planning • Knowledge of corporate policies regarding administrative functions • Knowledge of local, state, and national driving, safety, and security laws and regulations • Knowledge of ERP, logistics planning, supply chain, and navigational software • Knowledge of transportation industry organizations and other benchmarking organizations <p>Key enhanced skills include organization, communication, delegating, strategic planning, budgeting, decision making, problem solving, and leadership</p>	On-the-job training; vocational school training required for most; or associate's degree (some require bachelor's degree)	Hourly: \$32.04 Annual: \$66,600
First-Line Supervisor, Driver Manager	Directly supervise and coordinate work assignments of drivers (tractor-trailer, delivery/short haul, yard jockeys)	<ul style="list-style-type: none"> • Knowledge of principles and methods for moving goods • Knowledge of best practices for customer service and quality • Knowledge of policies & procedures to promote local, state, and/or national safety & security operations • Knowledge of human resources practices, including recruitment, training, compensation & benefits, and personnel information systems • Knowledge of selecting training & education programs appropriate for each driver group <p>Key skills include communication, delegating, time management, problem solving, negotiation, motivation, instruction, and leadership</p>	On-the-job training; vocational school training required for most; or associate's degree (some require bachelor's degree)	Hourly: \$22.39 Annual: \$46,600

(Table 1, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Tractor-Trailer Driver	Drive a tractor-trailer truck to transport products, livestock, food, or materials to specified locations, generally over a long distance	<ul style="list-style-type: none">• Knowledge of principles and methods for moving goods• Knowledge of geography and map reading• Knowledge of local, state, and /or national driving laws, governmental policies, and regulations• Knowledge of truck operation and general maintenance• Knowledge of policies and procedures regarding safety and security• Knowledge of proper reporting and logging procedures• Ability to use and monitor equipment controls <p>Key skills include safe vehicle operation, attention to detail, truck maintenance, equipment controls operation</p>	Vocational or technical school training to obtain a Commercial Driver's License (CDL); 2 years experience with CDL and clean driving record required for most	Hourly: \$16.59 Annual: \$34,500
Truck Driver	Drive a on local routes, between company locations, or on short-haul trips	<ul style="list-style-type: none">• Knowledge of principles and methods for moving goods• Knowledge of geography and map reading• Knowledge of local, state, and /or national driving laws, governmental policies, and regulations• Knowledge of truck operation and general maintenance <p>Key skills include safe vehicle operation, truck maintenance, equipment controls operation attention to detail</p>	Vocational or technical school training to obtain a Commercial Driver's License	Hourly: \$11.49 Annual: \$23,900
Dispatcher	Schedule and dispatch workers and trucks to convey goods, usually over a long distance	<ul style="list-style-type: none">• Knowledge of principles and methods for moving goods• Knowledge of local, state, and national safety, security and driving laws and regulations• Knowledge of geography, map reading, and associated navigational systems• Knowledge of best practices for customer service• Knowledge of scheduling, routing, and developing transportation plans• Knowledge of appropriate corporate and insurance company reporting procedures <p>Key skills include communication, time management, stress management, active listening, problem-solving and decision making</p>	On the job experience; some may require vocational training or related coursework	Hourly: \$14.87 Annual: \$30,900

Table 2: Facility & Mobile Equipment Maintenance Pathway

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
First-Line Supervisor, Manager of Mechanics	Directly supervise and coordinate the activities and work assignments of diesel engine mechanics	<ul style="list-style-type: none"> • Knowledge of machine, tool, equipment, and vehicle maintenance • Knowledge of the practical application of engineering & design principles for the repair and maintenance of equipment • Knowledge of technical plans, blueprints, drawings, and models, and the design techniques involved in creating them • Knowledge of human resources practices, including recruitment, training, compensation & benefits, and personnel information systems • Knowledge of selecting training & education programs appropriate for mechanics and technicians • Knowledge of appropriate equipment and shop safety and security regulations <p>Key skills include motivation, delegating, strategic planning, problem solving, communication, time management, negotiation, and leadership</p>	Several years on-the-job training; vocational or technical school training; associates degree preferred	Hourly: \$24.07 Annual: \$50,100
Diesel Engine Mechanics	Diagnose, repair, and maintain the diesel engines of the company fleet	<ul style="list-style-type: none"> • Knowledge of diesel engine operation • Knowledge of the practical application of engineering & design principles for the repair and maintenance of equipment • Knowledge of troubleshooting techniques to diagnose and repair diesel engines • Knowledge of equipment downtime consequences on corporate bottom-line • Knowledge of basic product procurement and inventory management procedures • Knowledge of appropriate equipment and shop safety and security regulations <p>Key skills include equipment maintenance and repair, problem solving, decision making, troubleshooting, time management, and communication</p>	Vocational or technical school training; on-the-job experience, often in an apprenticeship; some may require associate's degree	Hourly: \$16.61 Annual: \$34,500

(Table 2, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Facility Maintenance Mechanic	Perform routine maintenance of facility, equipment, and grounds in order to keep an establishment in good repair	<ul style="list-style-type: none">• Knowledge of mechanical, electrical, structural, machine, tool, equipment, and grounds maintenance techniques• Knowledge of the practical application of engineering & design principles for the repair and maintenance of equipment• Knowledge of technical plans, blueprints, drawings, and models, and the design techniques involved in creating them• Knowledge of facility/building design, codes, and construction materials• Knowledge of appropriate equipment and shop safety and security regulations <p>Key skills include equipment maintenance and repair, troubleshooting, problem solving, decision making, communication, critical thinking, time management and coordination</p>	Vocational or technical school training; on-the-job experience, often in an apprenticeship; some may require associate's degree	Hourly: \$15.17 Annual: \$31,600
Forklift/Mobile Equipment Mechanic	Diagnose, repair, and maintain the mechanical and mobile equipment of a facility (forklifts, conveyers, material handling equipment such as overhead cranes, and grounds equipment/vehicles)	<ul style="list-style-type: none">• Knowledge of mechanical, electrical, hydraulic, and pneumatic equipment• Knowledge of the practical application of engineering & design principles for the repair and maintenance of equipment• Knowledge of troubleshooting techniques to diagnose and repair equipment, machines, and vehicles• Knowledge of equipment downtime consequences on corporate bottom-line• Knowledge of basic product procurement and inventory management procedures• Knowledge of appropriate equipment and shop safety and security regulations <p>Key skills include equipment maintenance and repair, troubleshooting, problem solving, decision making, time management, and communication</p>	Vocational or technical school training; on-the-job experience, often in an apprenticeship; some may require associate's degree	Hourly: \$18.46 Annual: \$38,400

Table 3: Logistics Planning & Management Services Pathway

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Logistics Manager	Plan, direct, and coordinate the logistical functions of an organization (planning and managing the physical distribution of products on a national or global basis)	<ul style="list-style-type: none"> • Knowledge of principles and methods for moving goods • Knowledge of best practices for customer service and quality • Knowledge and application experience with leadership, human resource management, resource allocation, and strategic planning • Knowledge forecasting, analysis, supply chain, and project management software • Knowledge of methods and procedures for analysis of logistics system performance • Knowledge of proposal writing, project planning, and negotiating contracts • Knowledge of demand forecasting and supply chain economics <p>Key skills include leadership, delegating, organization, communication, decision making, problem solving, analytical analysis, negotiation, and time/task/project management</p>	BA or BS degree, with industry experience required by some as well	Hourly: \$32.04 Annual: \$66,600
Logistician	Analyze, plan, and coordinate the most efficient and cost effective distribution and storage of products, often using more than one mode of transportation	<ul style="list-style-type: none"> • Knowledge of principles and methods for moving goods • Knowledge of best practices for customer service and quality • Knowledge of logistics system design and performance requirements • Knowledge forecasting, cost-benefit analysis, supply chain, and project management software • Knowledge of demand forecasting and supply chain economics • Knowledge of developing transportation plans, routes, and schedules • Knowledge of warehousing and storage solutions • Knowledge of local, state, and/or national supply-chain reporting and documentation procedures <p>Key skills include analytical thinking, problem solving, decision making, communication, time/task/project management, organization, and negotiation</p>	BA or BS degree, with industry experience required by some as well	Hourly: \$26.91 Annual: \$56,000

(Table 3, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Logistics Coordinator	Assist in the coordination of the distribution and transportation of products	<ul style="list-style-type: none">• Knowledge of principles and methods for moving goods• Knowledge of best practices for customer service and quality• Knowledge of corporate procedures regarding creation of shipping/distribution and transportation documentation• Knowledge of transportation plans, routes, and schedules• Knowledge of logistical, business, procurement, and supply chain software• Knowledge of administrative and clerical procedures for managing records <p>Key skills include communication, time and resource management, applied mathematics, critical thinking, and computer</p>	Previous work experience, with vocational or business training preferred; associate's or bachelor's degree may be required by some	Hourly: \$12.36 Annual: \$25,700

Table 4: Warehousing & Distribution Center Services Pathway

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Storage and Distribution Manager/Warehouse Manager	Plan, direct, and coordinate the storage and distribution operations within an organization	<ul style="list-style-type: none"> • Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods • Knowledge of ERP, logistics planning, supply chain, and navigational software • Knowledge of best practices for customer service and quality • Knowledge and application experience with leadership, human resource management, resource allocation, corporate policies, and strategic planning • Knowledge of demand forecasting and warehouse performance indicators analysis • Knowledge of warehouse management systems, barcoding technology, & RFID technology • Knowledge of facility safety regulations, reporting procedures, and training • Knowledge of warehousing/ distribution industry organizations and other benchmarking organizations <p>Key skills include strategic planning, organization, communication, decision making, problem solving, negotiation, and leadership</p>	On-the-job training and vocational/ business school training required for most; or associate's degree (some require bachelor's degree)	Hourly: \$32.04 Annual: \$66,600
First-Line Supervisor, Shipping & Receiving/ Warehouse Operations	Coordinate all the shipping/receiving activities and supervise the facility personnel involved with orders and customer service	<ul style="list-style-type: none"> • Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods • Knowledge of best practices for customer service and quality • Knowledge of human resources practices, including recruitment, training, compensation & benefits, personnel information systems, and corporate administrative policies • Knowledge of warehouse management systems, barcoding technology, & RFID technology • Knowledge of facility safety regulations, reporting procedures, and training <p>Key skills include leadership, delegating, communication, problem solving, decision making, time management, conflict management, team building, and negotiation</p>	Previous work experience required, with vocational/business training preferred; some may require associate's degree	Hourly: \$20.03 Annual: \$41,700

(Table 4, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Purchasing Clerk/Buyer	Create purchase orders to procure the equipment, products, and services necessary for the operation of the warehouse	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for customer service and quality• Knowledge of warehouse management system software, specifically regarding inventory control, cost/pricing analysis, reporting, and scheduling• Knowledge of negotiation techniques and strategies• Knowledge of administrative & clerical processes, including document management, spreadsheets, and database reporting <p>Key enhanced skills include communication, decision making, problem solving, negotiation, time management, stress management, and computer</p>	On-the-job training, 1-2 years preferred, with some previous work experience; some prefer vocational/business school training or related coursework; may require associate's degree	Hourly: \$15.80 Annual: \$32,900
Inventory Control/ Shipping & Receiving Clerk	Verify incoming shipments, process outgoing shipments, and accurately record all data regarding the goods while in the warehouse. Confirm records with customer	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for customer service and quality• Knowledge of corporate procedures and appropriate warehouse management software for creating shipping and distribution documentation• Knowledge of administrative and clerical procedures, including document management, spreadsheet analysis, and database reporting <p>Key skills include communication, time management, data gathering & reporting, writing, and computer</p>	On the job training; some previous work experience may be helpful, but generally not required	Hourly: \$12.36 Annual: \$25,700

(Table 4, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Customer Service Representative/ Order Clerk	Prepare customer contracts, receive and process incoming orders, and handle customer concerns	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for customer service and quality• Knowledge of warehouse management system software, specifically regarding order forms, invoices, shipping documents, and contracts• Knowledge of sales and marketing tactics involved in selling/promoting warehousing services• Knowledge of administrative & clerical processes, including document management, spreadsheets, and database reporting <p>Key skills include communication, decision making, problem solving, time management, stress management, and computer</p>	On-the-job training, 1-2 years preferred, with some previous work experience; some prefer vocational/business school training or related coursework; may require associate's degree	Hourly: \$12.31 Annual: \$25,600
First-Line Supervisor, Warehouse Vehicle Operators and Warehouse Workers	Supervise and coordinate the activities and work assignments of warehouse vehicle operators and warehouse workers	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for customer service and quality• Knowledge of human resources practices, including recruitment, training, compensation & benefits, personnel information systems, and corporate administrative policies• Knowledge of facility safety regulations, reporting procedures, and training• Knowledge of human behavior as it relates to motivation, persuasion, and learning assessment strategies <p>Key skills include communication, delegating, organization, time management, personnel management, persuasion, motivation, team building, problem solving, decision making, and active listening</p>	Previous work experience required, with vocational school training preferred as well; some may require an associate's degree	Hourly: \$19.94 Annual: \$41,500

(Table 4, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Forklift Operator/ Truck Driver/ Yard Jockey	Operate industrial equipment and drive vehicles equipped to transport or move materials and goods around a warehouse, between facilities, or to a local site	<ul style="list-style-type: none">• Knowledge of principles and methods for moving, receiving, storing, labeling, handling, and shipping goods• Knowledge of equipment and vehicle controls, appropriate lifting machines and attachments, and wrapping and packaging equipment• Knowledge of routine equipment and vehicle maintenance• Knowledge of warehouse management system software, specifically regarding input of shipping/receiving data entry into hand-held or vehicle-equipped computers• Knowledge of facility and driving safety laws and regulations <p>Key skills include equipment control & maintenance, equipment selection, critical thinking, time management, attention to detail, and computer</p>	Some previous work experience is helpful, but generally not required; forklift operator certification required (provided by employers), and some drivers require CDL	Hourly: \$13.48 Annual: \$28,000
Warehouse Associate/Warehouse Clerk	Receive, load/unload, and move materials around a warehouse to appropriate storage locations. Assemble product containers, pallets, or crates and compile stock and inventory records	<ul style="list-style-type: none">• Knowledge of principles and methods for moving, receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for facility and personal safety• Knowledge of administrative processes and procedures for taking physical and computerized stock counts, and recording shortages, damage, or defective products• Knowledge of marking, tagging, and labeling stock items <p>Key skills include data recording, communication, active listening, and time management</p>	No previous work experience or education is required	Hourly: \$9.90 Annual: \$20,600

(Table 4, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Packer/Packager	Pack and/or re-package products (by hand) as detailed by customer requirements	<ul style="list-style-type: none">• Knowledge of principles and methods for moving, receiving, storing, labeling, handling, and shipping goods• Knowledge of best practices for facility and personal safety• Knowledge of administrative processes and procedures for recording product information on appropriate forms and containers• Knowledge of marking, tagging, weighing, and labeling stock items <p>Key skills include data recording, active listening, coordination, and time management</p>	No previous work experience or education is required	Hourly: \$9.50 Annual: \$19,800

Table 5: Safety, Training & Human Resources Pathway

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Safety/Security Manager	Plan and implement corporate safety programs (including transportation and facility programs); coordinate and lead safety teams/committees to facilitate workforce safety training	<ul style="list-style-type: none"> • Knowledge of local, state, and national laws and regulations regarding the safe transportation and storage of goods, and the safe operation of facilities • Knowledge of compliance software, MSDS software, SIL software, and safety, health, and environmental management software • Knowledge of appropriate tools and technology used to analyze various safety conditions • Knowledge of principles and methods for safety curriculum design and development • Knowledge and application experience with leadership, human resource management, resource allocation, and strategic planning • Knowledge of best practices for customer service and quality <p>Key skills include communication, leadership, active listening, critical thinking, time/task/project management, strategic planning, team building, instructing, problem solving, and decision making</p>	Minimum of 2-4 years of work experience needed, along with a bachelor's degree for most	Hourly: \$30.28 Annual: \$63,000
Training and Development Manager	Plan, develop, and coordinate corporate training programs; train and evaluate instructors; develop tests and assessments, new courses, and training manuals and policy guides	<ul style="list-style-type: none"> • Knowledge of principles and methods for receiving, storing, and shipping goods • Knowledge of logistics planning and supply chain management • Knowledge of principles and methods for moving goods • Knowledge of best practices for customer service and quality • Knowledge and application experience with leadership, human resource management, resource allocation, corporate policies, and strategic planning • Knowledge of principles and methods for developing, implementing, and evaluating job-relevant curriculum and training programs • Knowledge of effective instruction, presentation, and communication techniques <p>Key skills include strategic planning, budgeting, communication, active listening, instructing, writing, and task/project/time management</p>	Minimum of 2-4 years of work experience needed, along with a bachelor's degree for most	Hourly: \$31.54 Annual: \$65,600

(Table 5, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Training/Safety Coordinator	Coordinate and implement corporate training programs, especially safety training; research available "off-the-shelf" training solutions, as well as custom-designed courses	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, and shipping goods• Knowledge of logistics planning and supply chain management• Knowledge of principles and methods for moving goods• Knowledge of best practices for customer service and quality• Knowledge of principles and methods for developing, implementing, and evaluating job-relevant curriculum and training programs• Knowledge of planning and scheduling software• Knowledge of effective instruction, presentation, and communication techniques <p>Key skills include communication, active listening, instructing, time management, writing, and research methods</p>	Minimum of 2-4 years of work experience needed, experience in instruction a plus; some require a bachelor's degree	Hourly: \$21.89 Annual: \$45,500
Human Resources Manager	Plan, implement, and coordinate the human resource management activities of an organization, such as compensation, benefits, recruiting, training, hiring/firing, corporate policies, and regulatory compliance	<ul style="list-style-type: none">• Knowledge of principles and methods for receiving, storing, labeling, handling, and shipping goods• Knowledge of logistics planning and supply chain management• Knowledge of principles and methods for moving goods• Knowledge of best practices for customer service, safety, and quality• Knowledge and application experience with leadership, human resource management, resource allocation, corporate policies, and strategic planning• Knowledge of human resources, time accounting, document management, database, and word processing software• Knowledge of local, state, and national laws and regulations regarding corporate policies and operations <p>Key skills include communication, leadership, active listening, personnel management, instructing, strategic planning, time/task/project management, problem solving, and decision making</p>	Minimum of 2-4 years of work experience needed, along with a bachelor's degree for most	Hourly: \$33.93 Annual: \$70,600

(Table 5, continued)

Occupation Title	Occupation Description	Occupation-Specific Knowledge & Skills	Education/ Training Requirements	PA State Median Wage Estimates (2004, hourly & annually)
Human Resources Assistant	Compile and record employee data; assist in employee hiring and clarification of corporate policies and benefits	<ul style="list-style-type: none">• Knowledge of basic corporate operations (transportation, warehousing/distribution, logistics)• Knowledge of best practices for customer service, safety, and quality• Knowledge of administrative and clerical procedures for managing data and employee records• Knowledge and application experience with leadership, human resource management, resource allocation, corporate policies, and strategic planning <p>Key skills include communication, computer, active listening, instructing, and time management</p>	Previous work experience or knowledge is required; vocational training or associate's degree preferred	Hourly: \$15.31 Annual: \$31,800

Supporting a Career Ladder

A career ladder is generally not effective on its own. It requires collaboration from numerous individuals and organizations to be successful. Local employers, colleges and universities, workforce investment boards (WIB's), chambers of commerce, one-stop centers, technology centers, and high school/vocational school guidance departments, for example, can all work from the same model and guide job-seekers and students to careers in the NEPA Logistics and Transportation Industry. When the parties involved take such an initiative and vow to support the process, the results of implementing a career ladder model can yield increased employee retention, performance incentives for employees, a succession planning tool for employers, and a career development tool for training developers, counselors and workforce professionals.

Pre-Employment Skills Assessment

The success of implementation, however, assumes that those utilizing the career ladder model do so in its entirety. Assumptions cannot be made regarding the core skills and competencies of potential employees. For this reason, to properly support a career ladder, Pre-Employment Assessments should be developed and implemented. Much research has been conducted in this area, and findings are simply stated: employees with scores indicating well-developed personal competencies, who have also attained a minimum level of Employability Skills and Competencies, will perform better in the workplace and will be more motivated to progress in the company. Numerous tests have been developed, and many can simply be purchased by companies and conducted online during job interviews.

Research also indicates that employees with well-developed personal competencies, but lower levels of Employability Skills and Competencies, can still become productive employees after these levels are increased through appropriate training and education. In these instances, career centers, one-stop-centers, WIB's, and/or community colleges/universities can play an integral part in developing the skills and competencies of the local workforce by offering an array of basic skills and competency courses to the community at large.

Employee Development Programs

Another important support mechanism is to implement Employee Development Programs. Some companies create training departments, some utilize the human resources department, some rely on department managers, and some contract with outside consultants to devise training programs to support career movement along the ladder. Regardless of the method, developing user-focused training that is designed specific to the industry has proven to produce the best results. For example, consider an employee who requires negotiation skills in order to move into a customer service representative position: a training class focused on retail negotiation skills would hardly enable that employee to transfer the skills to her position. In a case such as this, there simply are no "cues" for the employee to relate to, thus the training course becomes ineffective for the

employee and a waste of time and money for the employer. By studying the career ladder model, training developers can map skills to specific occupations, and then develop the training to fill the gaps for different levels of knowledge and skill attainment.

These Employee Development Programs can be developed on an individual company basis (some companies already have “corporate universities”) or as a collaborative effort with chambers of commerce, colleges and universities, WIB’s, etc. When developed as a joint project (such as the NEPA Logistics and Transportation Industry Partnership), all companies would have equal input regarding the development of the training programs and additionally, equal access to the training programs. Training such as this can be placed in a common on-line repository or website, or on CD’s/DVD’s distributed to each facility. Or, if the training is better-suited to classroom-style, employees can attend training classes together at neutral locations, minimizing the training cost to employers because it is shared among several.

An additional method which can be utilized as part of an Employee Development Program is for companies to offer to offset or provide tuition reimbursement for employees seeking occupations requiring a college degree or technical school training. If the employee sees that his employer is investing in his education, he will be more motivated to succeed in both his current and future occupations.

Employee Appraisal Systems

Once an Employee Development System is in place, it is important that employees participating in any type of training be appraised on a regular basis to monitor their performance and career goals. Performance appraisals are very effective for both the employee and employer. Human resource professionals attest to the fact that when all players are aware of what’s going on in the game, the probability of success is far greater. Again, when employees can provide input regarding their career goals, how they feel their performance rated, what they think should/can be done differently, and any company improvements they have, they feel invested-in and worthy (tying back to the basic personal competencies of work ethic and motivation).

Employers can benefit from performance appraisals because they can plan for employees’ career movement. Because such appraisals are well documented and part of an employee’s file, supervisors can make requests to human resource professionals (or appropriate company personnel) for other employees with similar career interests. This process can significantly shorten the length of time it takes to fill an open position, thus decreasing downtime or overworked employees in the department.

Recommendations and “Best Practices”

Since the inception of the Career Clusters Initiative, there has been a tremendous effort made by employers, workforce investment boards, colleges and universities, chambers of commerce, and numerous industry organizations to define skills standards and competency models within their individual industries. Not a lot has been done for the Transportation, Distribution, and Logistics industry. However, the work that has been done by different states, along with the models that have been developed for other industry clusters, has provided a solid model from which to grow the NEPA Logistics and Transportation Industry model.

The following identify “best practices” utilized by those who have implemented career ladders, along with curriculum development recommendations found during the research, and critical to the successful implementation of a career ladder model:

- ***Utilize a Variety of Media to Advertise the Model*** – Industries that have been successful in attracting new employees have advertised their career model using a wide variety of media. Several organizations have developed posters of the entire career ladder, for display at career/technology centers, one-stop centers, guidance offices, college/university counselor’s offices, etc. Because the career ladder is graphical in nature, it is also well-suited for use on a website, where someone can “drill-down” to obtain detailed information on a particular occupation. Displaying the career ladder at job fairs has also been cited as successful, along with having handouts available for each identified job. These handouts are also valuable resources for the workforce professionals mentioned above.
- ***Utilize Pre-Employment Assessments*** – These assessments can be internet-based or standard, but they are extremely helpful in gauging personal competencies, thinking and reasoning styles, occupational interests, and behavioral traits. These assessments can also be developed to be industry-specific in order to test for employability skills, or how a person would *apply* their basic academic skills and workplace competencies. This type of test is very useful in identifying the right candidate for the job – and companies attribute lower job turnover rates among entry-level employees to implementation of these pre-employment assessments.
- ***Help Develop the Employee Pool*** – Industries that have reported success in hiring from a well-qualified employment pool have not attributed that success to luck. Instead, these industries, in conjunction with chambers of commerce, workforce investment boards, community colleges, etc., have developed programs targeted toward junior high school students. They have developed assessments that test for interests and aptitudes, which are then utilized by guidance counselors in helping the students plan their high school curriculum, focusing on their career interests. In several researched programs, community colleges developed such assessments and the schools administered them (at no cost to the schools). Other programs provide similar assessments on State-sponsored career websites. In several cases, chambers of commerce followed-suit and sponsored Job Fairs specifically for high school/

vocational school students to highlight careers in local industries. Another helpful instrument cited was the development of a “mini course” for high school students/recent graduates covering topics under personal competencies, such as neatness, promptness, appropriate workplace behaviors, integrity, etc.

- ***Implement an Employee Development Plan*** – Companies that cite job turnover rates well below industry standards do not mean to brag; they simply have developed a program that invests in the employee from the start, and continues investing throughout that employee’s career. These employee development plans typically begin with assessments designed to develop job descriptions of each occupation within the company. These job description documents should list the job elements for each position: tasks, abilities, working conditions/work environment, training/experience/education levels, and pay scale. By knowing this, an applicant will know upfront what is expected of him on the job, and a supervisor will know exactly what to expect from his employees. Once a job description is developed for each occupation, training or curriculum developers can take a closer look at specific knowledge and skill sets for each occupation and determine what training is needed for movement around the career ladder. An important element of the employee development plan is to regularly appraise the employee. Human resource professionals indicate that companies who implement periodic performance appraisals, conducted jointly by the supervisor and employee, tend to have more motivated, career-focused employees. During such appraisals, employees and their supervisors should discuss career plans, performance issues, training goals for the period, and any changes that have taken place since the previous appraisal. Encouraging open communication is key to the success of these employee development plans.
- ***Develop User-Centric, Industry-Specific Training*** – Adult learning theory supports the fact that adults want training to be succinct, relevant, and convenient; otherwise, employers are wasting valuable time and money. Adults do not like to be inundated with details or case studies of information considered to be “background material.” Instead, adults want training to be to-the-point, delivered in the most efficient method, so that he or she can begin using the knowledge and skills learned immediately. Adults also need training to be relevant to their job. Unless someone has previous work experience or educational training in a subject, the only way learning takes place is for the new knowledge to hinge on “cues” (i.e., the training needs to provide examples related to the workplace, industry, or occupation so that the learner can associate the new skills with the current process). A training course on Communications developed for Call-Center Representatives is hardly relevant to a Receptionist at a distribution facility. Finally, adults need the training to be convenient. Many adults have other family obligations outside of the workplace, so training after-hours typically has been found to be ineffective. Because the intent is to make the employee feel valued, their time must be deemed important. Companies implementing a “best practices” approach plan in advance for any productivity interruptions and conduct training during work hours.

- ***Design a Multi-functional Website that is Audience Appropriate*** – Research has shown that websites with the most “hits” are *attractive* to their audience; not necessarily the most informative, but definitely the most attractive. Partnerships, industry groups, associations, workforce professionals, job seekers, employers, students, and parents all see the need for industry-specific websites so they can learn more about an industry and the careers and issues/news within that industry. The problem arises when trying to develop a multi-functional website that is attractive to all the various groups. Developers of effective websites have consulted with their target audiences (high school students, counselors, company personnel, industry association personnel, parents, etc.) to be sure that their needs are incorporated. For example, high school students would prefer to watch a quick video clip of someone performing an occupation rather than read about it in a job description. Also, the success rates of these websites are greater, especially when there are links provided for each audience group. These links can include, but are not limited to: local employers, industry associations, industry vendors, training providers, student activity sites, video libraries, wage/job growth information sites, apprenticeship listings, local colleges and universities, local online employment agencies, etc.

- ***Train Workforce Professionals on the Career Ladder Model*** – Research confirms that someone who is trained or knowledgeable about a subject is much more likely to discuss that subject. Gather together workforce professionals from the community, vocational/high school counselors, and career/technology and community college/university career counselors and train them on how to effectively utilize the career ladder model. Such training can provide an opportunity for questions, allow them to become more familiar with the industry, and be more confident in their discussions with their clients. These professionals also need to be made aware of any changes to the model, industry guidelines for specific occupations, how to access information online, and who to contact with questions. Successful implementation has been cited when everyone is kept in the loop.

- ***Develop an Industry-Based Curriculum for use by all Partnership Members*** – This document recommends training courses identified through research of companies who have implemented career ladders, career framework models, or who simply implement a “best practices” approach to training. Assuming that employees who require training for Employability Skills and Competencies get that training elsewhere (WIB’s, community colleges, adult education centers, various training providers), the following is a listing of industry-specific training courses that support successful implementation of this career ladder model:

 - Customer Focus Training for Transportation, Distribution, and Logistics Personnel
 - Project and Task Management Skills for Warehouse and Distribution Facility Personnel
 - Leadership Training for Transportation, Distribution, and Logistics Managers, First-Line Supervisors, and Senior Personnel
 - Teamwork Skills for Transportation, Distribution, and Logistics Personnel

- Time Management Skills for Transportation, Distribution, and Logistics Personnel
- Basic Business Fundamentals of the Transportation, Distribution, and Logistics Industry
- Basic Safety Fundamentals of the Transportation, Distribution, and Logistics Industry
- Basic Supply Chain Fundamentals of the Transportation, Distribution, and Logistics Industry

Conclusion

The NEPA Logistics and Transportation Industry Partnership has already identified strategies for improving the local industry. Projects such as the Training Needs Assessment and industry focus groups have brought together input from many voices within the local industry to address common training and workforce needs. In addition, by funding the development of a Career Ladder Model, the Partnership has indicated that they are committed to developing their current employees and addressing the competencies and skills gaps of the local workforce. Such an effort will, in the long-term, make their industry sustainable and much more competitive. Through collaboration, the Partnership can and should utilize the career ladder model as a tool to:

- apply for workforce development funding for curriculum/course development projects
- promote and advertise careers within the local logistics and transportation industry
- assist workforce development professionals and training developers in designing assessments for new-hires
- address employment fluctuations and occupation changes due to new government regulations or technology advancements.

The Career Ladder Model developed herein for the NEPA Logistics and Transportation Industry Partnership can be an effective tool as long as it is supported and implemented consistently. In addition, it can be expanded and mapped to pre-employment assessments – which, in the end, will help identify the best candidates for the job and enable a more competitive local industry.

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