TARGETED INDUSTRIES REPORT:

WHOLESALE TRADE - DURABLE GOODS

DRIVING 21ST CENTURY LOGISTICS FOR NORTHWEST INDIANA

PREPARED BY
THE CENTER OF WORKFORCE INNOVATIONS

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FOREWORD

The logistics industry is a major employer in Northwest Indiana and a strategic part of the region's economic success. Northwest Indiana's logistics industry has long been associated with the steel industry and related manufacturing—moving coils, slabs, materials and products throughout the Midwest, North America and the world. With the decreasing reliance on the steel industry as a customer, logistics employers have been forced to diversify their business and operate under severe economic conditions, especially in the last few years.

The logistics industry has been challenged to provide quality services in an environment of increased fuel and insurance costs, high turnover, and low margins. Changes in technology and pressure from customers to absorb increased costs have made it difficult for small companies to adapt to the new landscape or to invest in their workforce development efforts. We believe this report is an important step at creating dialogue within the logistics industry and our region's leadership to address such issues as keeping up with technology, reducing employee turnover, improving training and development, and making a better connection with our region's secondary and post-secondary students to provide a future pipeline for tomorrow's workforce—with the preparation and skills necessary for them to enter the field.

The Center of Workforce Innovations (CWI) is committed to innovative workforce development and economic development strategies for Northwest Indiana. CWI's **Targeted Industries Report for Wholesale Trade-Durable Goods** includes a survey of 20 logistics organizations in Northwest Indiana. These include employers in trucking, distribution, wholesale trade and warehousing that we consider to be top employers in the region for this industry. The report was put together to help identify challenges and opportunities for successful growth, in addition to best practices and insights affecting the logistics industry in Northwest Indiana. We also worked with various stakeholders, including education, economic development, business, labor and community organizations to get their suggestions for next steps and collaboration.

The Center of Workforce Innovations would like to acknowledge the support of the Indiana Department of Workforce Development, the Indiana Department of Commerce through the Community Development Action Grant program, and NIPSCO Economic Development, which helped make this effort possible. We would also like to recognize Matt Hunter for the compilation of this report and the Community Workforce Compact teams for their work to develop goals, objectives and action plans to help diversify our economy and provide momentum for further implementation.

Linda Woloshansky
President
The Center of Workforce Innovations

TABLE OF CONTENTS

MISSION, VISION, GOALS AND VALUES ..... *vii*
I. EXECUTIVE SUMMARY **1**
II. INDUSTRY INFORMATION **2**
Introduction 2
21st Century Logistics Conference 3
Global and National Challenges for the Industry 4
Regional Challenges for the Industry 5
Indiana's Inventory Tax 5
Outsourced Logistics 6
Northwest Indiana as a Transportation Market 7
Warehousing in Northwest Indiana 8
Trucking in Northwest Indiana 9
Air Cargo in Northwest Indiana 10
Rail in Northwest Indiana 11
The Port at Burns International Harbor 13
The Intermodal Market 14
Logistics Employment in Northwest Indiana 15
Projected Employment Growth 17
Fastest Declines in Employment 19
The Search for Good Paying Jobs 19
Certification Programs in Logistics/Supply Chain Management 20
III. EMPLOYER SURVEY **22**
Methodology, Participants and Survey Results 22
Economic and Technology Issues 22
Productivity and Compliance 23
Most Critical Jobs 23
Recruiting Employees 23
Quality of Applicants 24
School Preparation 24
Training 25
Suppliers, Customers and Transportation of Products 25
The Case for Exports 26
Quality of Life and Expansion Plans 26
Maintaining a Thriving and Growing Logistics Industry 26
IV. WORK KEYS PROFILES **27**
V. OPPORTUNITIES AND CHALLENGES **29**
The Pipeline for Future Logistics Employment 29
Learners Report 30
VI. RECOMMENDATIONS AND NEXT STEPS **31**
Specific Workforce Recommendations for Logistics 31
Conclusion 32
APPENDIX A – EMPLOYER SURVEY **35**
APPENDIX B – WORK KEYS OCCUPATIONAL PROFILE **49**
WORKFORCE INVESTMENT BOARD **53**

MISSION, VISION, GOALS AND VALUES: "INVESTING IN OUR ECONOMIC FUTURE"

In order to enhance the economic health of Northwest Indiana, it is essential that our workforce investment strategies meet the needs of our business community to create a dedicated and well-trained workforce. The Center of Workforce Innovation's Workforce Investment Board (WIB) brings private sector leaders together with policy makers from government, education, economic development, labor, and community-based organizations to analyze regional labor market trends, needs, and issues, in order to develop strategic workforce solutions for the system in Jasper, LaPorte, Newton, Porter, Pulaski and Starke counties.

VISION To develop a skilled, adaptable, motivated, and diverse workforce.

MISSION To be an agent for economic growth by enhancing workforce development opportunities in Northwest Indiana.

GOALS

- Create a clear vision of employer needs and employee skills necessary to insure a strong and diversified economy.
- Encourage service providers, business and labor to expand high quality workforce development training programs and initiatives that will meet the needs of job seekers and businesses.
- Develop a strong education pipeline that will produce trainable graduates with the requisite foundational skills needed for work and life.
- Establish and monitor the vision and standards of One Stop Career Systems in the Region.
- Expand awareness of workforce and workplace issues, trends, initiatives, and policies that will allow for informed decision-making and innovative utilization of resources.

CORE VALUES

- **Innovative Leadership** – The WIB will demonstrate leadership through strategic decisions regarding use of resources, taking appropriate risks to develop and improve services in the region and maximize the impact for job growth and job retention through workforce development.
- **Customer Focus** – The WIB will seek input from customers while planning programs and strategies to insure their needs are met. Customers include employers, job seekers, economic developers, and other relevant community groups.
- **Respect for Individuals** – The WIB believes in treating everyone with integrity, fairness and dignity. The WIB values cultural diversity and differences of opinion in our decision making process.
- **Continuous Improvement and Accountability** – Programs and services will be evaluated based on data related to customer satisfaction, core performance, and implementation of continuous improvement processes. The WIB will ensure a sound return on investment of taxpayer dollars and will work in securing resources to support the workforce development system.
- **Collaboration** – The WIB will work in collaboration with economic development, education, business, labor, elected officials, and other community leaders, to achieve greater impact and solutions in meeting the vision of a qualified workforce for our region.

A Northwest Indiana Workforce Investment Board (WIB)

TARGETED INDUSTRIES REPORT: WHOLESALE TRADE - DURABLE GOODS

DRIVING 21ST CENTURY LOGISTICS FOR NORTHWEST INDIANA

I. EXECUTIVE SUMMARY

The logistics industry has been recognized by the State of Indiana as one of the four pillars of its strategy for developing a diversified economy. In late 2002, the Indiana Department of Commerce launched the "Energize Indiana" initiative to drive economic development efforts to support key industry clusters across the state. Those four clusters are: life sciences, information technology, advanced manufacturing and 21st Century Logistics. Of particular concern to the State of Indiana is the need to expand logistics capabilities in three key areas:

- High-tech distribution
- Efficient, effective flow and storage of goods, services and information
- Intermodal Ports

The logistics industry is one of the fastest growing industry clusters in Northwest Indiana, which benefits from national infrastructure via air, rail, highway and waterways that flow directly through the region and in the neighboring Chicago metropolitan area. Northwest Indiana is an integral part of the Chicago hub for national and international trade activities and flows of product and materials across the country. Traditionally, Northwest Indiana's logistics industry has enjoyed a symbiotic relationship with the region's steel industry. However, over the last two decades of tumultuous change, globalization and consolidation in the steel industry, many logistics companies have gone out of business, merged or changed customers entirely. Northwest Indiana's steel industry is leaner, yet still intact. However, the region's logistics industry is now faced with less business from the steel mills, extremely thin margins, and more competition from outsiders. Most of the survivors have been able to diversify into other lines of business and expand the scope of their market territory.

Though there are signs of overall growth in revenues and jobs in all aspects of the logistics industry and forecasts for increased business activity, the largest gains in total payroll, number of jobs and average annual wages is being driven by the movement of durable goods through Northwest Indiana, and is the focus of this study. Durable goods are defined as goods whose intended lifespan is three years or more. A large part of Northwest Indiana's economy still hinges on the creation and movement of these durable goods in and out of the region, as witnessed by the growth in employment and wages for wholesale trade-durable goods and other supporting sectors that are considered to be a part of 21st Century Logistics.

The purpose of this report is to help create dialogue and action within the logistics industry of Northwest Indiana, and to encourage collaboration among economic development organizations, government, business, labor, education and community leaders to support this industry as a valuable source of capital, jobs and tax base. The *Targeted Industries Report: Wholesale Trade – Durable Goods* includes background information on the industry, a profile of challenges and opportunities facing the various logistics sectors, employer survey results, and information on workforce development tools and the pipeline for future workers. The report concludes with recommendations for next steps. Appendix A includes the actual employer survey results with

graphs and charts, and Appendix B includes a Work Keys assessment for the occupation of picker packer, which was identified as an entry-level job in demand by logistics employers.

II. INDUSTRY INFORMATION

Introduction

The Center of Workforce Innovations, Inc. (CWI), is a nonprofit corporation dedicated to addressing workforce development issues throughout Northwest Indiana. A key endeavor for our organization has been to help diversify our regional economy in the wake of continued employment declines in the steel industry. CWI has been engaged in a regional strategic planning process with leaders in business, labor, education, community organizations, economic development professionals and locally elected officials. We have identified four objectives that are crucial to the success of the region:

1) Diversify our region's economy
2) Increase the skills of our current workforce
3) Prepare our youth for success
4) Improve intermediary systems between workers and employers

As a result, CWI developed an Industry Cluster Project to identify targeted industries for business expansion and attraction throughout Northwest Indiana. Clusters were chosen as targeted industries based on a combination of three criteria: greatest potential for employment, fastest growing industries in the region, and highest wage levels. These include advanced manufacturing, 21st Century logistics, healthcare, professional services, information technology and life sciences, which also encompasses all of the clusters targeted by the State of Indiana's *Energize Indiana* program. Our mission as a Workforce Investment Board (WIB) is to be a catalyst to proactively enhance and promote workforce development opportunities for growth.

The purpose of this project is to assemble the following for each industry cluster:

- Profile of infrastructure and support services that already exist in the region
- Track changes in employment levels and wages and other costs of doing business
- Baseline assessment of the skills, knowledge and experience levels needed for select occupations that are in high demand, difficult to hire or retain, or have higher turnover rates
- Create a "best practices" approach for reducing turnover, increasing productivity and providing training to workers
- Directory of regional training and educational providers and programs
- Cost-of-doing business analysis to identify the potential for a competitive advantage of doing business in Northwest Indiana, or identify uncompetitive costs or barriers to doing business in the region
- Prepare a toolkit of this information to be utilized by regional economic developers and workforce development to develop marketing plans, implement strategic planning initiatives and develop incentives for new business attraction, retention and expansion

Our survey of the logistics industry in Northwest Indiana includes a variety of employers, including trucking, distribution, wholesale trade and warehousing. Northwest Indiana is defined

in this report as the seven counties that make up Region 1 as grouped by the Indiana Department of Workforce Development. Region 1A includes Lake County. Region 1B includes the following six counties: Jasper, LaPorte, Newton, Porter, Pulaski and Starke. Region 1B is served by The Center of Workforce Innovations (CWI) and Region 1A is served by the Lake County Integrated Services Delivery Board (LCISDB).

The information gathered will be presented to all stakeholders who have participated in this strategic planning process, hereafter referred to as members of the Community Workforce Compact. Implementation of this project will assist Northwest Indiana in diversifying its industries and encourage economic growth among businesses related to these industries. The goal of this process is to bring together an industry that is facing common challenges, to develop a strategy for working together to meet the growing needs of Northwest Indiana's logistics industry, and to ensure that our current and future workforce is prepared to deliver those skills and services.

21st Century Logistics Conference

On May 15, 2003, The Center of Workforce Innovations hosted a conference on 21st Century Logistics to highlight the industry's economic impact on Northwest Indiana and how to prepare the region for future growth. Over 70 attendees participated, representing distributors, wholesalers, warehousing, trucking, logistics brokers, economic development and educators. The conference featured presentations by William Friedman, executive director of the Ports of Indiana, Bill Miller, Director of Business Development for Faure Brothers and the past-president of the Warehousing Education and Research Council (WERC), and Frank Szczepanski, Vice President of SandCherry, Inc. and a member of the Purdue University Calumet's UfoundIT Technology Group.

Will Friedman, Executive Director for the Ports of Indiana, spoke about the opportunities to expand the operations and efficiencies of the Ports and the new financing authority granted by the State of Indiana to fund economic development projects throughout the state, regardless of location. Friedman discussed recent legislation that was passed to allow the Ports of Indiana to get involved in rail port projects anywhere in the State of Indiana. He also identified the need for leadership to put together an action plan and prioritize development to improve intermodal facilities and connectors, work together to overcome barriers and leverage competitive advantages.

Bill Miller talked about the need to develop and keep quality people, help them work safely, and adapt to the ever-changing demands of the logistics industry. With practical insights and best practices from over 25 years of experience, he emphasized the need to find better venues for recruiting, including employee referrals, colleges and recruiting services, then screen, test and make sure employees have the skills they need—which results in reduced turnover, better productivity and happier customers. The workforce presentation concluded with an overview of some of the new technological developments shaping how logistics companies will meet customers' demands—especially for increased visibility and tracking of how things get moved. All of these services require a much higher skill level from the logistics workforce.

Frank Szczepanski spoke about the need and opportunity to develop a “Center of Logistics” in Northwest Indiana to leverage its strengths in terms of strategic location, its brain trust of talent at local universities, and hands-on experience of logistics and distribution companies throughout the region who already have a national and international presence. The Center would focus on information flow—not just goods. It would solve the visibility problem by providing real time information about the movement of materials, cargo and product, whether companies in Northwest Indiana actually touched it or not. The Center would help establish IT logistics businesses that are global in scope, and help the region become the “Crossroads of Information.” CWI followed up with several logistics employers who participated in the conference to develop an analysis of the opportunities and challenges facing the industry within Northwest Indiana. A compilation of their insights is included in the survey of logistics employers in Appendix A. The majority of logistics employers surveyed indicated a strong interest in working as an industry group to develop a strategic plan for the region to support mutual goals for business development, workforce development and creating a pipeline for future workers.

Global and National Challenges for the Industry

Due to the extremely competitive nature of the logistics industry, it is often very difficult to get employers to work together on issues of mutual interest unless there is a crisis. The majority of employers in this industry are fiercely independent, and typically have less than 20 employees. However, larger companies can leverage their economies of scale to offer more services and drive prices lower, which is squeezing out many small companies. It is also a buyer's market: many inefficiencies have been wrung out of the system by major customers and the increasing power of intermodal logistics brokers, who leverage transportation providers on such characteristics as speed of delivery and lowest price.

Increased homeland security and U.S. Department of Transportation compliance requirements have had their effect on the nation's supply chain since 9/11, requiring considerable investment in technology and process changes to protect the nation's food supply and provide more visibility and accountability for the industry. In the last few years, the industry has shown signs of vulnerability when dealing with foreign impacts like the SARS virus and the labor strife at major ports on the West Coast in 2003, which disrupted the entire nation's economy for several weeks after the dispute was resolved and effectively shut down the supply chain for a multitude of manufacturers and retailers.

Mergers in the industry have helped some companies to become more competitive through decreased overhead and administration costs, complementary customer lines and increased leverage of distribution infrastructure like terminals and warehouses—although many small logistics companies are accusing one particular merger of stifling competition. Yellow Freight acquired Roadway Express in 2003, making the new company, Yellow Roadway, the third largest transportation company in the nation behind FedEx and UPS. The combined company is by far the largest LTL (less than truckload) company in the U.S. with over 30% overall market share for long-haul LTL freight traffic, but causing a monopoly in many markets that they operate in and making it very difficult for smaller companies to compete. Yellow Transportation and Roadway Express still operate as divisions of Yellow Roadway, with a combined fleet of over 16,600 tractors, over 62,000 trailers and over 700 terminals. There are fears that the merger will eventually lead to price hikes and more bankruptcies for smaller carriers—however, if the

merger does not go well or if capacity is not well managed, there are opportunities for smaller companies to differentiate themselves on customer service and flexibility.

Regional Challenges for the Industry

Closer to home, the logistics industry in Northwest Indiana is highly reliant upon the rest of the Midwest economy, which has had a much slower rebound than other regions in the U.S. since the recession of 2001. The State of Indiana enjoys an overall advantage in terms of its costs of doing business when compared to states like Wisconsin or Illinois, but Michigan and Ohio have been very aggressive about providing incentives for expansions and relocations, and have seen a number of major projects come their way.

By its very nature, the logistics industry is very mobile, allowing national and large regional service providers to capture business that passes through Northwest Indiana by offering increased levels of service, especially those requiring investments in technology to provide GPS tracking of shipments and real-time information on delivery times, electronic tagging of merchandise and inventory management. This has caused a number of logistics companies in the region to upgrade their information management systems to meet increased customer demands, and provide higher-level services to match those of larger rivals. Other challenges include lingering perceptions regarding Indiana’s receding inventory tax, manufacturing and distribution outsourcing that shifts companies and jobs out of state or out of the region, and the difficulty of trying to leverage the region’s proximity and resources to Chicago as a logistics asset.

Indiana's Inventory Tax

Despite Indiana's inventory tax, there have been a number of companies that have expanded or relocated to Northwest Indiana in recent years. Several communities have been successful in building a local cluster of trucking, warehousing and related logistics companies that want to do business in the Chicago area but don't want to pay Chicago prices—especially if the majority of their inventories were destined for outside of the State of Indiana, since outbound inventory is exempt from the state's inventory tax. Companies that deal with significant inbound Indiana inventory have complained that the State of Indiana's tax on inventory made it more costly to do business and located elsewhere. In fact, economic developers and commercial/industrial real estate brokers concede that the Indiana inventory tax created Bolingbrook, IL and other corridors in the Chicago area with significant warehousing and distribution activities.

The State of Indiana has recently made significant steps to gradually eliminate the inventory tax. House Enrolled Act 1001ss was passed during the 2002 Special Session of the Indiana General Assembly, and was signed into law by Governor O’Bannon on June 28, 2002. The law stipulates that a statewide 100% deduction for the assessed value of inventory will be available to all Indiana taxpayers for assessments made in 2006 for taxes payable in 2007. Individual counties were allowed to adopt an interim deduction for the assessed value of inventory between January 1, 2003 and March 30, 2004. Counties now have the ability and flexibility to eliminate the inventory tax in their counties and replace it with a local County Economic Development income tax. Voluntarily eliminating the inventory tax will give those counties a competitive advantage against counties that still rely on the inventory tax until it is completely phased out. The Work-in-Process Interstate Inventory Tax Exemption was extended to inventory that is used in an

operation to alter personal property into a new or changed state (or incorporated into personal property) that will be shipped out of the State of Indiana. Already, the repeal of the inventory tax is causing more companies to become interested in locating to the State of Indiana, as evidenced by recent announcements of very large distribution centers being built around the state.

Outsourced Logistics

The logistics industry is extremely sensitive to fluctuations in the national and global economy. Even though the logistics industry was growing rapidly during the 1990s, it was already facing lean times due to a transition to a global economy that hit one of its greatest customers—manufacturing. As manufacturers shifted their operations overseas, many suppliers and related logistics companies folded or began taking on lower margin customers just as fuel prices and other costs of doing business began to rise. Employers responded to increased fuel costs and double-digit increases in insurance costs by keeping wages relatively flat for some jobs like truck driving.

Employers cite flat wage growth, increased drug testing, background checks and regulatory restraints on drivers' hours on the road as major factors that resulted in an exodus of drivers from the industry. Logistics employers and manufacturers faced tremendous pressure to reduce costs to remain competitive and maintain their distribution channels with a shortage of experienced and qualified drivers. In order to lessen the blow, many companies began to outsource components of their business that were not considered a core activity, like distribution.

Outsourcing of distribution, warehouse and trucking activities has created a rise in third party logistics providers (3PL), with massive consolidation and bankruptcies in the last few years as net margins dropped to some of their lowest levels ever. In fact, net margins of 1% are now considered rather good for the industry. Contracted third-party logistics (3PL) services are a growth industry. According to Richard Armstrong of Armstrong Associates, Inc., a leading logistics consultancy, the U.S. 3PL industry grew from $60.8 billion in 2001 to $64 billion in 2002. 2003 gross revenues for 3PL are $76.9 billion. The largest segments are non-asset-based domestic transportation management, international transportation management and value-added warehouse/distribution services.

What this means for Northwest Indiana is that the higher margins in the logistics industry and higher paying jobs tend to center around the movement of durable goods within a manufacturer's supply chain. Even though there is significant outsourcing of logistics operations to 3PL providers, there are still a number of higher-paying jobs with higher-level skills within these manufacturers in supply chain management, resource management, logistics brokerage, operations management and procurement—however, this work is often done by one person or a very small department within the organization.

Outsourcing tends to be focused on low-margin operations and eliminating lower-paying, low-skilled jobs. Customers are now more likely to look for providers to handle all of the distribution process. National and large regional logistics companies can provide trucking, warehousing, intermodal transfers for rail, air and by ship in addition to other services. This places them higher on the food chain than a company that only provides one core service like trucking or warehousing.

One alternative arrangement is the independent logistics broker, who coordinates a variety of services through a network of 3PL service providers and usually has a more direct relationship to customers than a trucking company or warehouse. They negotiate routes, schedules, pricing, terms and who gets the work, whether it is transportation, warehousing or a combination of services. Brokers feature one-stop shopping, and handle all aspects of the logistics process for their clients in-house by offering turnkey services, which they then outsource to select contractors. Most of these contractors operate on thin margins, invest minimal time or resources on training or employee development, and tend to have high turnover rates. Contractors mostly compete on price, with higher margins for niches like hazardous materials, temperature-controlled handling, just-in-time deliveries and heavy loads requiring special permits.

Outsourcing of logistics operations will continue to be a key factor in the shift of jobs and wages from higher paying manufacturers to lower paying third party providers. Another related factor is the outsourcing of procurement services. According to research from the Aberdeen Group, "Companies that outsource procurement services have recognized rapid and measurable cost reductions and improved overall operational efficiencies." (www.aberdeen.com)
In a recent survey of over 750 senior executives in procurement, supply chain management and corporate finance, these companies reported the following savings as a result of their outsourcing:

- An 18% reduction in the prices paid for goods and services
- 50% less time spent on sourcing and procurement cycles
- A 60% improvement in contract compliance
- A 25% reduction in procurement administration and automation costs

As outsourcing of procurement becomes a more acceptable practice, it will be combined with outsourced supply chain management to set a new standard for how companies allocate resources and manage their channels of distribution. Several logistics companies in Northwest Indiana have already made significant investments in IT and upgraded their accounting services in order to accommodate the increased demands of their clients—without being able to increase their prices, further eroding margins in an increasingly competitive environment.

Northwest Indiana as a Transportation Market

Northwest Indiana is in a strategic position to capitalize on the growing flow of goods and materials through the Chicago area, with increased opportunities for intermodal traffic via truck, rail, air and water. Thanks to the combination of Lake Michigan's "footprint" and the existing highway and rail infrastructure, all traffic around the tip of Lake Michigan invariably passes through Northwest Indiana. Northwest Indiana's logistics industry has an opportunity to work with local economic development organizations, government and community leaders to leverage the region's proximity to Chicago, improved tax environment, existing infrastructure, available workforce and other factors to bring more business into the region.

FIGURE A: International Truck Flows – Chicago 1998

Line weight denotes truck traffic volume.
Source: U.S. Department of Transportation

As seen from FIGURE A and FIGURE B, Chicago is a major hub for the flow of goods to and from regional, national and international markets. The map in FIGURE A shows the flow of international truck traffic to and from Chicago. Most international movements move to and from major ports and border gateways.

FIGURE B: International & Domestic Truck Flows – Chicago 1998

Line weight denotes truck traffic volume.
Source: U.S. Department of Transportation

The map in FIGURE B shows the flow of international *and* domestic truck traffic to and from Chicago. Usually, long distance truck flows connect major production areas to major areas of consumption or indicate major routes between regional distribution centers and local markets.

Warehousing in Northwest Indiana

Currently, there are at least 35 employers who have warehousing as their primary business activity in the seven counties that comprise Northwest Indiana. This does not include employers like retailers or manufacturers who also provide warehousing as a secondary operation. Warehousing has undergone tremendous changes nationally as new technologies like Radio Frequency Identification (RFID) tags, voice-activated systems, satellite and Web-based data services track real-time delivery, inventory, storage, even temperature and humidity levels for some products and materials. With the increased adoption of just-in-time manufacturing and retailing, many warehouse operators have responded by providing services for a particular market or industry-specific niche, or by providing value-added services like customization, repairs and customer service.

Trends in warehousing employment include higher level skills for computerized tracking of orders and bills of lading, utilizing more automation of picking and packing, and increased efficiencies throughout their operations, which results in less people being needed to run a facility. Customers usually drive the need for updated technology and efficiency, though some

warehouse providers have invested in technological advances in order to reduce errors, lower costs and leverage faster performance into better billing and payment terms from their customers.

Many of the employers that CWI interviewed still rely on phone and fax for their operations, with paper bills of lading and invoices. Some employers have made the transition to either a proprietary electronic data exchange (EDI) system through their major customers, or are utilizing e-mail and Web-based solutions to provide real-time tracking of shipments, inventory control, digitized documents, delivery notification and even online bidding for work through public and private network exchanges. These exchanges can pre-qualify bidders, allow customers to set terms and pricing, and let market forces prevail. This trend is also becoming evident in the trucking industry as savvy companies use the increased level of online communications and database bidding to reduce the number of "deadheads," the industry term for an empty truck on its way back to its point of origin.

Trucking in Northwest Indiana

From 2001 to 2002, the number of trucking firms in Northwest Indiana increased by 3.1% to 525. Some of this growth is the result of companies from Illinois moving across the border because of Indiana's lower costs of doing business and the relative ease to still service their existing Illinois customers. Typically, the majority of domestic truck trips stays within the state of origin, or has a destination in a neighboring state. Four major interstate highways, I-65, I-80, I-90 and I-94 cross Northwest Indiana, giving the region a strategic advantage as a trucking hub within the State of Indiana, which is often referred to as the "Crossroads of America." 65 percent of the nation's markets can be reached in a single day by truck. More than one-third of all Americans and two-thirds of all Canadians live within one day's ground travel.

The full impact of NAFTA on truck traffic to and from Mexico and Canada is yet to be felt in the region, as restrictions on the reciprocal flow of goods and materials have not been lifted between the U.S. and Mexico. Cross-border trucking has faced increased scrutiny and restrictions among the U.S., Canada and Mexico due to the Homeland Security Act and other measures that have been implemented since 9/11. No doubt, easier access for Mexican and Canadian trucks to enter the U.S. will put pressure on the wages of U.S. workers and increase the level of competition for U.S. employers—however, any forecast or recommendation is beyond the scope of this report.

The State of Illinois' fee increases for logistics employers—especially trucking—will cause more transfer of business from that state into Indiana since the ability to move freight traffic across state borders has become less regulated through the International Registration Plan (IRP). Since 1973, the American Association of Motor Vehicle Administrators (AAMVA) has been an advocate and administrator for the International Registration Plan (IRP), which created a registration reciprocity agreement to make it easier for interstate freight traffic to navigate through various permits and individual state regulations. The IRP is an agreement among 48 states, 10 Canadian Provinces and the District of Columbia that allows a motor carrier to register commercial vehicle fleets for travel in all IRP jurisdictions by filing the paperwork with the home (base) jurisdiction. The IRP authorizes the registration of over 2.0 million commercial vehicles. In addition, the repository is working with Mexico on steps to enter the IRP agreement.

There has been increased activity in truck drivers and trucking companies transferring their vehicle registration and home base from Illinois to bordering states like Missouri and Indiana due to large increases in Illinois' registration fees since last year. On June 20, 2003, the State of Illinois added a 36 percent surcharge to the fee, called the Commercial Distribution Fee and changed the rolling stock exemption. Since then, the number of IRP-registered trucks in Illinois has declined by almost 17,000 and according to *Land Line*, a trucking industry media source, "2,718 trucking companies have either closed their doors or left the state." This activity has also resulted in increased leasing of buildings for trucking terminals and warehousing in the State of Indiana. It remains to be seen whether these companies will remain—the Illinois legislature is already considering a repeal of the fee increase to stem the flight of trucking companies.

Air Cargo in Northwest Indiana

The Gary/Chicago International Airport has successfully attracted a lot of activity in the last few years. The loss of Pan Am Airlines has been offset by the addition of Southeast Airlines, Casino Express Airlines and Hooters Air, which offer passenger service to some select vacation locations with the potential for additional flight destinations as market demand grows. Additionally, Boeing houses its corporate jets at the airport, and there has been some discussion about attracting more air cargo freight traffic that is currently being handled by Midway and O'Hare Airports. Expansion efforts are already underway to increase traffic and capabilities, and to position itself as a regional airport serving the Chicago metropolitan area. The Gary/Chicago International Airport (GCIA) also offers a Foreign Trade Zone[*] for companies, however such a benefit must take into account the new restrictions required by the Homeland Security Act on air cargo. Currently, most regional air cargo is being routed to and from Chicago and South Bend, though the GCIA is now handling close to 3,500 tons of air cargo.

There are some factors that make a compelling case for the GCIA to target air cargo traffic. Since 9/11, passenger carriers must meet more stringent guidelines for carrying air cargo. Some airlines, like American Airlines Cargo, have reacted by shifting cargo traffic to dedicated planes that do not carry passengers. Other major airlines have reacted by sharply reducing their cargo traffic and seem to be more concerned about the impact of low-fare carriers. They have shifted to fewer flights and smaller planes, which have smaller load capacities for cargo and tighter flight schedules. As a result, most wide-body passenger planes are only at 30% capacity for cargo freight and most narrow-body passenger planes have none. In addition, rising fuel prices, insurance and security issues have made it more expensive and difficult to transport air cargo on a competitive basis. Most of this service is being diverted to UPS, FedEx and other commercial carriers who use their own fleet of dedicated planes, with the closest hubs being located in Chicago and South Bend.

The new realities of the airline industry have simply made it more efficient and economical for trucks to meet a time-specific delivery target than air freight for trips less than 1,000 miles. Since air cargo demand is still growing faster than passenger demand, there may be an opportunity to attract small niche companies or capture excess demand that cannot be easily met by existing capacity constraints at the Chicago airports. According to the Federal Aviation Authority (FAA),

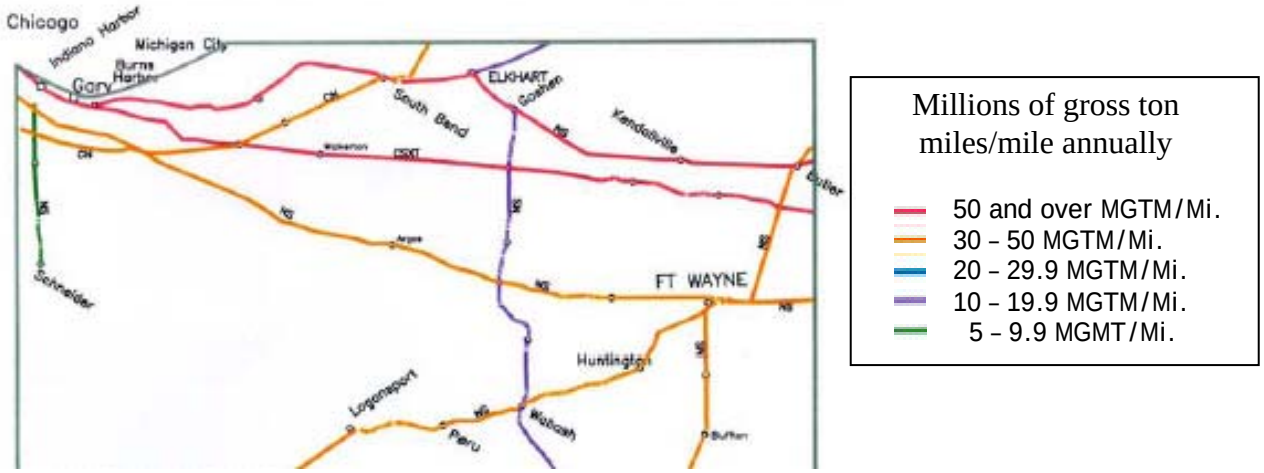
[*] Foreign Trade Zones (FTZ) are regulated by the U.S. Department of Commerce, International Trade Administration. FTZ benefits are described in detail at http://ia.ita.doc.gov/ftzpage/tic.html.

domestic passenger carriers had a 10% reduction in cargo revenue (revenue ton-miles) in 2002, whereas all-cargo carriers declined in revenue ton-miles by only 2.8% in 2002. There was a 3.8% increase in international markets, and the projection is for faster continued growth in that sector than domestic air cargo. This could be a market niche for global expeditors to take advantage of the growing capabilities and strategic location of the Gary/Chicago International Airport.

Rail in Northwest Indiana

Northern Indiana has one of the highest concentrations of rail service routes in the U.S., including service by Canadian National (CN); Chicago South Shore and South Bend (CSS & SB); CSX; Elgin, Joliet and Eastern; Indiana Harbor Belt (IHB); Norfolk Southern (N&S); and the Union Pacific. However, with the growth of lean manufacturing practices and just-in-time inventory, it is very difficult or impossible for many manufacturers to transport by rail due to the delays through the Chicago area rail yards. For most wholesale trade-durable goods transactions, the speed of trucking and commercial carrier wins out over the lower costs and longer delivery time for rail.

FIGURE C: Major Railroad Lines in Northern Indiana



Source: Indiana Department of Transportation

FIGURE D: Rail Freight Traffic Flows

Line weight denotes rail traffic volume.
Source: U.S. Department of Transportation

The majority of tonnage going out of Indiana is destined for Illinois, Ohio, Kentucky and Michigan, in that order. Two-thirds of tonnage terminating in Indiana came from Illinois, Michigan, Ohio and Louisiana, by order of volume. The decision to use rail is usually driven by the need to move goods and materials at least 400 to 500 miles or more; otherwise trucking is considered to be the better alternative. Nationally, railroads move over 40 percent of all ton-miles of intercity freight—almost as much as trucks, airlines and barges combined.

The relationship between trucking and rail is tied to the intermodal transportation of containers and

trailers. Because of the difficulty in moving containers through the Saint Lawrence Seaway, such traffic is usually transferred to rail much further east. Though Northwest Indiana has significant traffic passing through the region, the lack of a major intermodal facility necessitates reliance on terminals in other states, such as Chicago, Louisville, Cincinnati and Toledo. Most terminal traffic in Northwest Indiana is from Chicago. The Hoosier Lift terminal in Remington, Indiana, near I-65 is on the Toledo, Peoria and Western Railway and is considered within the logistics industry to be an incidental component of the intermodal market in the Midwest.

According to the Indiana Rail Plan, compiled by Parsons Brinckerhoff in 2002 on behalf of the Indiana Department of Transportation, "the nation's railroads carry 70 percent of automobiles and trucks, 64 percent of coal, 40 percent of grain and 20 percent of chemicals. The cost of providing rail services has declined from 3.04 cents in revenue per ton-mile in 1985 to 2.26 cents in 2001. Most of the rail network in Indiana is privately owned, and provides one of the most cost-efficient modes of freight traffic to and from the region." However, only recently have the large Class 1 railroads been willing to share their tracks with their competitors, and are now collaborating to oversee a project that is designed to create five corridors in the Chicago area in order to create better connections and eliminate bottlenecks.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE) is a $1.5 billion plan to modernize the freight rail infrastructure in Chicago, and is sponsored by the City of Chicago, the rail industry and the State of Illinois. U.S. Transportation Secretary Norman Mineta has already voiced his support for the project. "While the larger Chicago area will benefit from the improved safety, reduction in traffic congestion and improved air quality, the rest of the country will benefit from improved rail service and increased efficiency and reliability of the nation's freight hauling surface transportation system."

Close to 40,000 freight cars slog their way through the region each day at an average speed of less than 12 mph, due to a bottleneck in the existing rail infrastructure. According to the Illinois Road and Transportation Builders Association, this situation has been ignored by the railroads, the State of Illinois and the federal government for years.[*] The CREATE plan is seen as the best way to modernize the system by expanding five rail corridors, building 25 overpasses and underpasses in Chicago and the surrounding suburbs, and creating six railroad "flyover bridges" to separate freight trains and passenger trains. It is also quite likely that a reduction in the current congestion would also help eliminate the practice of idling trains in Northwest Indiana as trains wait for their turn to enter the Chicago rail yards or for the Metra commuter train traffic to subside.

Funding such a large multi-year project will probably require federal transportation dollars, which are hard to come by. The State of Indiana and in particular, the Northwest Indiana region has a lot at stake in this endeavor, and could help provide leverage for a joint venture to ensure that Northwest Indiana's rail infrastructure is also able to handle the increased volume of rail freight transportation, which is projected to double throughout the U.S. by 2020. Increased utilization of rail would greatly reduce the amount of congestion on the region's interstate highways, but would require collaboration among the large national Class 1 railroads, government leaders and rail customers in both Northwest Indiana and the Chicago area.

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[*] Illinois Road and Transportation Builders Association, 2003

One potential opportunity is Indiana Harbor Belt's Gibson Rail Yard in Hammond, near U.S. 20 and the newly expanded Cline Avenue, which connects to either I-94 or the I-90 toll road and is minutes away from I-65. The site has over 350 acres in an urban metropolitan area, with existing rail infrastructure, utilities, an available workforce and other amenities. Half of the park is within an Empowerment Zone, which qualifies participating companies for various tax credits and incentives. The City of Gary is working to remove and relocate various rail lines surrounding the International Gary/Chicago Airport in order to facilitate its expansion. The intermodal services offered at the Port at Burns Harbor is another likely candidate for infrastructure improvements to increase capacity and efficiency. Projects like these lend themselves to significant study to find ways to increase intermodal services and improve the infrastructure in the region, and will require local funding and consulting from industry experts to ensure that such an investment meets the needs of the region as well as the Chicago market.

The time has never been better for economic development organizations, government leaders at all levels and other stakeholders to identify the bottlenecks that exist in Northwest Indiana and over the border into Illinois, and develop a prioritized agenda to work with site owners, major rail users and the railroads to determine the best course of action. A recent meeting sponsored by Chicago-based groups Business Leaders in Transportation, the Metropolitan Planning Council and Chicago Southland Economic Development Commission met with Northwest Indiana leaders in Hobart to highlight the need for cooperation between Illinois and Indiana. Securing state and federal funding for priority projects is very difficult, yet vital to the region's ability to function as a major hub for logistics. The Chicago groups are already making plans for an improved intermodal environment, and have invited Northwest Indiana stakeholders to participate. Improved rail and intermodal infrastructure is necessary for economic growth, the creation of good paying jobs, and reducing congestion and air pollution throughout the Chicago metropolitan area.

The Port at Burns International Harbor

Burns International Harbor leads all western Great Lakes ports in international cargo, and provides access to the world via the Saint Lawrence Seaway or the Mississippi River. Each year, over six million tons of domestic and general cargo is handled by Burns International Harbor. The 500-acre harbor offers a complete line of stevedore, RoRo (roll-on, roll-off), freight consolidation, security and docking services. In 2003, the State of Indiana granted authority to the Ports of Indiana to enter lease-financing agreements with Indiana businesses for capital projects, backed by bonds issued through a provision of the state's Energize Indiana initiative for economic development projects around the state, regardless of whether the business uses the port or not. Eligible businesses can be corporations and developers located anywhere in the State of Indiana who have investment-grade credit. Lease financing is highly beneficial to companies who need to secure fixed interest rates, arrange long-term financing, deduct lease payments (principal and interest) for income tax purposes, maintain substantial control of the new facility throughout the term of the lease, or conserve capital for investment in research and development. In addition, interest on bonds is exempt from state income tax for the bond buyer.

The Ports of Indiana also announced plans to develop a number of intermodal logistics centers throughout the State of Indiana—not just at existing port sites. These facilities will be strategically located to expand the capabilities of Indiana's logistics industry and promote

economic growth by collaborating with area colleges and universities to create logistics training and resources that are designed to assist logistics employers with their workforce development needs. An employee could learn a specific area like procurement or inventory management without having to enter an associate's or bachelor's degree program. Additional Ports of Indiana efforts could include the development of intermodal hubs to provide a central location where various modes of transportation converge, such as rail, interstate and water transport. These hubs should enable businesses to ship products more efficiently and at lower costs by leveraging bundled services and providers since intermodal hubs also encourage the co-location of companies with related products or missions. In addition, the Port at Burns Harbor offers a Foreign Trade Zone for companies that import or export goods.

The Intermodal Market

Northwest Indiana should certainly be considered to be a strategic location for both a logistics center and an intermodal hub. This is an opportunity for educators, workforce development agencies and economic development organizations to work with logistics and manufacturing companies to create the resources needed to train and prepare residents for jobs in logistics. Economic development organizations and existing businesses could help the Ports of Indiana to identify additional companies that could benefit from locating near the Port at Burns Harbor to take advantage of the port, rail and highway infrastructure already in place. As previously mentioned, the Gibson Rail Yard already exists in Hammond and could be an ideal location to facilitate expansion and infrastructure to attract business development in need intermodal capabilities. However, constructing a large rail-served intermodal facility in Northwest Indiana would require the support of large rail customers and Class 1 railroads to be successful, in addition to collaboration among community governments, the State of Indiana and the Indiana Department of Transportation.

Some strategic intermodal hubs that impact Northwest Indiana are located in Columbus, Ohio, Joliet, Illinois, and Kalamazoo, Michigan. These hubs offer companies reduced transportation costs and improved supply chain management with features like value-added warehousing, e-commerce fulfillment and other related services. These large intermodal hubs threaten to make Northwest Indiana's short line rails obsolete, and cause more trucks from Indiana to have to travel to Illinois in order to drop off or pick up loads. The CenterPoint Intermodal Center, near Joliet, Illinois, is an $800 million development on 2,200 acres. 621 acres are designated for an intermodal rail facility and plans call for over 17 million square feet of space for warehousing, distribution and light manufacturing. The project is projected to create 20,000 construction jobs and over 16,000 permanent jobs by 2012.

Midlink Business Park is located along southwest Michigan's I-94 corridor. The park is strategically located midway between Chicago and Detroit. The 1.6-million-square-foot, multi-tenant space is split between two buildings, separated by a truck plaza with 28,800 square feet of office space. The Park has 240 acres of land available for build-to-suit projects including industrial, R&D, flex space, office, and retail development.

The Union Pacific Global III Intermodal Facility, located in Rochelle, Illinois is a consolidation of operations between Global III and Union Pacific's Chicago area intermodal yards. The $187 million project makes it the third largest intermodal facility in the world after Hong Kong and

Singapore, acting as an interchange hub for rail shipments of containers moving through the Chicago area. The facility was designed to consolidate traffic inbound from the west and outbound traffic and to reduce the time needed for resegmenting trains and blocking of cars. Over 25 trains with more than 3,000 containers pass through the terminal each day, transferring containers from rail to truck and vice versa. The container yard can hold 7,200 units, and the intermodal terminal features 720,000-lift capacity and a 10-lane automated gate entrance.

Logistics Employment in Northwest Indiana

Tables A through D compare the data in Region 1 on payroll, number of employers, employment and average annual wages to establish baseline data, which is tracked by the Indiana Department of Workforce Development. In Northwest Indiana, the fastest growing segment within the logistics industry has been SIC 50 Wholesale Trade-Durable Goods. For this report, SIC 50 was converted to the North American Industry Classification System (NAICS). In order to reflect the interdependence of wholesale trade with related sectors in the logistics industry, this report tracks economic activity and issues in warehousing, transportation and distribution channels of manufacturers. TABLE A outlines the growth in payroll for the region's logistics industry from 2001 to 2002.

TABLE A: Region 1 Logistics Industry – Payroll

	2001	2002	
Wholesale Trade	**PAYROLL**	**PAYROLL**	**% Change**
423 – Merchant wholesalers, durable goods	251,116,113	273,324,671	8.8%
424 – Merchant wholesalers, nondurable goods	114,776,160	118,606,202	3.3%
425 - Wholesale electronic markets, agents, brokers	42,253,624	42,977,802	1.7%
Transportation & Warehousing			
481/482/483 - Air/rail/water transportation	3,475,064	4,058,339	16.8%
484 – Truck transportation	204,370,737	214,512,338	5.0%
488 - Support activities for transportation	29,162,575	33,906,861	16.3%
492 – Couriers and messengers	30,500,409	31,293,374	2.6%
493 - Warehousing and storage	46,272,773	48,798,051	5.5%
TOTAL	$721,927,456	$767,477,638	6.3%

Source: Indiana Department of Workforce Development

In terms of payroll, the largest increase has been in Wholesale Trade-Durable Goods with an increase of over $20 million in 2002 over the previous year, followed by an increase of over $10 million for Truck Transportation. The highest percentage increase was in Air/Rail/Water Transportation and Related Support Activities for Transportation. Total payroll increases for Wholesale Trade and Transportation and Warehousing sectors were over $45 million.

TABLE B shows the slight increase in the number of firms that occurred from 2001 to 2002, with a loss of merchant wholesalers offset by an increase in the number of trucking companies, couriers and wholesale brokers.

TABLE B: Region 1 Logistics Industry – Number of Employers

Wholesale Trade	2001 EMPLOYERS	2002 EMPLOYERS	% Change
423 - Merchant wholesalers, durable goods	653	644	-1.4%
424 - Merchant wholesalers, nondurable goods	261	250	-4.2%
425 - Wholesale electronic markets, agents, brokers	161	171	6.2%
Transportation & Warehousing			
481/482/483 - Air/rail/water transportation	4	5	25.0%
484 - Truck transportation	509	525	3.1%
488 - Support activities for transportation	93	95	2.2%
492 - Couriers and messengers	22	26	18.2%
493 - Warehousing and storage	34	35	2.9%
TOTAL	1,737	1,751	0.8%

Source: Indiana Department of Workforce Development

Nationally, over 85% of firms in Transportation and Warehousing have less than 20 employees. Trucking jobs alone account for over 44% of jobs in Transportation and Warehousing. Owner/operators continue to enter the market, but the increased competition has caused many owner/operators to leave the industry or go out of business.

TABLE C shows the change in employment levels for the region's logistics industry from 2001 to 2002. Overall employment for the region grew at an average increase of 4.9%, led by an increase of 411 jobs in wholesale trade-durable goods and an increase of 338 jobs in truck transportation. The largest percentage growth in employment was in Air/rail/water transportation with an increase of 15.9%. Wholesale trade-nondurable goods had a flat growth rate of only 0.7%, yet that translated to more new jobs than Air/rail/water transportation.

TABLE C: Region 1 Logistics Industry – Employment

Wholesale Trade	2001 EMPLOYMENT	2002 EMPLOYMENT	% Change
423 - Merchant wholesalers, durable goods	6,691	7,102	6.1%
424 - Merchant wholesalers, nondurable goods	3,272	3,294	0.7%
425 - Wholesale electronic markets, agents, brokers	897	922	2.8%
Transportation & Warehousing			
481/482/483 - Air/rail/water transportation	69	80	15.9%
484 - Truck transportation	5,693	6,031	5.9%
488 - Support activities for transportation	982	1,071	9.1%
492 - Couriers and messengers	1,000	1,008	0.8%
493 - Warehousing and storage	1,312	1,384	5.5%
TOTAL	19,916	20,892	4.9%

Source: Indiana Department of Workforce Development

Companies in NAICS 488 – Support activities for transportation deserve some close attention—89 new jobs were created within one year for that sector, which includes companies that provide a variety of services like airport operations, packing and crating, marine cargo handling and motor vehicle towing. With the increase of activity at the Gary/Chicago International Airport and the Port at Burns Harbor, new job creation in this sector could be significant.

As expected, TABLE D reflects the impact of flat margins in the region's logistics industry. Average annual wages remained flat or even dipped for some segments. Wage growth was strongest in NAICS 488 – Support activities for transportation, which has already been identified as having good prospects for increased employment. Final results for employment, payroll and average wages for 2003 will not be released until the third quarter of 2004.

TABLE D: Region 1 Logistics Industry – Average Annual Wages

	2001 AVERAGE	2002 AVERAGE	
Wholesale Trade	**ANNUAL WAGES**	**ANNUAL WAGES**	**% Change**
423 - Merchant wholesalers, durable goods	37,535	38,485	2.5%
424 - Merchant wholesalers, nondurable goods	35,186	36,005	2.3%
425 - Wholesale electronic markets, agents, brokers	47,091	46,631	-1.0%
Transportation & Warehousing			
481/482/483 - Air/rail/water transportation	50,608	50,729	0.2%
484 - Truck transportation	35,869	35,568	-0.8%
488 - Support activities for transportation	29,695	31,657	6.6%
492 - Couriers and messengers	30,516	31,045	1.7%
493 - Warehousing and storage	35,260	35,259	0.0%

Source: Indiana Department of Workforce Development

Projected Employment Growth

Within the logistics industry, there seems to be two tiers of employment: 1) executive, professional and supervisory jobs, which usually require a college degree and some experience in the industry, and are few in number for most employers and 2) unskilled or semi-skilled jobs, which usually require only minimal on-the-job training, few certifications or training programs other than OSHA, hazardous material handling or site-specific certifications like fork-lift driver or a CDL for a truck driver. Employers increasingly utilize computer applications to help automate some functions like inventory, order picking and shipping, which is driving the need to begin recruiting employees at the post-secondary level, though it may only require an associate's degree or some college coursework. As for career ladders, most logistics companies are very lean in their organizational structure, with little or no opportunity for advancement beyond first-line supervisor or dispatcher. This is especially true for employers with headquarters in one location and distributed facilities throughout a region, the U.S. or in other countries.

Nationally, the wholesale trade industry is expected to grow 11% from 2002 to 2012 compared to 16% for all industries. Most of the jobs in management, professional services and sales require some college education and utilize transferable skills and knowledge that support most

industries. The increasing complexity of the industry and reliance on technology is driving the need to have a more educated workforce.

Within the management, business and financial occupations group, top executives are projected to grow at a rate of 15.7% from 2002 to 2012. Advertising, marketing, promotions, public relations and sales managers are projected to grow at a rate of 27.6% during the same period, but in 2002, they only represented 1.2% of all jobs in the industry. Operations specialties managers are projected to grow at a healthy 18.7%, with buyers and purchasing agents at 8.8%.

Most of the jobs in wholesale trade used to be geared towards transportation and material moving occupations, which include warehouse operations, truck driving and material handling. However, as a percentage of all employment in the industry, the top occupational areas are:

TABLE E: Occupation Group, Employment, Percent of Employment, and Forecast of Employment Growth

Occupation group	Employment, 2002	Percent of industry employment*	Percent change, 2002 – 2012
Sales and related occupations	1,395,000	24.7%	17.2%
Office and administrative	1,347,000	23.9%	1.4%
Transportation and material	1,109,000	19.7%	5.8%
Management, business, financial	575,000	10.2%	18.6%
Installation, maintenance, repair	391,000	6.9%	16.4%
Production	386,000	6.8%	13.9%
Professional and related	309,000	5.5%	24.7%

Source: Bureau of Labor Statistics, Occupational Outlook, U.S. Department of Labor
* May not add up to 100% due to omission of occupations with small employment.

The professional and related occupations group only comprises 5.5% of the industry's jobs, yet is projected to grow at a rate of 24.7% from 2002 to 2012. A major driver for that growth is the need for computer specialists, who now make up almost half of the jobs in that occupations group, yet are projected to grow at a rate of 25.6% for the same time period. This group is most likely to have a college degree.

Within the sales and related occupations group, the greatest employment growth is in sales representative positions with a forecasted growth rate of 20.0% from 2002 to 2012.
Within the office and administrative support occupations group, first-line supervisors are expected to run flat with only 2.1% growth. Bookkeeping, accounting and auditing clerks continue to lose ground with a projected growth rate of only 0.9% for the same period. Conversely, customer service representatives are expected to grow at a rate of 21.1% and will be expected to have applied computer skills and extensive knowledge on products, services and customer needs. Employers will need to recruit from 2-year and 4-year post-secondary schools in order to find enough people with these higher-level skills in communications and problem-

solving, or provide extensive training either in-house or through training vendors. However, logistics employers have a track record of hiring the skills they need rather than providing in-house training.

The installation, maintenance and repair occupations group has two fast-growing areas: electrical and electronic equipment mechanics, installers and repairers with a forecasted growth rate of 14.4% and industrial machinery installation, repair and maintenance workers with a rate of 17.0%. Both areas require workers to have knowledge and skills beyond the high school level, which is typically provided by the employer as on-the-job training or through a local technical college program. Post-secondary educators should make this type of training a priority for adult education, associates degree and certification programs, considering the prospects for job growth

Within the production occupations group, metal workers and plastic workers should experience a growth rate of 17.2%. As manufacturers look to outsource non-core competencies, savvy logistics companies are picking up extra work by providing services such as assembly, fabrication, metal and plastics work.

The transportation and material moving occupations group is expected to increase in employment, especially for truck drivers (heavy and tractor-trailer) at 13.3%, truck drivers (light or delivery services) at 12.6%, packers and packagers (hand) at 12.4% and a respectable 10.1% growth rate for industrial truck and tractor operators. This occupations group is the most likely to remain an avenue for entry-level workers with little or no experience and minimal education.

Fastest declines in employment

A number of logistics jobs are expected to decline through 2012 as technology and productivity advances make work less labor intensive or replace certain functions entirely. Most of the declines in employment fall under the office and administrative support occupations group. Order clerks are expected to decrease by 11.5% through 2012, followed by stock clerks and order fillers at -5.5%, and -3.1% for secretaries and administrative assistants. Shipping, receiving and traffic clerks are projected to hold on to an actual growth rate of 0.5% through 2012, but for the purposes of this report, this should be considered to be a declining occupation. For the transportation and material moving occupations group, jobs like laborer, freight, stock and material mover are projected to decline by 5.0%.

The Search for Good Paying Jobs

Most logistics-related employers in Northwest Indiana require only a high school diploma, and report that virtually all workers receive On-The-Job Training (OJT) with little or no additional training provided by either vendors, educators or outside training programs. Higher-level logistics employment that typically requires a college degree is usually only available through larger regional or national logistics and supply chain management employers.

On a more local level, these jobs are most likely to be provided by a manufacturer that has significant supply and distribution channel activities. There is an ongoing shortage of qualified and experienced truck drivers, a position that also experiences a high level of turnover. Most trucking companies will only hire a driver with at least one year of experience, since the

insurance rates are lower for such drivers. This practice makes it difficult for employers to provide their own CDL training or recruit directly from driving schools.

According to the latest wage survey from the Indiana Department of Workforce Development, logistics occupations in the Gary Primary Metropolitan Statistical Area (PMSA) of Lake and Porter Counties had the following rates of pay for 2001:

TABLE F: Logistics Wage Rates for Gary, IN PMSA

Occupation	Median Hourly Wage	Mean Hourly Wage	Mean Annual Wage
Wholesale and Retail Buyers, Except Farm Products	16.91	17.96	37,370
Sales Reps: Wholesale, Except Technical & Scientific Products	17.91	21.08	43,850
Sales Reps: Wholesale, Technical & Scientific Products	23.27	32.81	68,240
First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	18.56	18.39	38,240
First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	21.29	21.41	44,540
Driver/Sales Workers	11.83	12.59	26,180
Truck Drivers, Heavy and Tractor-Trailer	19.69	20.02	41,650
Truck Drivers, Light Or Delivery Services	11.79	13.51	28,100
Conveyor Operators and Tenders	16.65	16.82	34,990
Crane and Tower Operators	19.90	19.69	40,960
Excavating and Loading Machine and Dragline Operators	19.20	19.41	40,370
Industrial Truck and Tractor Operators	14.65	15.30	31,830
Cleaners of Vehicles and Equipment	7.18	7.95	16,530
Laborers and Freight, Stock, and Material Movers, Hand	12.39	13.49	28,050
Machine Feeders and Offbearers	19.25	17.33	36,050
Packers and Packagers, Hand	6.93	8.10	16,850

Source: Indiana Department of Workforce Development
Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

Certification Programs in Logistics/Supply Chain Management

Certifications in the logistics industry tend to be geared more to supply chain management (SCM), enterprise resource management (ERP), material resource planning (MRP and MRP II) and related professional disciplines like accounting, procurement, engineering and production

management. Employers could work with educators in the region to determine appropriate certifications and how to offer local delivery of such training, either on-site at the work location or at a nearby campus.

Some certifications are available online through the provider's Web site.

American Production & Inventory Control Society (APICS)
Tel: (800) 444-2742 Fax: (703) 354-8106 http://www.apics.org

American Society of Transportation & Logistics (AST&L)
Tel: (404) 524-3555 Fax: (404) 524-7776 http://www.astl.org

Institute of Certified Management Accountants
Tel: (201) 573-9000 Fax: (201) 573-8438 http://www.cmawebline.org

Institute of Logistical Management
Tel: (609) 747-1515 Fax: (609) 747-1517 http://www.logistics-edu.com

Institute of Management Consultants (IMC)
Tel: (202) 367-1134 Fax: (202) 367-2134 http://www.imcusa.org

Institute of Packaging Professionals (IoPP)
Tel: (703) 318-8970 Fax: (703) 814-4961 http://www.iopp.org

Materials Handling & Management Society (MHMS)
Tel: (704) 676-1183 Fax: (704) 676-1199 http://www.mhia.org/mhms

National Association of Purchasing Management (NAPM)
Tel: (480) 752-6276 Fax: (480) 752-7890 http://www.napm.org

National Private Truck Council (NPTC)
Tel: (703) 683-1300 Fax: (703) 683-1217 http://www.nptc.org

Society of Logistics Engineers (SOLE): The International Society of Logistics
Tel: (301) 459-8446 Fax: (301) 459-1522 http://www.sole.org

Transportation Intermediaries Association
Tel: (703) 329-1894 Fax: (703) 329-1898 http://www.tianet.org

The Indiana Motor Truck Association
Master Truck Driver Certification, Driver of the Month/Year Contests, Driving Championships.
Tel: (317) 630-4682 Fax: (317) 630-0072 http://www.imtaonline.net

III. EMPLOYER SURVEY

Methodology

In order to gain a better understanding of the issues, challenges and opportunities facing Northwest Indiana's logistics industry, CWI surveyed 20 employers in the region. Our goal was to identify areas of concern and develop strategies to meet the needs of employers in this industry cluster. The majority of surveys were conducted during a face-to-face interview with either the top executive, director of operations, department manager or a combination of these decision-makers. These industry leaders were asked to answer a number of questions relating to their industry as well as their own facility, including quality of life issues, the impact of the economy, jobs in demand, hiring and retention, expansion plans, how well do local universities and schools prepare their students for work, and opportunities to attract suppliers to the region. Many of the questions asked for a ranking from 1 to 5, with 1 being of little or no significance and 5 being significant. A comparison of median and average response scores indicate that a number of healthcare providers who were surveyed are encountering similar challenges and have a similar mindset towards key areas affecting their success. All of the individual survey responses have been kept confidential and are being released in aggregate.

Participants and Survey Results

A total of 20 logistics employers were surveyed, representing organizations with total employment of 1,930 full time workers and 14 part time workers. Respondents included 18 companies with warehouse and distribution operations throughout Northwest Indiana and two transportation companies with durable goods manufacturers as primary clients. A complete list of participating organizations and the entire survey report with aggregated responses are located in Appendix A. A summary of highlights is provided here for discussion.

Economic and Technology Issues

Employers were asked to rate the impact of changes in the economy on the competitiveness of their firm on a scale of 1 to 5, with 5 signifying high impact and 1 being no impact. On average, employers reported that changes in the national economy have a greater impact than the global or regional economy with a median score of 4.0 for national impact, 3.0 for global and 3.0 for regional impact. Employers reported that changes in new technology were at a median score of 4.0. Their ability to keep up with the new technology also had a median score of 4.0.

Employers were asked, "How do technology changes affect the skills you will be seeking in new hires?" 75% of the employers responded that they have increased expectations. Over three-fourths of this group expect basic technology skills, but also provide specific skill training. The other fourth expects higher-level skills with experience in specific technology skills. 20% of employers reported that their expectations hadn’t changed or didn’t require some level of technology skills—even for entry level. One employer reported that their expectations had not changed—they had always required technology skills. When asked about specific technology skills required for employment, the most critical skills being sought by employers were computer skills (16 employers), forklift, hazmat and supervisory.

Productivity and Compliance

Most productivity-improvement strategies are linked closely with OSHA compliance and quality certifications of major customers. 60% of employers mentioned increased investment in worker training, 60% have increased their investment in management and supervisory skills training, and 45% use a "balanced scorecard" of performance indicators. Other quality initiatives mentioned by employers included 35% for statistical process control, 30% for ISO 9000 and various industry-specific accreditations. Large customers who are ISO certified require their supply chain partners to be ISO certified as well, which drives the need for some logistics companies to invest in ISO compliance and training initiatives. Some companies are able to get by with "ISO compliance" rather than having to become ISO certified.

Most Critical Jobs

Employers were asked to identify the most critical jobs in their organizations—positions that were most likely to hamper productivity or growth if they couldn't find enough people with those skills. The most critical jobs are a mix of everything from entry level to management. However, management/supervisory jobs and technicians tied for first place with four votes apiece among employers as being the most critical jobs, though few openings are available at any given facility.

The technician positions are tied to value-added industry-specific services and not necessarily related to logistics. The logistics job that was considered to have the most openings going forward was for picker/packer, followed by semi-skilled jobs, accounting, truck drivers, and sales. Other critical jobs cited were dispatchers, mechanics, customer service, inventory and clerical, although these functions were not likely to generate as many new jobs per employer as picker/packer.

Recruiting Employees

The best recruiting tool employers use is referrals from current workers, followed by referrals from colleagues, temp agencies, employment agencies and newspaper want ads. Some employers mentioned that unsolicited walk-in applicants were making a comeback, and that they were more likely to utilize WorkOne offices for entry-level and semi-skilled positions than for skilled positions.

When asked how often they have to recruit qualified workers from outside of Northwest Indiana, 70% responded "Never or rarely." Jobs most likely to be advertised outside of Northwest Indiana were for management positions and sales. Employers rated their overall satisfaction level of their current recruitment and selection methods with a median score of 3.5 out of 5.0, and an average score of 3.4.

The turnover rate within most logistics organizations is higher for truck drivers than any other position. 40% of employers have an average turnover rate of 3% or less for all positions. 25% of employers reported a turnover rate of 4-6%, and 20% had a turnover rate of 7-10%. Companies with drivers reported a turnover rate of over 50% for that position.

Turnover rates were reported at the following levels:

# of Employers	Turnover rate
8	0-3%
5	4-6%
4	7-10%
1	11-15%
1	16-20%
1	21% or higher

Quality of Applicants

Employers were asked to identify key skill deficiencies among applicants. Poor technical skills and poor work ethic were most often cited by employers as being a highly frequent problem among applicants, followed by poor interpersonal skills and poor math skills. Even though most recruits receive only minimal on-the-job training, 45% of employers reported that it took at least three months for a new hire to become proficient, and 30% reported that it took at least four months to become proficient. Most employers also institute a 90-day probationary period for new hires.

School Preparation

Employers were asked to rate how well local high schools, two-year vocational colleges and 4-year universities prepared students for employment. Someone with only a high school diploma is qualified for the majority of entry-level jobs that are available in logistics, since most positions do not require a college degree or a specific certification, other than a CDL for drivers or site-specific certification for forklift drivers.

As stated earlier, there are two tiers of employment in the logistics industry. Very few people are needed with college degrees for professional positions within most small companies to handle supply chain management and related activities. Most of the jobs in logistics are low-skill jobs requiring very little on-the-job training and no education beyond high school. Most students from 2-year technical or associates degree programs are not qualified for the higher-level jobs (or can't compete with the candidate pool of applicants with a 4-year bachelor's degree), and/or are not interested in the entry-level jobs. Employers are usually seeking someone with a high school diploma, 18 years or older with some work experience and a clean drug/criminal history. Many logistics employers feel little or no connection with the local schools, and believe that the ability of these schools to prepare students for employment in the logistics industry is "not applicable."

Some of the positions gaining ground in logistics companies are value-added services like customer service, sales support, customizing products, installation and maintenance. These jobs are more likely to require some college or appropriate certifications. However, local education providers are not tailoring classes or programs to support the logistics industry per se. There are bits and pieces of classes that could prepare someone for these higher-level jobs, but not as a defined program for the logistics industry.

Training

Almost all employees receive hands-on training on the work floor from their employers. This training is usually of a short duration—one day or less—and does not result in a recognizable, portable certification. Tuition reimbursement is offered by a significant percentage of employers, but utilization by employees is extremely poor. The third largest area of training assistance is on-site classroom training provided by a company trainer.

None of the employers surveyed were familiar with Individual Training Accounts or how they function. IRAs provide training dollars under Title I of the Workforce Investment Act. This allows individual job seekers to choose from a pre-approved list of training courses to gain occupational skills in order to successfully reenter the workforce. All training services must be provided through the use of Individual Training Accounts for eligible adults and dislocated workers under WIA Title I. Logistics employers could coordinate with WorkOne centers to identify potential employees who qualify for such training funds.

When asked, "What percent of your payroll is spent on training?" Seven employers reported that they spend less than 1% of their payroll on training, six employers spend 1-2%, five spend 3-4%, and two spend more than 6%. It is worth noting that these two companies offer more technical and specialized services to their customers, which requires extensive training on products, installation and maintenance. Some positions require training and certification as an electrician, certified welder, computer network technician and other specialties, depending upon the extra services required by their customers.

Suppliers, Customers and Transportation of Products

Typically, an industry cluster strategy would include opportunities for vertical and horizontal integration of the industry by attracting suppliers or major customers to the region. For logistics employers in the region, 65% of their major suppliers are located outside of Northwest Indiana. There is an opportunity for local economic development professionals to work together with logistics employers in the region to attract suppliers—or at least explore the possibility of bundling purchases for greater leverage and better pricing. Major suppliers include third party trucking and distribution services followed by industrial supply and packaging materials. Surveyed employers reported that 80% of their current major customers are located outside of Northwest Indiana, and include a number of Fortune 500 companies and various international intermodal companies. The competitive nature of their business has forced them to expand operations to a larger base than Northwest Indiana. Some companies that used to only have a few major steel customers now have literally hundreds or even thousands of customers of all sizes, and operate on a national or even global scale.

65% of employers reported that they use trucking as the primary mode of transportation for shipping product—with speed, weight or hazardous nature of the product being the main reason for that mode. 20% of employers use commercial carriers like FedEx, UPS and Airborne as the primary mode of transporting product, with speed being the primary factor. Only one company uses rail as a primary method, with cost and weight being the primary factors. Only one company uses airfreight as its primary mode, with weight and speed being the top factors.

The Case for Exports

55% of employers reported some export activity, with the majority having less than 15% of business being exported. Only two companies reported having exports of over 25% of total deliveries. Logistics companies may be able to expand their business by working with Northwest Indiana manufacturers to identify foreign markets for exports and to facilitate that effort by expanding the scope of their services to create additional distribution channels for these customers. Manufacturers that conduct all distribution activity internally could also benefit from an increased focus on strategic markets for exports to expand their business. Expert guidance on world trade opportunities is available to these companies from the Indiana Department of Commerce and the Northwest Indiana World Trade Council.

Free export assistance is available to all Indiana manufacturers through the International Trade Division of the Indiana Department of Commerce, which maintains thirteen international offices in strategic locations throughout the world. According to the Indiana Department of Commerce, "Each office has a corresponding Geographic Trade Specialist located in Indianapolis to facilitate communications between companies and overseas office staff." Indiana representative offices are located in: Australia, Brazil, Canada, Chile, China, Eastern Mediterranean Region, Europe, Japan, Korea, Mexico, South Africa, Taiwan and a liaison office in Singapore. Within the region, the Northwest Indiana World Trade Council (NWIWTC) is a not-for-profit membership organization that promotes area international trade and investment through education, coordination of world trade efforts and services, communication, marketing, and direct assistance to over 100 of its members. NWIWTC conducts regular luncheon meetings and workshops on various topics related to exporting and importing.

Quality of Life and Expansion Plans

When asked "What keeps you in Northwest Indiana," employers said the number one reason for being here is because it is "a good place for me and my workers to live" followed closely by its proximity to their customer base. A close third was the availability and cost of means to transport products. 55% of employers see a need to expand at their current location within the next 5 years. Two companies plan to relocate outside of Northwest Indiana, one company plans to expand elsewhere within Northwest Indiana and one company has plans to expand outside of the region.

Maintaining a Thriving and Growing Logistics Industry

Employers were asked what they need most in order to thrive and grow here. The number one critical factor is an overall improvement in the economy, followed closely by a better tax environment. Better-qualified workers and new equipment/better technology vied for third and fourth place respectively, followed by better local schools.

IV. WORK KEYS PROFILES

The Center of Workforce Innovations engaged Job Works, a workforce development organization to conduct a Work Keys profile for the job of picker/packer, which was cited most often by employers as an entry into the logistics industry. Work Keys was developed by American College Testing (ACT) as an assessment tool to help employers find the right people to staff various positions, determine skill levels of their current workforce, and develop training programs to help employees reach the required levels of proficiency and knowledge to be successful for a particular job. Employers identified the job of picker/packer as being one with higher levels of turnover, and having the most openings in the future. Deborah Berger, an ACT certified Work Keys job profiler, conducted the analysis by working with a warehousing and shipping company in Northwest Indiana with 40 employees and ships products worldwide.

Ms. Berger met with a total of six subject matter experts (SMEs) during two sessions, who have worked in the Picker/packer position for their employer from 11 months to 5 years, 5 months. The SMEs were assessed to determine the level of knowledge and proficiency required for critical skills, including: Applied Mathematics, Locating Information, Observation and Teamwork. Additionally, Ms. Berger developed a list of 30 tasks that the SMEs identified in session 1 as being critical to their jobs and determined the proficiency levels expected for a worker with a year of experience on the job. The SMEs in session 2 identified 34 tasks, which are virtually the same as those identified in session 1. Both final task lists are included in Appendix B along with the Work Keys summary report.

TABLE G: On a scale of 1 to 7, the top skills and respective performance levels were:

SME Skill	Entry Level	Effective Performance	Range
Observation	3	3	3-6
Applied mathematics	3	3	3-7
Locating information	4	4	3-6
Teamwork	3	3	3-6

For a general description of these skills and levels, also visit www.act.org/workkeys/assess/index.html.

Work Keys maintains a database of occupational profiles for various industries and jobs, based on job profiles and occupational profiles conducted by certified Work Keys profilers. For the logistics industry, Work Keys offers employers a useful tool to identify the levels of skills current and prospective employees need in order to be successful on the job. These profiles also provide employees and prospective employees with a clear picture of the skill levels they need to qualify for and be successful in the jobs they want. Educators can also view these profiles as a way to quantify the performance level of students and to align their curriculum to meet the needs of employers for various jobs in the logistics industry.

TABLE H outlines the Work Keys occupation profiles conducted nationally for various logistics jobs, along with their median scores and ranges for each proficiency area.

TABLE H: Occupational Profiles for Logistics Jobs

AM = Applied Math, AT = Applied Tech, L = Listening, LI = Locating Info, OB = Observation, RI = Reading for Info, TW = Teamwork, W = Writing

Title	AM	AT	L	LI	OB	RI	TW	W
Dispatchers	4	3	3	4	5	4	4	3
Range	3 6	3 5	3 4	4 5	4 5	4 6	3 4	3 4
Driver/Sales Workers	3	4	3	4	4	3	4	3
Range	3 3	4 4	3 3	4 4	4 4	3 3	4 4	3 3
Supervisors/Mgrs of Laborers, and Material Movers,	3	6	4	4	4	3	6	2
Hand Range	3 3	6 6	4 4	4 4	4 4	3 3	6 6	2 2
First-Line Supervisors/Managers of Transportation and Material-Moving Operators	3	3	4	4	4	4	4	3
Range	3 5	3 3	3 4	4 5	4 5	3 5	3 5	2 4
Freight, Stock, and Material Movers, Hand	3	3	3	4	4	3	3	3
Range	3 5	3 5	1 5	3 6	3 6	3 5	3 6	1 4
Material Moving Workers, All Other	4	4	2	4	4	3	3	2
Range	4 4	4 4	2 2	4 4	4 4	3 3	3 3	2 2
Order Fillers, Wholesale and Retail Sales	3			4	5	4	4	
Range	3 3			4 4	5 5	4 4	4 4	
Packaging & Filling Machine Operators & Tenders	3	3	3	4	4	3	4	2
Range	3 6	3 5	2 4	3 5	3 6	3 6	3 5	1 4
Packers and Packagers, Hand	3	4	3	4	4	3	4	2
Range	3 5	3 4	1 4	3 5	3 6	3 4	3 5	1 4
Procurement Clerks	3		2	3	4	3	3	4
Range	3 3		2 2	3 4	4 4	3 4	3 4	4 4
Purchasing Managers	6	6	5	4	6	5	4	3
Range	6 6	6 6	5 5	4 6	6 6	3 6	3 4	2 4
Shipping, Receiving, and Traffic Clerks	3	3	3	4	4	4	4	3
Range	3 6	3 4	2 5	3 6	3 6	3 5	3 6	1 4
Storage and Distribution Managers	5		3	4	5	4	5	4
Range	3 6		3 3	3 5	3 6	4 6	3 5	4 4
Tractor-Trailer Truck Drivers	3		4	4	4	3		2
Range	3 4		4 4	3 5	3 6	3 5		1 3
Transportation Managers	4	5	3	4	5	5	4	3
Range	3 7	3 6	3 5	3 6	5 6	3 6	4 6	3 3
Truck Drivers, Heavy	3	4	4	3	3	3	3	2
Range	3 3	3 4	3 5	3 5	3 4	3 4	3 4	1 3
Truck Drivers, Light or Delivery Services	3			4	5	3	3	
Range	3 5			4 5	4 5	3 4	3 3	
Wholesale and Retail Buyers	5		4	5	5	5	4	4
Range	3 5		2 5	4 5	5 5	4 6	4 6	4 5

NOTE: Line one is the median profile rounded to the nearest integer, line 2 contains the minimum and maximum skill levels required.

Work Keys allows employers, educators and job applicants to be on "the same page" when looking at skill and knowledge levels required for various occupations. The Center of Workforce Innovations has actively supported the State of Indiana's initiative to utilize Work Keys as an

assessment tool for employers in each industry cluster and to help educators align their curriculum and school-to-work preparation for students considering employment in the region within these clusters. The State of Indiana is willing to profile up to 5 different jobs for each employer who participates at no cost. Employers who utilize Work Keys as an assessment for their employees will need training programs that can specifically address some of the gaps in proficiency levels. This could be an opportunity for employers to work with educators on how to improve their own on-the-job (OJT) training programs to meet the gap, or let an educator provide specialized training to meet the gap. There could also provide an opportunity for educators to work with employees with their lifelong learning goals. As mentioned earlier, almost all employers surveyed provide tuition reimbursement, yet only a fraction of their employees are taking advantage of the benefit.

V. OPPORTUNITIES AND CHALLENGES

New workers entering the workforce are more likely to have increased computer skills, high school diplomas and even some college-level classes. However these new workers also have higher expectations for their employer. Often referred to as the Gen-X and Gen-Y workforce, these workers are looking for meaningful work, flexibility instead of loyalty, and a team-based work environment with lots of recognition, competitive compensation and prospects for personal and professional growth. Most logistics employers do not actively recruit from post-secondary institutions or find college students applying for employment in significant numbers, and even have difficulty recruiting high school graduates.

The Pipeline for Future Logistics Employment

Some innovative companies have figured out that in order to recruit high school graduates and those entering college, it is important to recruit their parents first, who may have a negative perception of the industry due to their own personal experience or feel that there is no opportunity for advancement. These companies have successfully demonstrated to parents that their child is not choosing a warehouse job instead of going to college, but that through tuition reimbursement and cross-training, their child has the opportunity to find a stable job to help them pay for college, with an opportunity for a management position in the future. For the employer, the cost of providing tuition reimbursement is cheaper than having a high turnover rate. College-bound students tend to have a better attitude towards work, which results in greater productivity, the ability to handle more responsibility and better computer literacy skills, which are vital for some companies that are now utilizing more complex systems for warehouse and inventory management. Companies like UPS and FedEx have transformed recruitment and retention of young workers through tuition reimbursement, cross training, recognition efforts and profit-sharing productivity programs. This is causing the rest of the industry to offer similar benefits in order to reduce turnover. Some employers still believe that it is a “numbers game” and have accepted high turnover, low morale and poor productivity as a cost of doing business and a fair exchange for low wages and minimal benefits.

There is a communication barrier between most logistics employers and the education community. Almost all of the employers surveyed for this report said that high schools, technical schools, colleges and universities do not approach them regarding workforce opportunities for

their students or attempt to discover their employment needs. This could be the result of a negative perception of the industry by educators, who are not aware of some of the higher-end occupations, skills and wages available in the logistics industry. This gap is further widened since logistics employers do not actively recruit from placement offices or utilize internships or other school-to-work initiatives. This is an opportunity for employers and educators to work together on career awareness activities to promote the opportunities and career ladders available, as limited as they may be for some companies.

Learners Report

The Center of Workforce Innovations recently engaged Thomas P. Miller & Associates (TPMA) to update the Learners Report for Northwest Indiana, which identifies educators, programs of study and number of graduates by degree. TPMA compiled the information on enrollees and graduates by industry cluster through data made available by the U.S. Bureau of Economic Analysis, the Indiana Department of Education, the Indiana Commission for Higher Education and the Independent Colleges of Indiana.

For post-secondary training in the logistics industry, there are no enrollments at either the Graduate, Bachelors, Associates or even the certificate level. This is true for both direct and indirect cluster enrollment. Direct clusters of learners are those who have the greatest likelihood to enter a particular industry upon graduation or completion of training. Indirect clusters of learners are those who may complete a program in a particular industry that is not directly aligned with one like logistics, but have transferable skills in a program that supports the logistics industry.

The degree programs of each institution are classified by the standard Classification of Institutional Programs, which was established by the U.S. Department of Education. Every degree program at every accredited institution uses a six-digit code to identify its degree programs. The Learners Report counts degree program enrollments by utilizing that code. The fact that no post-secondary enrollments were counted for the logistics industry indicates the lack of focused curriculum to support specific disciplines, such as procurement, supply chain management, inventory, warehouse and material management, and related bodies of knowledge. However, elements of these areas are contained within various business courses but not specific enough to be counted by the Indiana Commission for Higher Education for the purposes of this report.

Vocational high school programs tend to have the highest correlation to the logistics industry in terms of certifications or preparatory curriculum, and even that is focused on marketing and retailing and not directly applicable to wholesale trade.

Vocational enrollments and graduation levels for Northwest Indiana are:

Vocational Enrollments at High Schools and Career Centers:

Degree	Enrollments	Graduates	Largest concentration (Count of enrolled)
Certificate	59	9	General Marketing Operations
Certificate	13	13	General Retailing Operations

There is an opportunity for logistics employers to work with universities, colleges, adult education centers and high schools to develop programs that prepare students for careers in warehouse management, procurement, supply chain management and other related disciplines. Most employers in the region's logistics industry offer tuition reimbursement, yet few employees take advantage of the benefit. Employers and educators could develop a program of class work that would prepare students for careers in logistics, and even provide curriculum that would result in a series of certifications that would qualify for industry-accepted accreditation. Employers could also work with educators to provide insights to students on careers in logistics through career awareness presentations, mentoring and internships.

VI. RECOMMENDATIONS AND NEXT STEPS

The Community Workforce Compact (CWC), a team of key stakeholders representing The Center of Workforce Innovations and the Lake County Integrated Services Delivery Board, worked on developing goals and objectives for a number of industry clusters, including logistics. This report is part of a regional strategy development to improve the workforce opportunities for people throughout Lake, Porter, LaPorte, Jasper, Newton, Starke, and Pulaski counties. It is the intent of this report to review the existing conditions and to make recommendations to the Workforce Investment Boards (WIB) for next steps.

Specific Workforce Recommendations for Logistics

Logistics is affected by the local, regional, and global markets, and relies on an efficient intermodal transportation network. The elimination of the inventory tax will encourage growth in this industry in Indiana, as will the rollout of specific incentives through the State of Indiana's *Energize Indiana* initiative for the logistics industry. A regional study of this industry is needed to better understand the needs of employers, challenges and opportunities. There are four major improvements that are needed for the logistics industry to grow in the region. They are:

1) A regional freight study
2) Increased intermodal facilities
3) A regional land use plan that identifies major transportation corridors
4) A regional study for logistics development that identifies the needs of this industry

Some specific initiatives were developed to meet the needs of youth, incumbent workers and dislocated workers:

Youth

1) Share the survey information with area high school counselors, and post secondary and college career development offices.
2) Review technical curricula to develop and increase opportunities to learn skills needed in logistics.
3) Work with employers to create career ladders and increase internship opportunities.

Incumbent Workers

1) Analyze the existing training programs for logistics to determine what changes are needed. Promote the technology training that is available throughout the region through city, county, and economic development Web sites.
2) Encourage employees to take advantage of training and education programs offered by their employers by using public forums to educate them on the economic impact of pursuing additional training to increase their lifetime earnings potential.
3) Develop a regional logistics task force to study this industry at all levels. Develop business partnerships for the increased development of regional training and education programs.
4) Develop educational partnerships to increase reciprocal agreements so that employees have a variety of opportunities for training and educational degrees and certifications.

Dislocated Workers

1) Develop an assessment tool to assess current skills to determine a fit for logistics employment.
2) Assess work experience that could transition into related work in the transportation section of this industry.
3) Create specific internships that are part of re-training programs for these future employees. Partner with business and educational institutions to create scholarships for these future employees.

Conclusion

Northwest Indiana's logistics industry is projected to enjoy sustained growth and has the potential to become a strategic player as the Chicago market continues to flourish as a Midwest distribution hub. Communities need to consider the implications of this growth when considering investments in infrastructure, industrial park development, the number of new jobs, and the contribution to the local tax base. An intermodal logistics center in Northwest Indiana could help position local employers and the Port at Burns Harbor as a world-class provider of logistics services on a regional, national and global scale. An expanded regional airport in Gary could attract a number of businesses that rely on expedited air cargo and other intermodal services.

Wage and skill levels for this industry are lower than the other fastest growing industry clusters, yet continue to show steady improvement. The requirements for these jobs are becoming more reliant on computer literacy and other technical skills, and will require more advanced skills for the current workforce that may be beyond the typical on-the-job training being currently provided. This could also provide local educators with an opportunity to align their curriculum to meet the needs of employers and provide more career awareness and school-to-work activities. Work Keys provides an avenue for employers and educators to speak the same language and develop specific programs to meet the skill gaps for critical jobs in the industry. Economic development professionals, workforce development agencies, local government and educators have the opportunity to work together with logistics employers to create a better prepared workforce, attract new businesses, and look for ways to help existing companies thrive and expand.

In light of the State of Indiana's *Energize Indiana* incentives for the logistics industry, it is critical for these stakeholders to leverage available direct investment and training funds in order to remain competitive. The role for economic development organizations, local governments and community leaders is to recognize the rapid changes affecting the logistics industry and to maintain a regional perspective on the needs and opportunities facing these companies. Northwest Indiana's logistics industry is no longer as dependent upon the steel mills or local manufacturers for their customer base. They compete with companies throughout the Midwest, and for many, they are competing with distribution channels and markets around the world in an industry that rewards the lowest-cost provider...or the fastest. In fact, speed is becoming the currency of choice for the logistics industry, driven by customer demand, increased productivity, technology applications and more efficient distribution methods. Speed also offers higher margins and a better competitive advantage for logistics companies who choose that road.

Still, reducing the costs of doing business is a worthy goal. The State of Indiana has taken great strides to reduce the cost of doing business to promote business attraction, expansion and retention through a gradual repeal of the inventory tax, a friendlier regulatory climate than neighboring states, and other measures. Numerous counties and local governments are taking additional steps to promote a business-friendly atmosphere by an early elimination of the inventory tax, encouraging developers to create "ready to-go" sites, industrial parks and speculative buildings with incentives and municipal bond financing for infrastructure, and proactively marketing the capabilities of their existing logistics companies to serve prospective businesses.

It is also worth noting once again that logistics companies are highly mobile by their nature. The number one reason they choose to remain in Northwest Indiana is summed up by their consensus that "It is a good place for me and my workers to live." Maintaining and improving our region's quality of life should be a vital component of all economic development activity. This effort is beyond the scope of just one community, and will require the foresight and commitment of the region's leadership to support logistics employers with the environment they need in order to succeed.

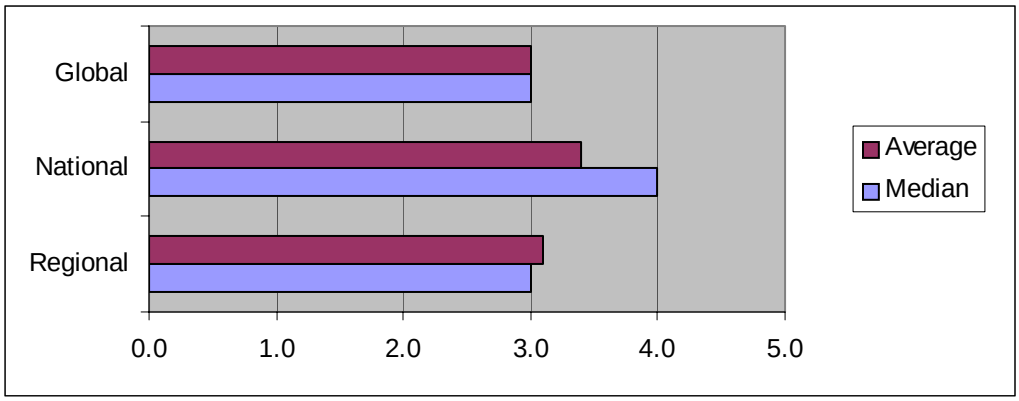
If Northwest Indiana is going to position itself as a strategic logistics location, there needs to be more collaboration and focus on what keeps the region connected to the rest of the world: our highway infrastructure, connections to transcontinental railroads, an expanding regional airport, and an international port—and to ensure that those assets are not only maintained and expanded, but marketed as well. One more crucial element needed for success is a sense of *urgency*. The market will not wait for Northwest Indiana's logistics industry and community leaders to merely reach consensus, conduct long-term studies and issue reports—the future of the region's logistics industry requires leadership, accountability, and action.

APPENDIX A

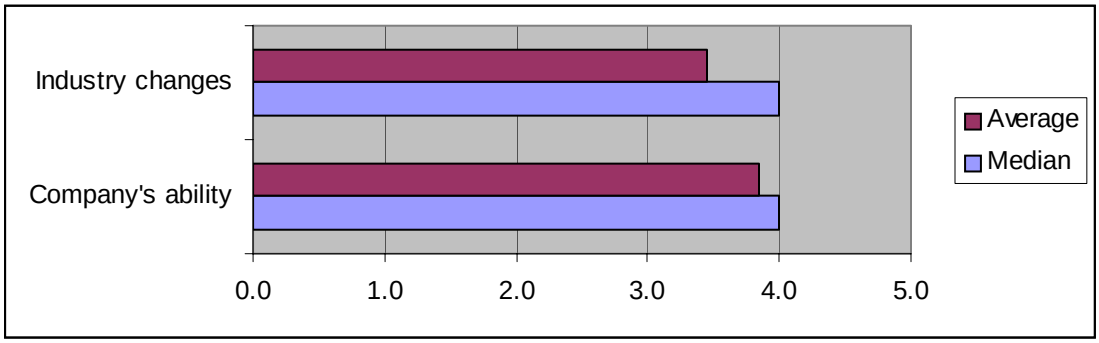
The Center of Workforce Innovations
2003-4 Survey of Logistics Employers in Northwest Indiana

As of 05/31/04
Number of firms: 20
Number of Employees: 1,930 FT; 14 PT

1. How would you rate the impact of changes in the economy on the competitiveness of your own firm? (5 = high impact, 1 = no impact)



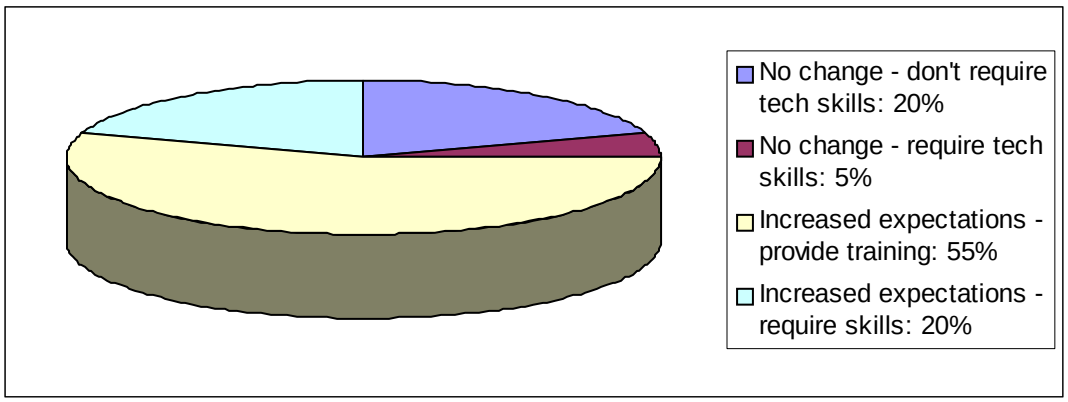
2, 3. How would you rate the impact of changes in new technology on your industry? (Not just your firm, but the entire industry within which you operate.) How would you rate your company's ability to keep up with new technology? (5 = high impact, 1 = no impact)



4. How do technology changes affect the skills you will be seeking in new hires?

Employers' response:

4	–	No change – don't require technology skills as condition to hire
1	–	No change – have always required technology skills to hire
11	–	Increased expectations – now expect basic technology skills, but we provide specific skill training
4	–	Increased expectations – expect higher level technology skills with experience in specific technology skills



5. If you require specific technology skills or train new hires in specific technology skills, please describe the most critical skill.

Computer Skills (16), forklift (1), HAZMAT (1), supervisory (1)

6. What kinds of productivity-improvement strategies are you implementing? (Check all that apply.)

35%	Statistical process control
45%	"Balanced scorecard" of performance indicators
60%	Increased investment in worker training
60%	Increased investment in management/supervisory skills training
0%	Baldrige principles of continuous improvement
30%	ISO 9000+
30%	Industry-specific accreditations
Other:	**OSHA**

7. What are the most critical jobs in your firm? That is, the positions where if you don't get the right skills or find enough people with those skills, it is most likely to hamper the productivity or growth of your firm?

Warehouse picker/packers (5), management/supervisory (4), technicians (4), semi-skilled (2), accounting (2), truck drivers (2), sales (2), dispatchers (1), mechanics (1), customer service (1), inventory (1), clerical (1)

8. How do you determine whether applicants for those key jobs have the right skills? What tools or methods do you use to assess their skill levels? (Check all that apply.)

85%	Review of education and work history
65%	Evidence of specific skill/industry certifications
100%	Oral interview questions
80%	Reference checks
20%	Written assessment tests developed by my firm
15%	Written assessment tests developed commercially
35%	Work-simulation assessment
Other:	**Typically, 90-day probation period; drivers need CDL and clean driving record**

9. What positions do you expect to have the greatest amount of turnover in the next 12 months?

Entry-level* (6), warehouse pickers/packers (4), Truck drivers (3), semi-skilled (1)

***Entry-level refers to job openings that do not require any previous experience—person may be given a variety of responsibilities.**

10. What positions do you expect will have the highest demand due to expansion in the next 12 months?

Warehouse pickers (2), technicians (2), semi-skilled (1), entry level (1), truck drivers (1), clerical (1), accounting (1), management (1), IT (1)

11. What positions will be hardest to fill in the next 12 months?

Management/supervisory (4), truck drivers (2), semi-skilled (1), warehouse (1), customer service (1)

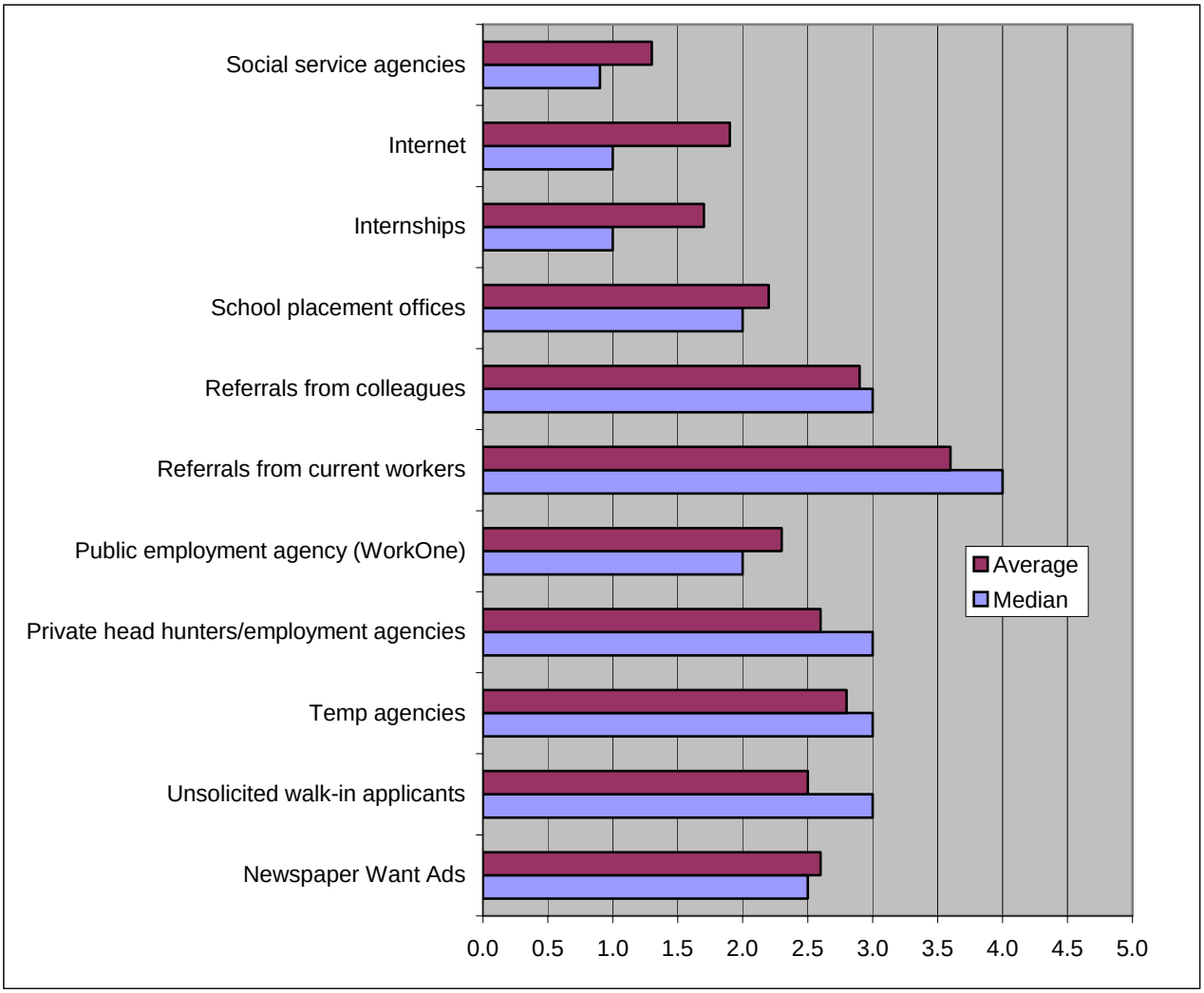
12. What types of positions are most likely to be eliminated or downsized in the next few years?

None (16), clerical (2), entry-level (1)

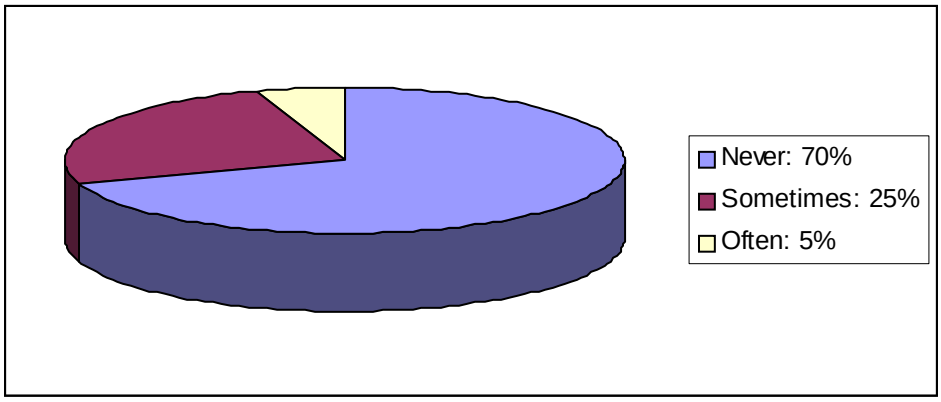
13. If you require workers or job applicants to have any special certifications, what is the primary kind?

CDL (3 – plus 1 chauffeur's license); IT (2), Forklift certs (1); Accounting degree (1); diesel mechanics cert (1); bachelors in business (1)

14. How do you recruit for job openings? From what sources do you get the best-qualified applicants? Rank each of the following on a 1-5 scale (5 = highly effective, 1 = minimally effective)



15. How often do you have to recruit qualified workers from outside of Northwest Indiana?



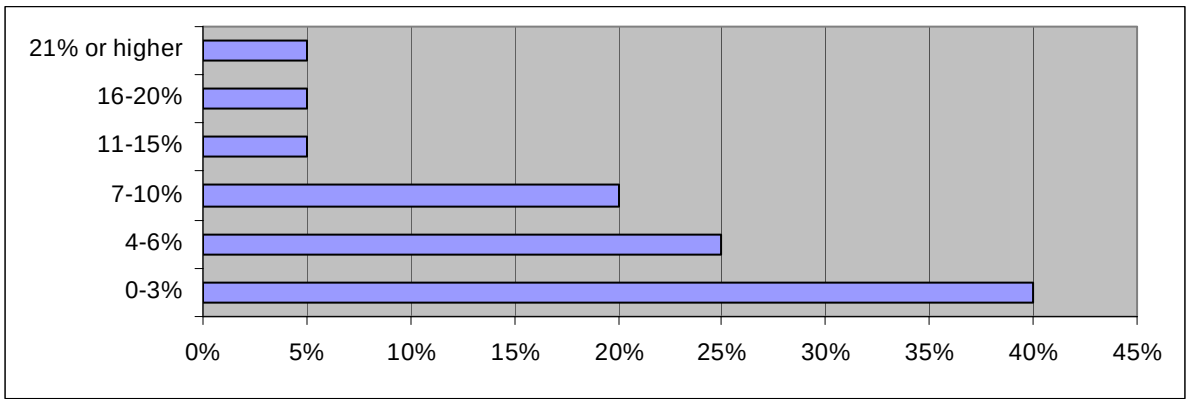
16. If you often recruit outside of Northwest Indiana, what is the primary kind of position for which you recruit?

Management (4), sales (3), truck drivers (1), safety supervisor (1)

17. How would you rate your overall satisfaction level with your current recruitment and selection methods?

Median = 3.5, Ave. = 3.4

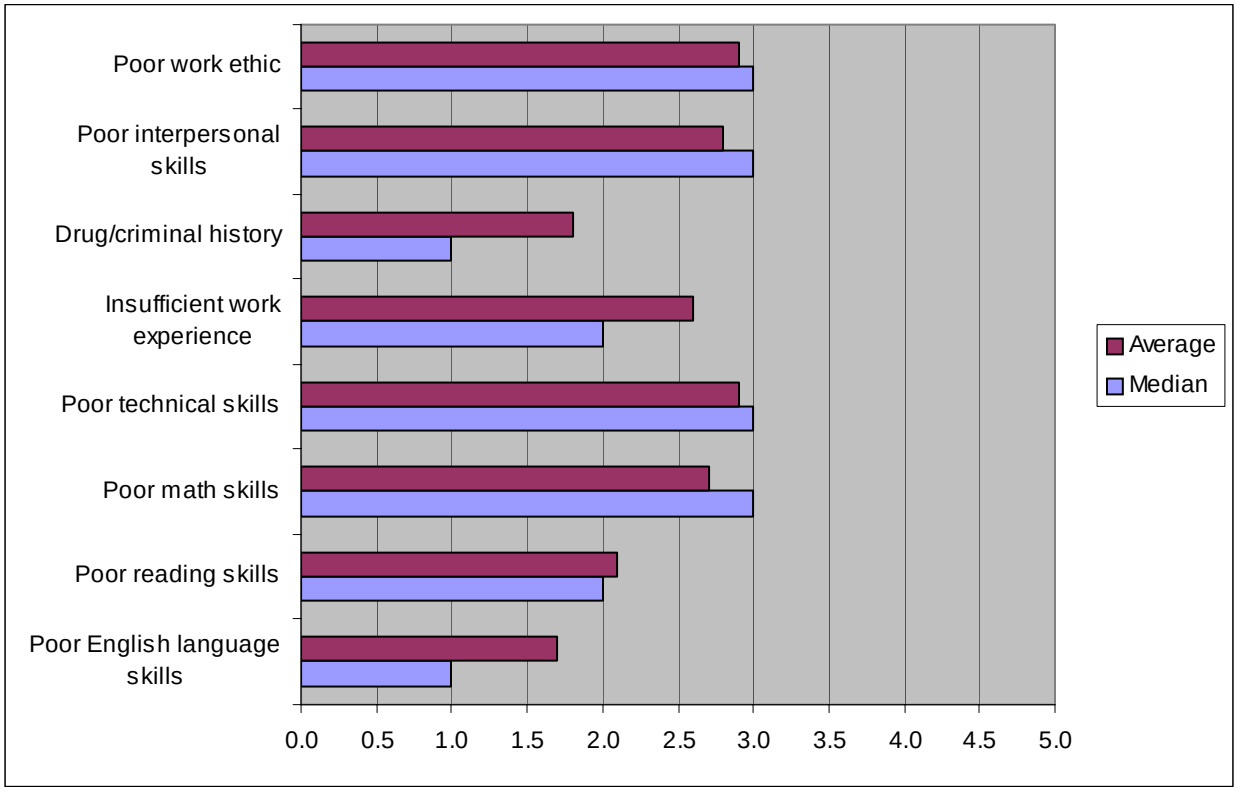
18. What is your annual turnover rate? **(Truck drivers have the highest turnover rate at 50%+.)**



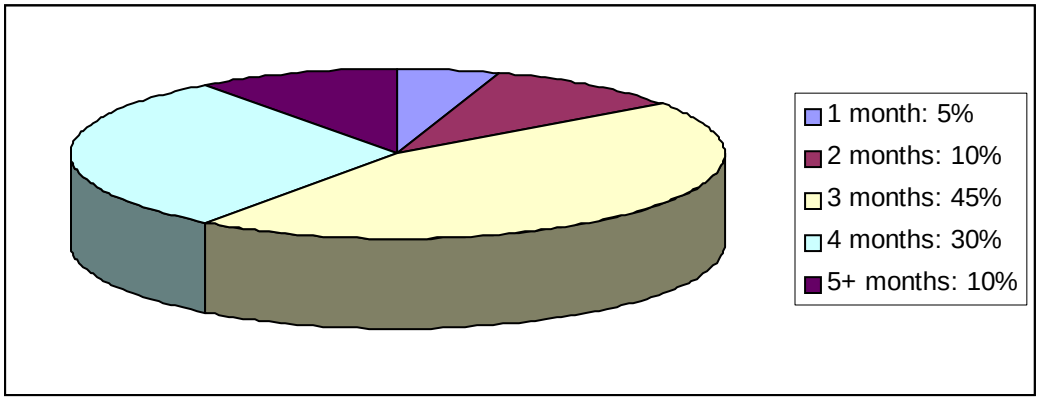
19. How would you rate the qualifications of most of your job applicants? (5 = well qualified, 1 = not very well qualified)

Median = 2.5, Ave. = 2.7

20. If the majority are underqualified, what are their primary skill deficiencies? Rate each on a scale of 1-5, with 5 being a highly frequent problem among applicants, and 1 being little or no problem among applicants.

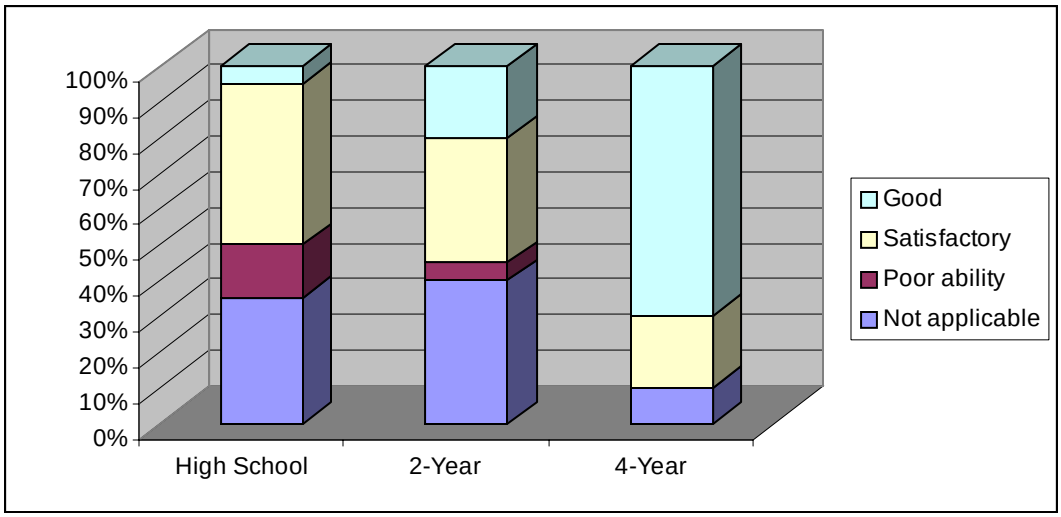


21. How long does it usually take to bring a new hire up to the proficiency level of an experienced worker?



22, 23, 24. How would you rate the ability of schools in Northwest Indiana to prepare the workforce you need? (High School, 2-Year Post-Secondary, 4-year Post-Secondary)

The answers to this question reflect the 2-tiered level of employment in the logistics industry. Very few people are needed with college degrees for professional positions within most small companies to handle supply chain management and related activities. Most of the jobs in logistics are low-skill jobs requiring very little on-the-job training and no education beyond high school. Most students from 2-year technical or associate's degree programs are not qualified for the higher-level jobs (or are not able to compete with the candidate pool of applicants with a 4-year bachelor's degree), and/or are not interested in the entry-level jobs. Employers are usually seeking someone with a high school diploma, 18 years or older with some work experience and a clean drug/criminal history. Many logistics employers feel little or no connection with the local schools, and believe that the ability of these schools to prepare students for employment in the logistics industry is "not applicable."



High schools in Northwest Indiana:

35%	Not applicable. Don't hire from high schools.
15%	Poor ability to prepare workers for my needs.
45%	Satisfactory ability to prepare workers for my needs.
5%	Good ability to prepare workers for my needs.

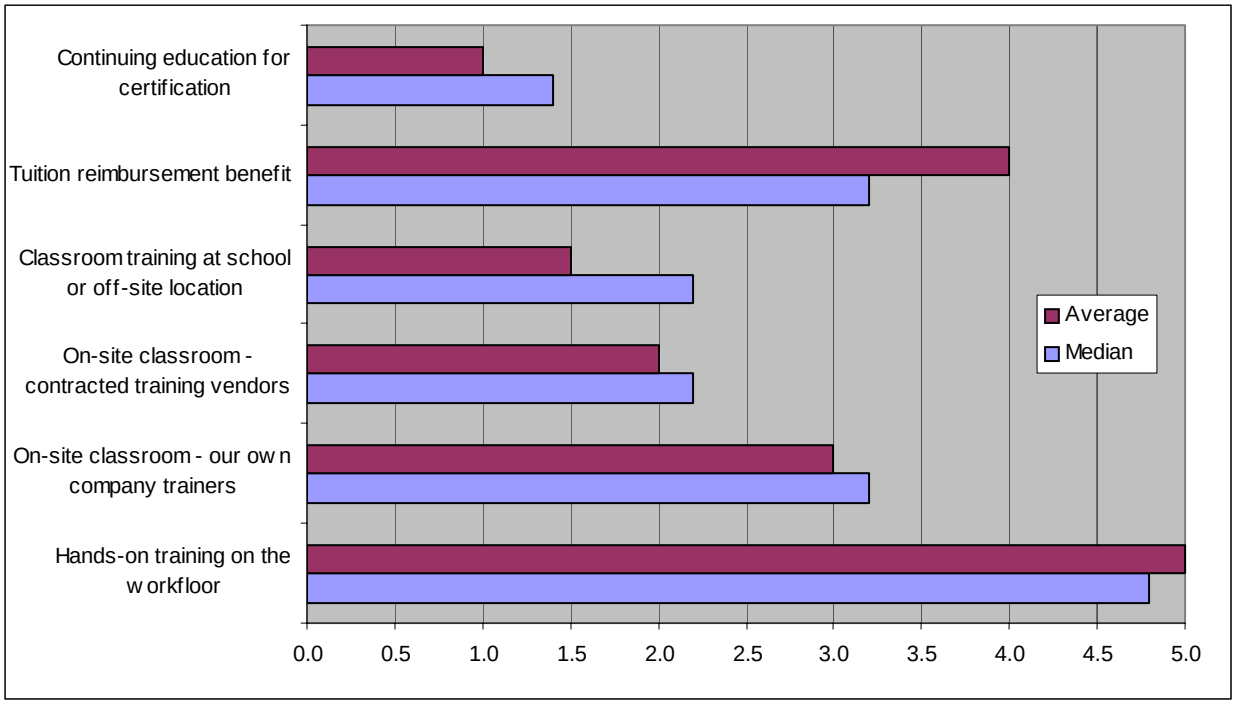
Postsecondary trade and technical schools in Northwest Indiana:

40%	Not applicable. Don't hire from trade/technical schools.
5%	Poor ability to prepare workers for my needs.
35%	Satisfactory ability to prepare workers for my needs.
20%	Good ability to prepare workers for my needs.

Universities in Northwest Indiana:

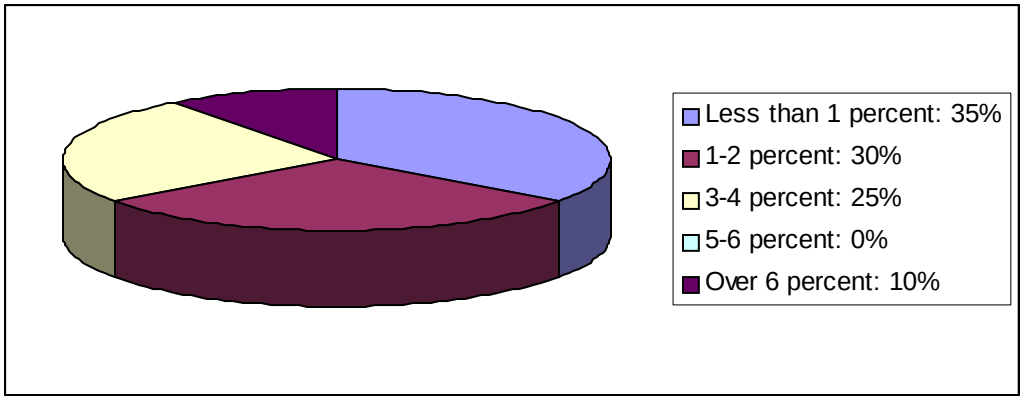
10%	Not applicable. Don't hire from universities.
0%	Poor ability to prepare workers for my needs.
20%	Satisfactory ability to prepare workers for my needs.
70%	Good ability to prepare workers for my needs.

25. What kind of education and training assistance do you provide to your workers? Please indicate the degree to which you provide each of the following, with 5 being all workers receive this kind of assistance, and 1 being none or very few workers receive this kind of assistance.



No facilities are utilizing individual training accounts (ITAs). ITAs are training funds through the Workforce Investment Act for qualified adults and dislocated workers who need training in order to gain skills needed for reemployment. No employers for this survey had any contact with a WorkOne office to learn about ITAs. Employers typically do not know about ITAs; they do not understand the benefit or the process for recruiting qualifying employees. They don't know if referred applicants have utilized ITAs or qualify for such training assistance.

26. What percent of your payroll is spent on training?



27. Who is your current major supplier?

Broder Bros., Alpha, Sanmar, Ryder, W.W. Grainger, Modular, Rediehs (distrib./trucking), Firestone, Mallory (office supplies); Figment Group (drug testing), Wheatbrooks (lumber), Design Packaging

28. Is your current major supplier located:

35%	Within Northwest Indiana?
65%	Outside Northwest Indiana?

29. Who is your current major customer?

3M, Health South, Georgia Pacific, Sears, Procter & Gamble, Wrigley, Colgate, various international intermodal companies

30. Is your current major customer located:

20%	Within Northwest Indiana?
80%	Outside Northwest Indiana?

31. Approximately what percent of your product or service delivery goes outside the United States?

45%	None
15%	0-5%
15%	6-10%
15%	11-15%
0%	16-20%
0%	21-25%
10%	Over 25%

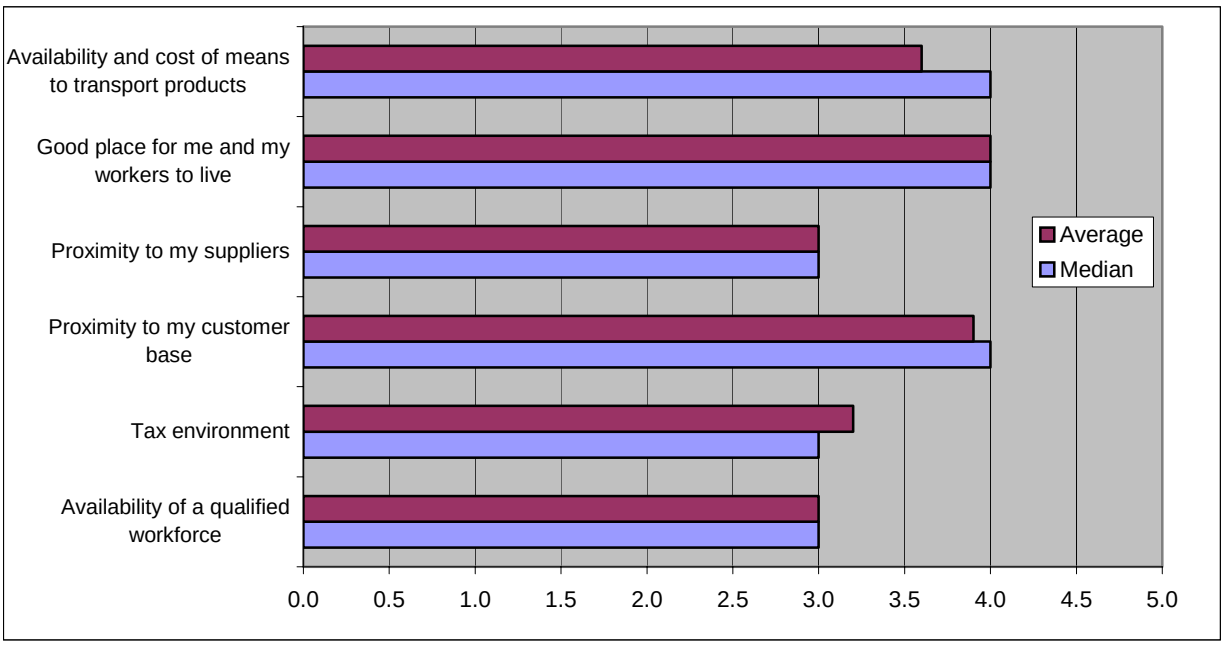
32. What is the primary method of transportation you use to ship your products?

5%	Not applicable – no products to transport
65%	Truck
5%	Train
5%	Air
20%	Commercial carrier (UPS, FedEx, Airborne, etc.)

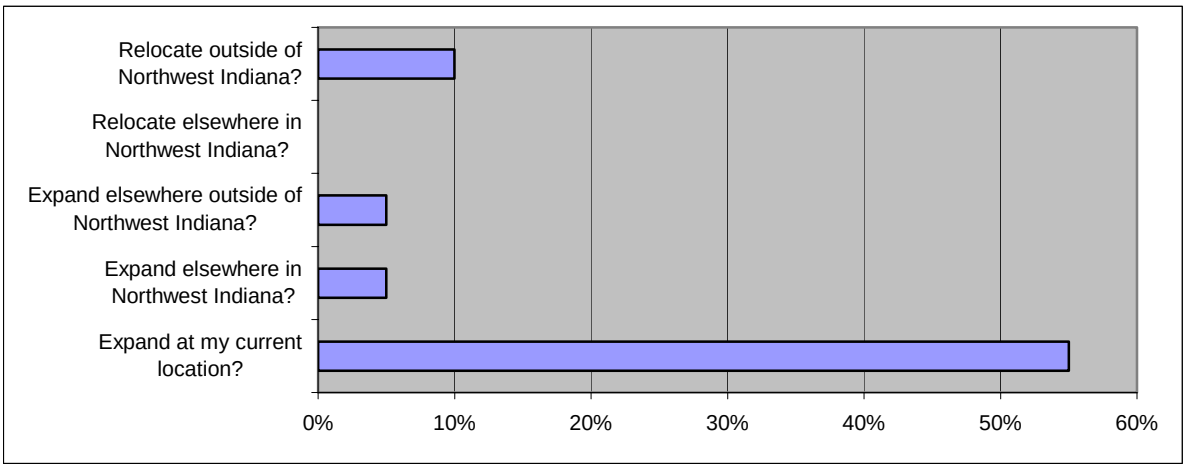
33. What is the main reason you use the transportation method that you use?

5%	Not applicable – no products to transport
15%	Cost
40%	Speed
40%	Weight or hazardous nature of product dictate method

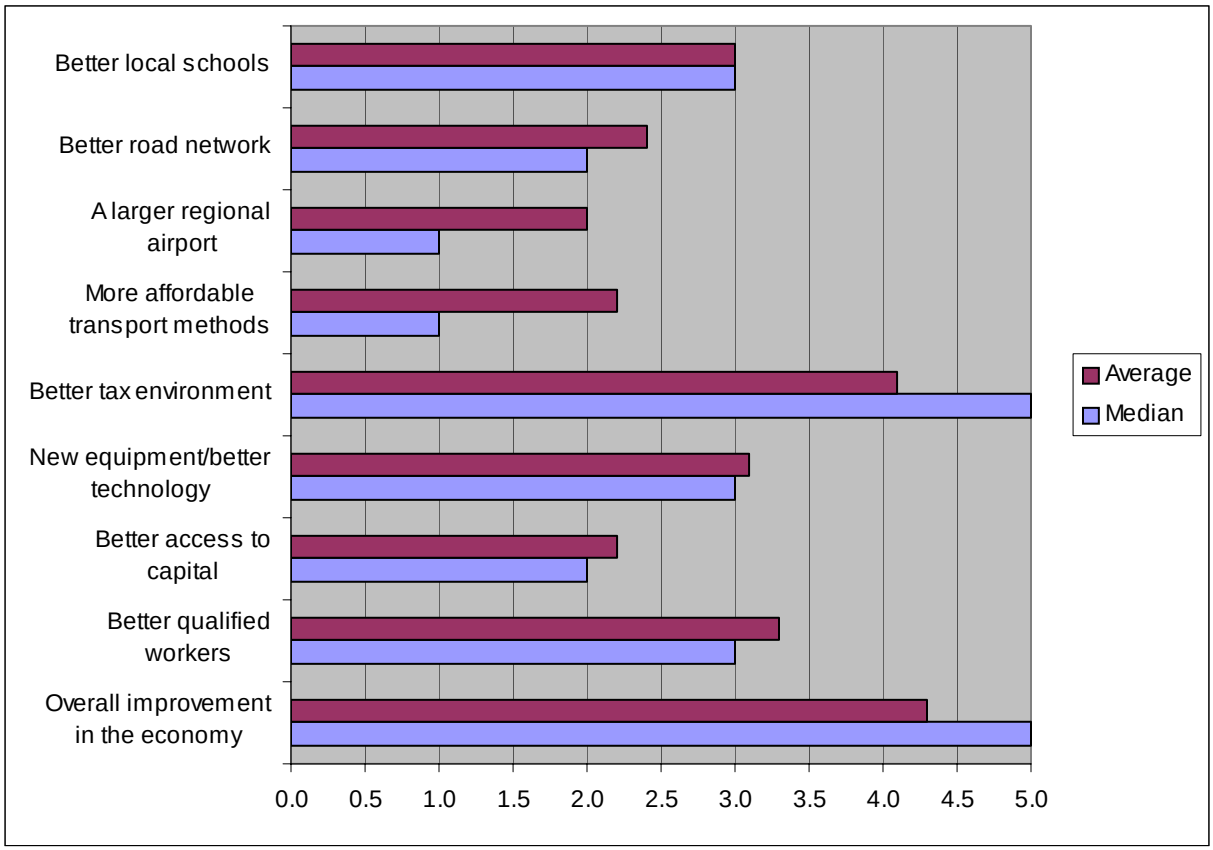
34. What keeps you in Northwest Indiana? Rate each on a scale of 1 to 5, with 5 being very important, and 1 being of little importance.



35. Within the next 5 years, do you foresee a need to:



36. What do you need most to thrive and grow here? Rate each of the following on a 1 to 5 scale, with 5 being very critical, and 1 being not very important.



37. What industry is your firm engaged in?

- **Trucking (2)**

Major clients are manufacturers/distributors of durable goods

- **Distributor/wholesaler (18)**

8 of those surveyed are manufacturers with their own distributor/wholesale business (Secondary SIC = 50 Wholesale trade – durable goods)

Companies Surveyed:	**County:**
Donaldson Corp. – N. American Distribution Center	Jasper
TC Services	Lake
Tri-Electronics	Lake
E-Pak Machinery	LaPorte
ITW Ramset/Red Head	LaPorte
Melrose Pyrotechnics, Inc.	LaPorte
New York Blower	LaPorte
St. Andrews Products	LaPorte
Tandem Transport Corp.	LaPorte
Whirlpool	LaPorte
Chester Technologies	Porter
Follett Higher Education Group	Porter
Herr Voss	Porter
Kramer & Leonard	Porter
Tri-State Hospital Supply	Porter
Urschel Labs	Porter
Galbreath (div. of Wastequip Co.)	Pulaski
I.P. Callison & Sons	Starke
J.W. Hicks - refractory division	Starke
Rockwell Windows	Starke

Special thanks to:

City of Valparaiso
Greater Valparaiso Chamber of Commerce
Chesterton/ Duneland Chamber of Commerce
Greater LaPorte Chamber of Commerce,
Michigan City Economic Development Corporation
Michigan City Chamber of Commerce
Greater Portage Chamber of Commerce
Community Development Commission of Pulaski County
City of Knox
Starke County Development Foundation
City of Gary
Community Workforce Compact
Indiana Department of Commerce
Indiana Department of Workforce Development
JobWorks
NIPSCO Economic Development

APPENDIX B

Work Keys
Picker/Packer Job Profile

Summary Report

General Comments

The Procedure
(from http://www.act.org/workkeys/profiles/proced.html)

Step 1: The analyst obtains background information about the job to be profiled and how that job fits into its company.

Step 2: Using *SkillPro*™, ACT's proprietary software, the analyst develops an initial list of the tasks most relevant to the job being profiled.

Step 3: The analyst meets with subject matter experts (SMEs)—incumbent workers or supervisors of the job being studied—who review and revise the list, adding, deleting, consolidating, or changing the wording of each task to make sure that the list of tasks accurately represents the job as it is performed in their company. Then the SMEs rate each task according to two dimensions: importance and relative time spent. The data are used to produce a criticality rating for each task. The SMEs review this revised task list and make any necessary changes. The resulting final task list establishes which tasks are the most critical to performing the job.

Step 4: Analysts present detailed descriptions of each of the Work Keys skills to the SMEs. These descriptions include examples of problems or situations employees must deal with at each level. The SMEs decide, as a group, which Work Keys skills are relevant to the job and which skill levels are necessary for entry into the job and effective performance in the job.

Step 5: The final product of the profiling procedure is a report listing the most critical tasks an individual in that job must perform and, for each relevant Work Keys skill, the skill level required to perform the job. The job profiling component of the Work Keys system is designed so that, when appropriately used, Work Keys assessments will be job-related and meet the validity and fairness requirements described in the federal government's *Uniform Guidelines on Employee Selection Procedures* and enforced by the U.S. Equal Employment Opportunity Commission (EEOC).

Results for Picker/Packer

- ✓ **Observation, Level 3**
- ✓ **Teamwork, Level 3**
- ✓ **Locating Information, Level 4**
- ✓ **Applied Mathematics, Level 3**
- ✓ **Writing, Not required**
- ✓ **Reading for Information, Not required**
- ✓ **Applied Technology, Not required**

Skill Analysis Information

Reading for Information – Level X (X means not required)

This skill is not required on the job, or less than the lowest level is required.

Applied Mathematics – Level 3

Employees at this level are required to:

- Do one step of mathematical operation (i.e., addition, subtraction) on positive or negative numbers, and multiplication and division of only positive numbers (i.e., 20)
- Change a number from one form to another, using whole numbers (e.g., 10), fractions (e.g., 1/2), decimals (e.g., 0.75), or percentages (e.g., 12%); for instance, employees may be required to convert 3/8 to its equivalent percentage

For example, at this level, employees may be required to add the prices of several products or to make the correct change for a customer.

Listening – Level X

This skill is not required on the job, or less than the lowest level is required.

Writing – Level X

This skill is not required on the job, or less than the lowest level is required.

Locating Information – Level 4

Employees at this level must read straightforward workplace graphics, such as basic order forms, line graphs, standard tables, basic diagrams, flowcharts, instrument gauges, and maps.

Employees are required to:

- Find several pieces of information in these types of graphics
- Summarize and/or compare information and trends in a single graphic
- Summarize and/or compare information and trends presented in more than one workplace graphic, such as a bar chart and a table showing related information
- Determine the relationships among graphics

Teamwork – Level 3

Employees are required to recognize the behaviors or actions which would best support the team and contribute to work performance when faced with simple work situations involving one problem or one issue that needs to be handled. In these work situations, the team goals and consequences are clear, all the resources needed to deal with the problems are available, and the relationships among team members are good.

Employees may be required to:

- Understand the goal that the team is trying to accomplish and how to work with other team members to accomplish that goal
- Choose actions that support the ideas of other team members and try to use their suggestions to accomplish team goals
- Determine if the team is having problems finishing a task and figure out what is causing these problems

Observation – Level 3

Employees at this level must pay attention to and remember a straightforward procedure. Obvious hints or reminders prompt the employee that the task needs to be done; how to complete the task; when the task should be complete; or whether the task was done correctly. The tasks are performed at a slow pace, generally under the employee's control, and in a routine, predictable manner without extra details or distractions.

Employees are required to:

- Pay attention to a straightforward procedure
- Watch and listen for basic elements shown at a slow pace
- Remember a few strongly prompted details
- Concentrate on the important elements shown without distractors or irrelevant information
- Identify clear differences

Applied Technology

This skill is not required on the job, or less than the lowest level is required.

Final Task List for Picker/Packer

Two sessions were conducted with separate groups of Subject matter experts (SMEs) to identify the critical tasks required for the position of Picker/Packer. SMEs are employees who have firsthand knowledge of the requirements of the job. They reviewed a task list from the Dictionary of Occupation Titles for relevance and comprehensiveness. They deleted any tasks they considered unimportant to the job. The SMEs rated each task on both importance and relative time spent performing this task compared to that spent on other tasks. The criticality of each task to the job (by multiplying the importance and relative time spent) was then calculated. The SMEs reviewed the list of tasks and their criticality rating and revised the list so that only the most critical tasks remained.

Final task lists from both sessions have been combined. Both groups chose tasks 1 through 30 as the most critical activities for their jobs. Tasks 31 through 35 were additional tasks identified by the group in the second session.

1. Drives vehicle to pick up items from several locations within warehouse and prepares them for shipment.
2. Operates forklift, stacker or handcart to move, convey, or to hoist and lower products to pallets, scales, or to shipping platform.
3. Manually moves and/or lifts product weighing from one to one hundred pounds from in-house pallet to out-going pallet.
4. Picks and packs customer order by matching pick list to the required number of lines, cubic measurements, line codes, and locations.
5. Picks product from up to 30 feet high, by attaching self to safety harness within automated hi-fly, and by operating manual controls.
6. Determines air or wet line, according to carton label, and fills in pallet with same line to deter product damage during shipment.
7. Visually ensures four boxes of equal height are placed on each of pallet's four corners for stacking and shipping purposes.
8. Works safely to prevent on-the-job injuries by participating in safety training, observing work environment, wearing proper protective equipment, and communicating safe procedures on a daily basis.
9. Identifies parts required by comparing part identification number on pick list to label number on carton.
10. Adheres label and/or pre-printed bar codes to pallets, carton, and pipe according to order to ensure proper shipping.
11. Complies with QS9000 and TS16949 standard operating procedures and working practices.
12. Ensures proper customer, destination, carrier, labeling and packing by referring to special written instructions.
13. Locates palletized product by matching location number on pick list to physical location within warehouse.
14. Transports cubed pallet of product, using forklift, to shrink-wrap machine for wrapping, then on to specific station for audit per freight line instructions.
15. Attains certification to pick and pack orders for specific customers, and to operate stacker and/or forklift by attending classroom training.

Final Task List for Picker/Packer (continued)

16. Places HAZMAT labels in a visual area to warn shippers and customers of hazardous material on pallet according to manual.
17. Records onto order skid quantity, carton quality, weight, and pipe count.
18. Examines order/pick list and ensures number of pallets to complete order, signs order/pick list and transports to proper carrier slot for pickup.
19. Records quantity of product picked onto pick list.
20. Audits palletized product by matching part identification number to customer order, to pick list, and matching purchase order number from order to bar code label part identification number and quantity.
21. Checks order for completed audit and special packaging instructions according to customer specification.
22. Labels carton containing mixed product or partial cartons to advise customer of contents within.
23. Locates required pick list from pack station to gather information for pulling orders.
24. Manually removes outer wrap from cartons and visually inspects carton for dents and dings.
25. Determines amount of power available for machine operation by checking the gauge. May change battery on machinery by removing side plate, matching battery number to machine number, and proceeds according to instruction manual.
26. Stages skids for shipment, according to due date on pick list.
27. Suggests improvements in work methods and procedures by following written Continuous Improvement Policy.
28. Troubleshoots work-related problems by verbally communicating problem to lead person.
29. Participates in daily or weekly meeting to discuss problems and/or quality issues.
30. Places lid on top of pallet and wraps top layer of pallet with specified tape to keep product from shifting prior to shrink-wrap.
31. Enters pick list number of individual orders, using computer, to verify customer information and quantity of pieces per order for billing purposes.
32. Manually loads product from pallet onto trailer as required.
33. Repacks and/or bundles small cartons for shipment via United Parcel Service.
34. Takes inventory of product on hand by matching inventory report to physical product location and records outdated and damaged product, wrong location of product, excesses or shortages.
35. Performs daily inspection of machine according to checklist.

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