
Talent Roadmap for Northern Indiana

DECEMBER 2012



This report was prepared by Thomas P. Miller and Associates, LLC (TPMA). TPMA would like to thank all of the individuals and organizations who participated in the design and development of the Talent Roadmap for Northern Indiana.

TPMA would like to thank all employers who participated in the regional survey and the employers, education providers, workforce professionals, and economic development professionals who engaged in the focus groups and interviews.

TPMA would also like to thank the Corporate Partnership for Economic Growth (CPEG), Work One of Northern Indiana, and Northern Indiana's local economic development organizations for their leadership, guidance and insight:

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This report was made possible through the generous contributions of: Community Foundation of St. Joseph County, Indiana's Education Roundtable, and anonymous private funders.



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LETTER FROM SHAWN E. PETERSON

PRESIDENT & CEO OF THE CORPORATE PARTNERSHIP FOR ECONOMIC GROWTH

Northern Indiana is in a global race for talent. Major structural changes are occurring in our economy as businesses adapt to globalization and digitalization. Employers find themselves needing a few, well educated people with both soft and technical skill sets. Unfortunately, the demand for talent and the supply of workers with these desired skills are out of balance, not only in Northern Indiana but also all over the country.

The long-term prosperity and survival of our community hinges on finding this balance. “The availability of better-educated talent with up-to-date career skills now largely determines where businesses will locate. Communities that break down the structural barriers among businesses, education, and community groups and collaborate to renew their talent creation and economic systems will attract new businesses and retain current ones. Those that don’t will wither and die,” explains Edward E. Gordon, internationally recognized researcher on workforce development and author of *Winning the Global Talent Showdown: How Businesses and Communities Can Partner to Rebuild the Jobs Pipeline*.

As the region’s economy began to rebound in early 2012, this talent imbalance became all too apparent and local employers began engaging economic development, workforce, and education professionals to express their concerns and look for solutions.

On May 30, 2012, the leaders of the economic development organizations in the region, along with the Corporate Partnership for Economic Growth (CPEG), convened a regional meeting focused on talent and workforce. The participants, including representatives from education, workforce development, and business concluded that the region needed a framework to develop both short and long-term initiatives that would increase the collective competitiveness of Northern Indiana. Accordingly, CPEG engaged Thomas P. Miller & Associates to assist in the creation and development of this Talent Roadmap for Northern Indiana.

As the Talent Roadmap evidences, our region is already taking action. From improvements in workforce placement processes and business consulting services to partnerships between education and economic development to create programs that meet the needs of industry – our region is making progress. Our local communities are also banding together to improve education performance and expand project-based learning opportunities in science, technology, engineering and mathematics fields. The Roadmap provides recommendations to expand upon these successes and to encourage further community engagement in improving our region’s global competitiveness.

We look forward to being a part of this ongoing conversation and a part of Northern Indiana’s bright and talented future.

Sincerely,

Shawn E. Peterson



President & CEO

FOCUS GROUP AND INTERVIEW PARTICIPANTS

Thank you to all focus group and interview participants, your knowledge and insight are highly valued and have been of great assistance in constructing the Talent Roadmap for Northern Indiana.

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- Apprentice Academy – Mark Noris – Marketing Director
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- Ivy Tech Corporate College – Matt Bell – President
- Ivy Tech Corporate College – Sue Smith – Corporate Executive for Advanced Manufacturing, Office of the President
- Purdue College of Technology – Mike Sanders – Director, South Bend
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EXECUTIVE SUMMARY

Recognizing the critical role of talent to the economic vitality and growth of the Northern Indiana region, a coalition lead by the Corporate Partnership for Economic Growth (CPEG) embarked upon a regional workforce assessment of Northern Indiana (Elkhart, Fulton, Kosciusko, Marshall, and St. Joseph counties). The *Talent Roadmap for Northern Indiana* provides an in-depth analysis and assessment of the region's workforce, educational attainment, open job opportunities, and stakeholder needs. This thorough data analysis uncovers clear workforce development needs as well as a commitment to working regionally toward collective solutions.

RECOMMENDATIONS

COMMON REGIONAL ASSESSMENT & CREDENTIALS

Implement and utilize common assessments for both open positions and potential job candidates using a common profiling system (like WorkKeys Job Profiling) and industry recognized credentials in a more aggressive and organized fashion, create a Work Ready community, and partner with organizations like the Manufacturing Institute to promote the value of credentials and assessments as needed.

PROFESSIONAL RECRUITMENT

Attract and retain degreed talent in Northern Indiana to meet the high-skill demands of employers through regional internship programs, fellowship programs, awareness campaigns, networks, and other initiatives that focus on young and/or international professionals and their families.

LOCAL PROMOTION & RECRUITMENT EFFORTS

Develop a local pipeline of talented individuals for in-demand* careers by engaging in efforts to change current manufacturing perceptions, to implement advanced workplace practices, to enhance regional talent, and to provide regional wage /salary and open position surveys.

EXPAND STEM, PROJECT BASED LEARNING, AND CTE

Provide vision and overall direction for education initiatives, including a focus on Science, Technology, Engineering, and Mathematics (STEM), Project Based Learning (PBL), and Career and Technical Education (CTE), and the use of complimentary metrics and measures. From this regional vision, county coalitions and organizations implement and initiate change.

MOVING FORWARD

Collaboration and coordination are essential to lasting regional success. Key stakeholders including professionals from education, business, workforce, and economic development should discuss, build, and implement an actionable vision for the region. Implementation plans should combine current regional capacity with desired future direction.

* In-demand careers include jobs with significant current or projected openings and/or growth. For a list of current openings see the Job Postings Analysis. For a list of Indiana's Hot 50 Jobs see Appendix C

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INTRODUCTION AND PROJECT GOALS

In Northern Indiana and across the country, there is a growing emphasis on talent for the long-term health and prosperity of the economy. In today's high-tech workplaces, the term talent does not just refer to degreed professionals, but rather any individual who can fill and excel in an open position – including opportunities in manufacturing. Developing a workforce where any individual can fill and excel in an occupation, independent of education level, allows communities to capitalize on opportunities and compete in the global economy.

Talent is any individual who can fill and excel in an occupation, independent of education level

Coordination and Cooperation are key to regional success

With limited time and resources available for economic and talent development, it is critical that Northern Indiana's businesses, economic development, workforce development and education align efforts and resources to more profoundly impact the region's development. To this end, the Corporate Partnership for Economic Growth (CPEG) represents an ongoing effort to engage regional business leaders, economic development professionals, workforce professionals, education providers, and community leaders with the ultimate goal of promoting long-term growth and prosperity for Northern Indiana. CPEG's mission is to leverage regional relationships and to attract and obtain new investments for economic growth and community prosperity.

To gain a more comprehensive understanding of the workforce needs in Northern Indiana, a coalition led by CPEG launched a talent and workforce review. The initiative is a coordinated regional effort to attract, develop and retain a skilled workforce that can meet employer needs today and into the future in order to drive economic growth in Northern Indiana. Three main goals of the review are:

1. Fill existing open positions
2. Assess emerging industries
3. Develop a complete talent and workforce roadmap through 2020

This report provides action steps to move the region toward filling open positions today and providing recommendations for long-term programs and initiatives to launch Northern Indiana on a path to success for 2020 and beyond. Further research is recommended to comprehensively examine and assess potential emerging industries within the region as certain industry opportunities may have not been discernible from our quantitative data sources.

This collaborative initiative builds upon other recent initiatives throughout the state of Indiana, including efforts by Indiana's Education Roundtable. The Roundtable is composed of key education, business, community, and government leaders, focusing on improving educational opportunities and achievement for Indiana students. Partnering with the Roundtable, CPEG conducted an analysis of the region to identify regional strengths and weaknesses related to economic development. The quantitative data analysis described within this report was used as a building block to launch the *Talent Roadmap for Northern Indiana* and drive the strategic planning process.

SUMMARY OF QUANTITATIVE AND QUALITATIVE ANALYSIS

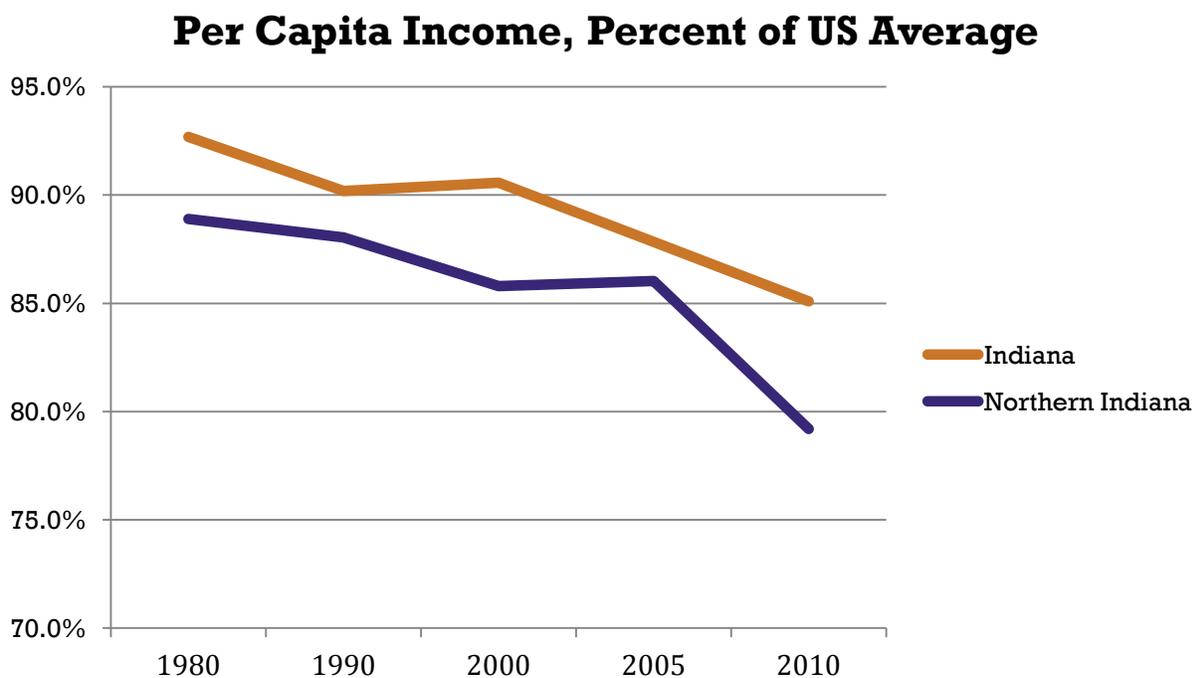
To more fully understand the workforce requirements of Northern Indiana employers, the Corporate Partnership for Economic Growth (CPEG) engaged Thomas P. Miller and Associates (TPMA) to perform an extensive analysis and planning process, which included quantitative labor market data analysis, a survey of regional employers, job posting analysis, focus groups and interviews.

QUANTITATIVE DATA ANALYSIS

As described in the introduction, the quantitative data analysis was completed in partnership with the Indiana Education Roundtable. Through an extensive analysis of both publically available data and proprietary data sources, several key areas of need and opportunity for the region have been identified:

PER CAPITA INCOME

Northern Indiana's per capita income as a percentage of the US average dropped 8.3% from 2005-2010. Changes in per capita income are especially important as it is a key driver of economic growth and development. Per capita income represents the standard of living within a region or area, whereby increases in per capita income generally represent both increased personal wealth and increased spending in the local economy.

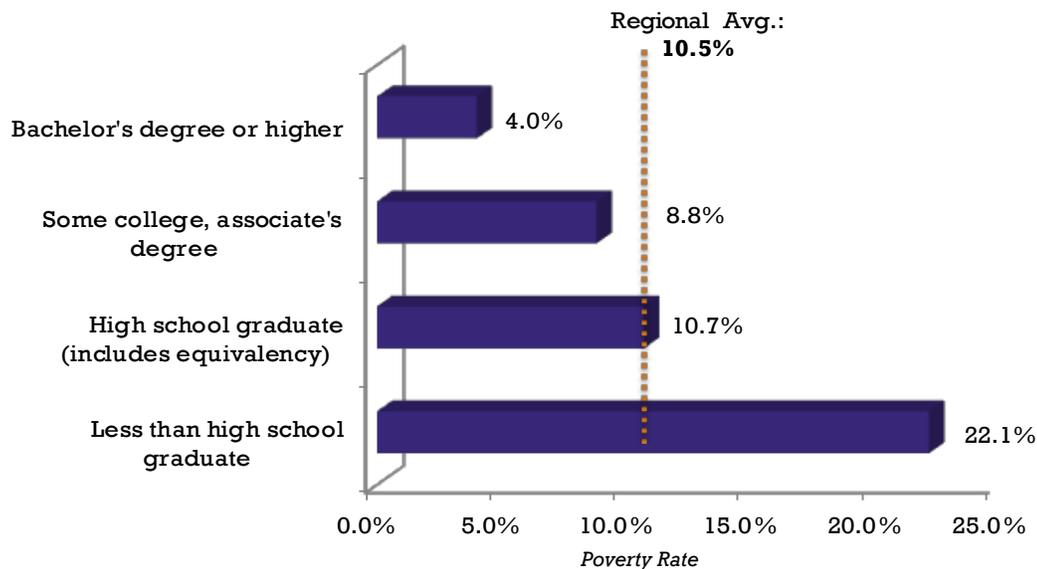


Bureau of Economic Analysis
[Represents most recently available data from BEA]

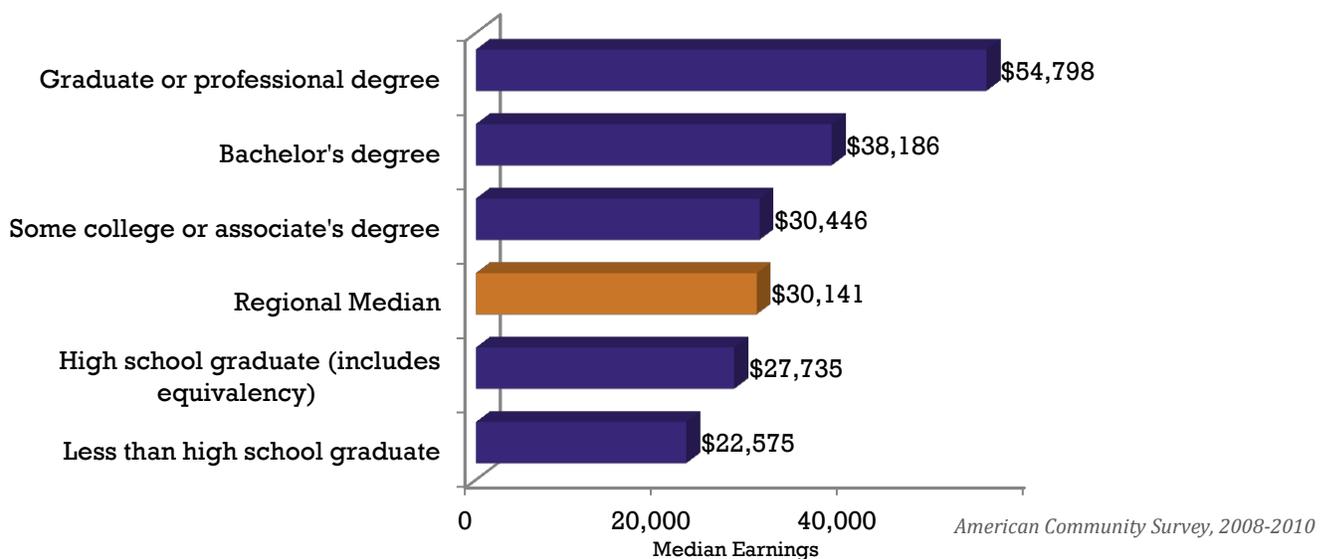
POVERTY AND EARNINGS

Individuals in Northern Indiana with some college or higher have a poverty rate below the region's average and receive median annual earnings above the regional average. On the whole, individuals with higher education levels have been better able to weather the Great Recession through consistently higher income levels than their less educated counterparts. This disparity in poverty and income across education levels is just one reason why it is vital for Northern Indiana to focus on educational attainment in in-demand positions within the region.

Poverty Rate by Education Level 2008-2010 Northern Indiana Average



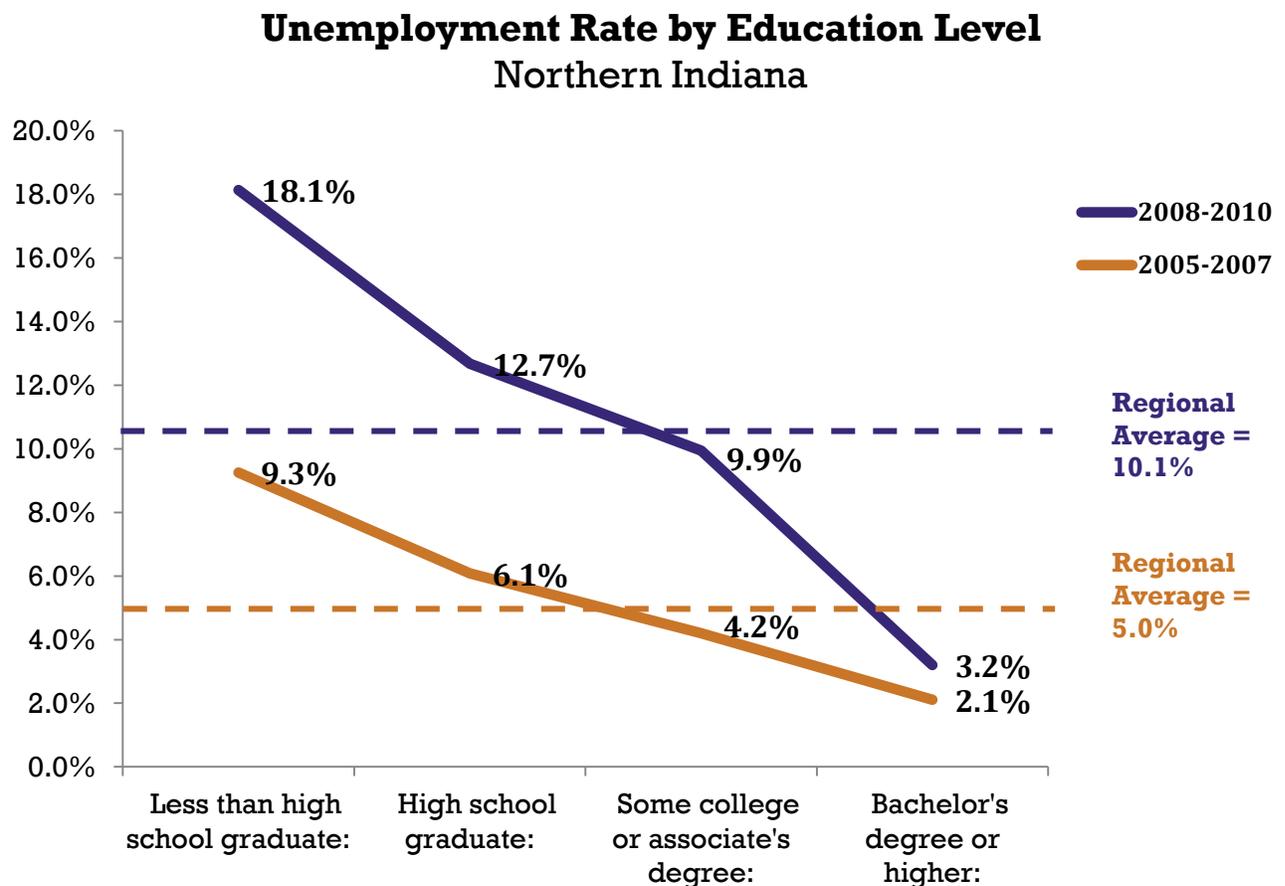
Median Earnings by Education Level 2008-2010 Northern Indiana Average



UNEMPLOYMENT

The average unemployment rate for Northern Indiana jumped to 10.1% (2008-2010) from 5.0% (2005-2007), with much of this increase in unemployment due to the Great Recession. However, even before the recession, while manufacturing and recreational vehicle production were booming, high unemployment levels were still observed for individuals with lower levels of education.

On average, unemployment rates decrease as an individual's educational attainment increases. As employers today and in the future require higher levels of education, this gap between the undereducated and those with some form of postsecondary experience will continue to grow. This difference in unemployment levels across educational attainment is another reason why Northern Indiana should focus on creating a workforce pool that fulfills the talent needs within the region, including increasing opportunities in high school, career and technical education, and higher education.



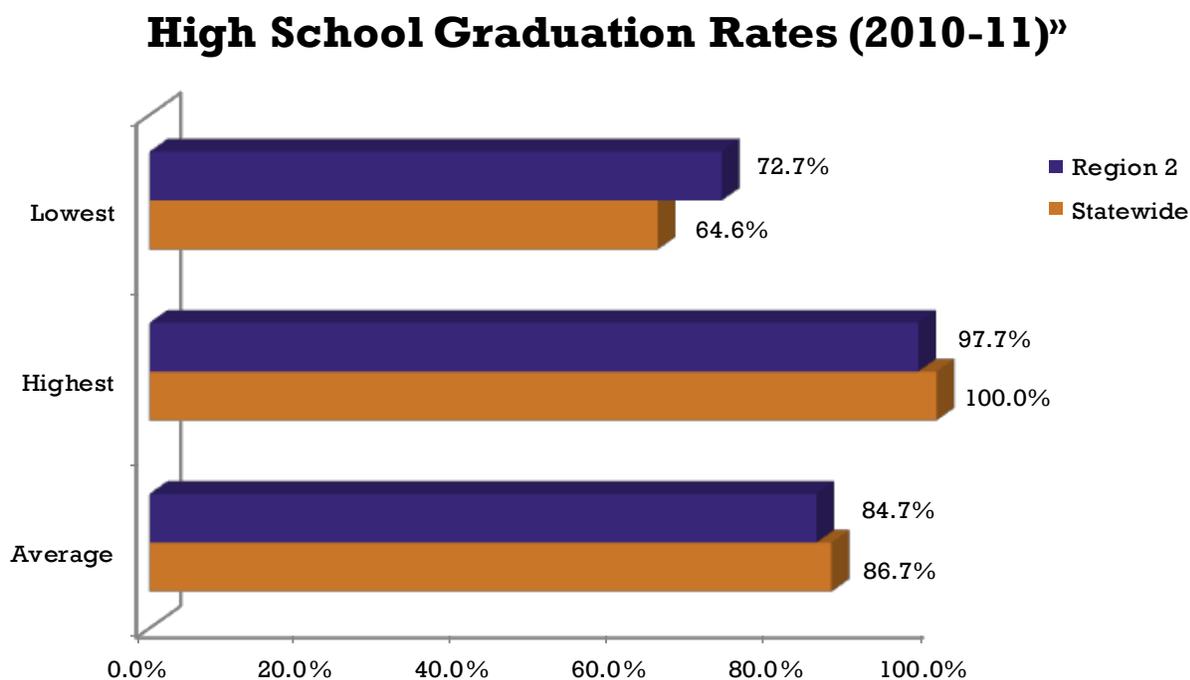
American Community Survey, 2008-2010 and 2005-2007

EDUCATIONAL ATTAINMENT

When examining the relationship between poverty rates, earnings, and unemployment it is clear that increased education levels correlate with higher earnings and lower unemployment. Given the importance of educational attainment, especially within in-demand occupations, it is important for Northern Indiana to understand the region's educational climate.

HIGH SCHOOL GRADUATION RATES

When considering high school graduation rates, Northern Indiana's completion rates fall behind the statewide average. In addition, high schools within Northern Indiana are neither the lowest nor highest performing schools within the state, providing opportunities for increased high school completion.



» Lowest and Highest refer to individual school districts that are the lowest or highest performing within the State or Region

POSTSECONDARY EDUCATION

When examining levels of postsecondary educational attainment, Northern Indiana has again fallen behind. In Northern Indiana, only 30% of adults age 25-64 have an Associate’s degree or higher, significantly lower than the U.S. average of 41%. As described earlier, higher levels of educational attainment are correlated with higher median earnings, lower levels of unemployment, and lower poverty rates – all possible benefits for Northern Indiana’s economy, should educational attainment rates increase.

Percentage of Adults 25-64 with an Associate Degree or Higher

	54%	District of Columbia
	50%	Massachusetts
	46%	Connecticut, Colorado
	45%	Minnesota, New Hampshire, New York, New Jersey
	44%	Maryland, Vermont, North Dakota
	43%	Virginia, Hawaii, Rhode Island
	42%	Washington
United States	41%	Illinois, Nebraska
	40%	Iowa, Kansas, Oregon
	39%	Utah, California, South Dakota, Maine, Delaware
	38%	Montana, Wisconsin, North Carolina, Pennsylvania
	36%	Florida, Georgia, Michigan
	35%	Alaska, Missouri, South Carolina, Wyoming, Arizona, Ohio
	34%	Idaho, New Mexico
Indiana	33%	Texas
	32%	Tennessee, Oklahoma, Alabama
Northern IN	30%	Kentucky, Nevada
	29%	Mississippi
	28%	Louisiana
	27%	Arkansas
	26%	West Virginia

College Board's The College Completion Agenda
2011, and American Community Survey, 2008-2010

IN-DEMAND OCCUPATIONS

The manufacturing industry employs the largest number of individuals in Northern Indiana, more than 92,800, which is over one-fourth of the total employment available within the region. In addition, Northern Indiana boasts a competitive advantage, or regional strength, in manufacturing – offering great potential for continued manufacturing development in the area.

Northern Indiana’s healthcare industry claims the greatest projected growth potential for the region, and second highest regional employment figures with over 38,100 jobs in 2012. An additional 8,600 jobs are expected to be added by 2022.

Opportunities in these strong target industries require at least a postsecondary credential and not just a high school diploma. In addition, many of these positions also require a STEM-related skillset and soft skills – emphasizing the importance for higher educational attainment for in-demand occupations in Northern Indiana.

MANUFACTURING

Knowledge Required for Top Manufacturing Occupations	Skills and Abilities Required for Top Manufacturing Occupations
Computers and Electronics	Active Listening
Customer and Personal Service	Control Precision
Design	Equipment Selection
Education and Training	Instructing
Engineering and Technology	Problem Solving
Mathematics	Quality Control Analysis
Production and Processing	Reading Comprehension

HEALTHCARE

Knowledge Required for Top Healthcare Occupations	Skills and Abilities Required for Top Healthcare Occupations
Biology	Active Listening
Clerical	Critical Thinking
Customer and Personal Service	Oral Comprehension
Education and Training	Oral Expression
English Language	Problem Sensitivity
Mathematics	Reading Comprehension
Medicine and Dentistry	Social Perceptiveness
Therapy and Counseling	Speech Clarity

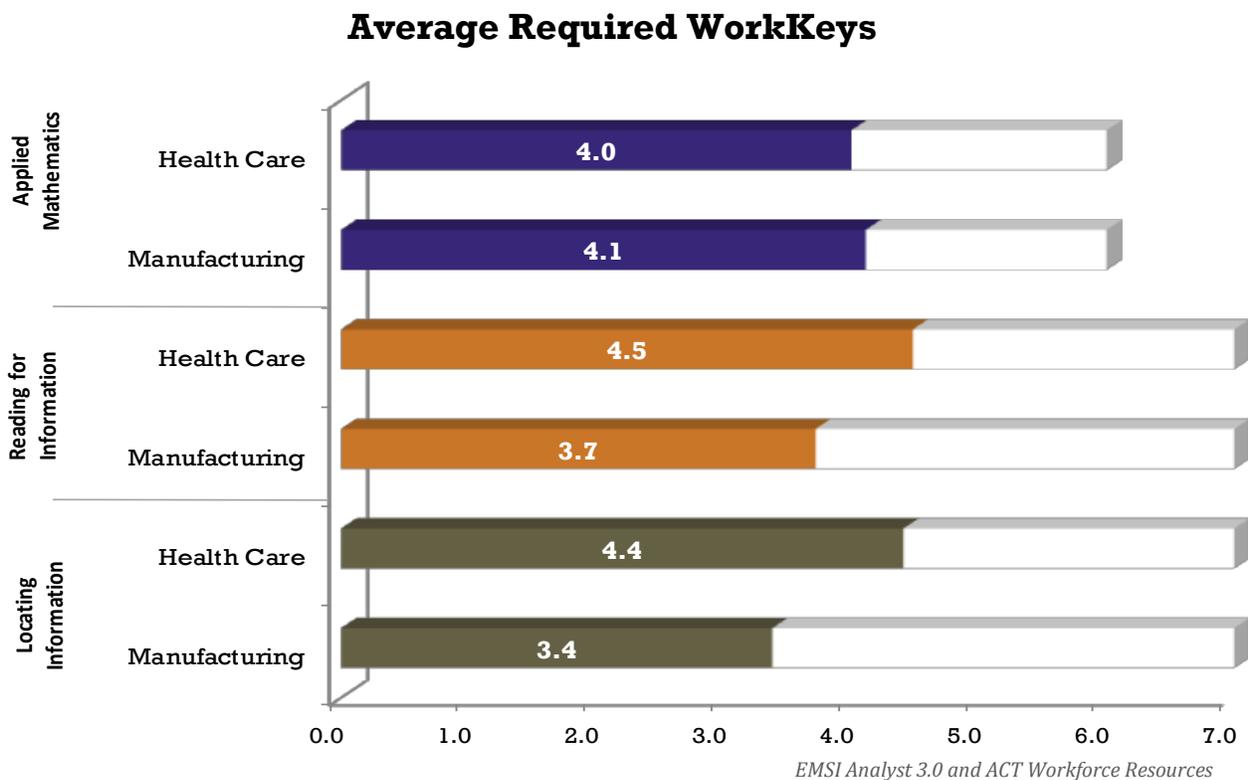
EMSI Analyst 3.0, using O*Net data

WORKKEYS

WorkKeys is a skills assessment tool created by ACT, a national non-profit organization focused on workforce development and educational and career planning. WorkKeys is the preferred assessment tool utilized by the Indiana Department of Workforce Development and Work One Northern Indiana and measures the real world skills that employers demand within the workplace. The WorkKeys assessment quantifies skillsets in Applied Mathematics, Reading for Comprehension, and Locating Information. Scores in these three categories are used by employers when examining job applicants and by schools/colleges when preparing students to enter the workplace.

Analyzing occupations for WorkKeys requirements presents the unique opportunity of creating a common language between employers, education providers, workforce professionals, and jobs seekers. If WorkKeys credentials are adopted within the community as a whole, the region could create a Work Ready Community. Work Ready Communities are designated areas where individuals have up-to-date WorkKeys scores, which allows for more efficient and successful hiring by employers. These communities also validate jobseekers' skills and assist them in identifying personal gaps, while assisting students in career planning to bridge the gap between school and the workplace.

It is possible to create WorkKeys requirements for jobs and industries, as demonstrated by the average scores for in-demand occupations within manufacturing and healthcare described below.



For additional information regarding Quantitative Data Analysis methodology, see Appendix A

SURVEY OF REGIONAL EMPLOYERS

The survey of regional employers was distributed by the region's local economic development officials to local employers. There were 71 survey respondents including representatives from manufacturing, healthcare, finance/insurance, information technology, and logistics. These employers cited a total of 254 current openings in Northern Indiana. Within these openings, 118, or 46%, were in manufacturing. The survey focused on:

- **Current Workforce Needs** – detailed information about open positions within each company. In total, 254 current openings were described, including position descriptions, starting salary, and required educational attainment.
- **Future Workforce Needs** – projected openings, annual turnover, and workforce constraints. Surveyed companies indicated increasing openings over time with a concern that the regional workforce would not contain workers qualified to fill the positions.
- **Local Workforce in Northern Indiana** – quality of job applicants and obstacles to hiring locally. Several key challenges limiting a company's ability to hire locally included a lack of: STEM education, teamwork skills, computer literacy, and specialized training.
- **New Worker Attraction** – current recruitment methods, opportunities offered through the company, and obstacles to recruiting. Many employers recruit from universities, community colleges, career and technical centers and word of mouth. Obstacles to recruiting qualified candidates into the region include perception of the region, the culture for young professionals, and spousal jobs.

The survey of regional employers highlighted the need for increased regional cooperation and coordination to tackle education and recruitment challenges. To create the talent required by employers today and into the future, it is imperative that business, economic development, workforce development and education entities within Northern Indiana come together to develop and enhance a talent pool and pipeline. This pipeline will not only assist Northern Indiana, but also the greater watershed, including the Ft. Wayne region, southwest Michigan, and the Merrillville-Gary region. In addition, common recruitment challenges such as spousal jobs and a culture conducive to young professionals may need to be addressed.

Results from the Survey of Regional Employers, validated by focus group discussions with employers in manufacturing, also brought to light additional challenges to hiring locally, including inability to pass a drug test and overall unreliability of workers. While these are pervasive issues within Northern Indiana, they are also prevalent within many communities across the United States. These social barriers exasperate the challenges faced by employers when seeking qualified workers. We acknowledge that these social challenges are a problem for Northern Indiana, but analyzing them in detail is beyond the scope of the *Talent Roadmap for Northern Indiana*.

For information regarding Survey of Regional Employers methodology, see Appendix A

JOB POSTING ANALYSIS

In order to acquire a more comprehensive view of the current workforce demand, the survey team conducted research of job posting data. The job posting analysis included an extensive evaluation of currently available jobs, standardized by O*Net-SOC codes, within Northern Indiana. In total, the job posting analysis recorded an estimated 2,080 available openings, with top jobs including:

Top Occupation Openings for Northern Indiana

Normalized Job Title	No. Positions Currently Available
51-2092 Team Assemblers	165
43-4051 Customer Services Representatives	73
17-2112 Industrial Engineers	69
41-2031 Retail Salespersons	66
51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic	52
29-1141 Registered Nurses	51
49-9071 Maintenance and Repair Workers, General	51
53-3032 Heavy and Tractor-Trailer Truck Drivers	44
31-1014 Nursing Assistants	43
15-1199.01 Software Quality Assurance Engineers and Testers	41
51-9198 Helpers--Production Workers	40
11-1021 General and Operations Managers	36
11-2022 Sales Managers	36
13-2011 Accountants and Auditors	29
53-7062.00 Laborers and Freight, Stock, and Material Movers, Hand	29
11-3021.00 Computer and Information Systems Managers	24
43-6014.00 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	24
41-3021 Insurance Sales Agents	22
17-2141 Mechanical Engineer	20
29-1127 Speech-Language Pathologists	19
51-2091.00 Fiberglass Laminators and Fabricators	19
51-4121 Welders, Cutters, Solderers, and Brazers	19
53-3033 Light Truck or Delivery Services Driver	19

Indiana Career Connect and Survey of Regional Employers

The job posting analysis highlighted the need to focus on manufacturing and healthcare industries, as both of these consistently shared high numbers of job openings at the regional level as well as for individual counties.

For information regarding Job Posting Analysis methodology, see Appendix A

FOCUS GROUPS AND INTERVIEWS

Utilizing data collected during the earlier phases of the initiative to drive conversation and data validation, focus groups and one-on-one interviews were held with key stakeholders in the region. Industry stakeholders were determined from earlier quantitative data analysis.

STAKEHOLDERS INCLUDED:

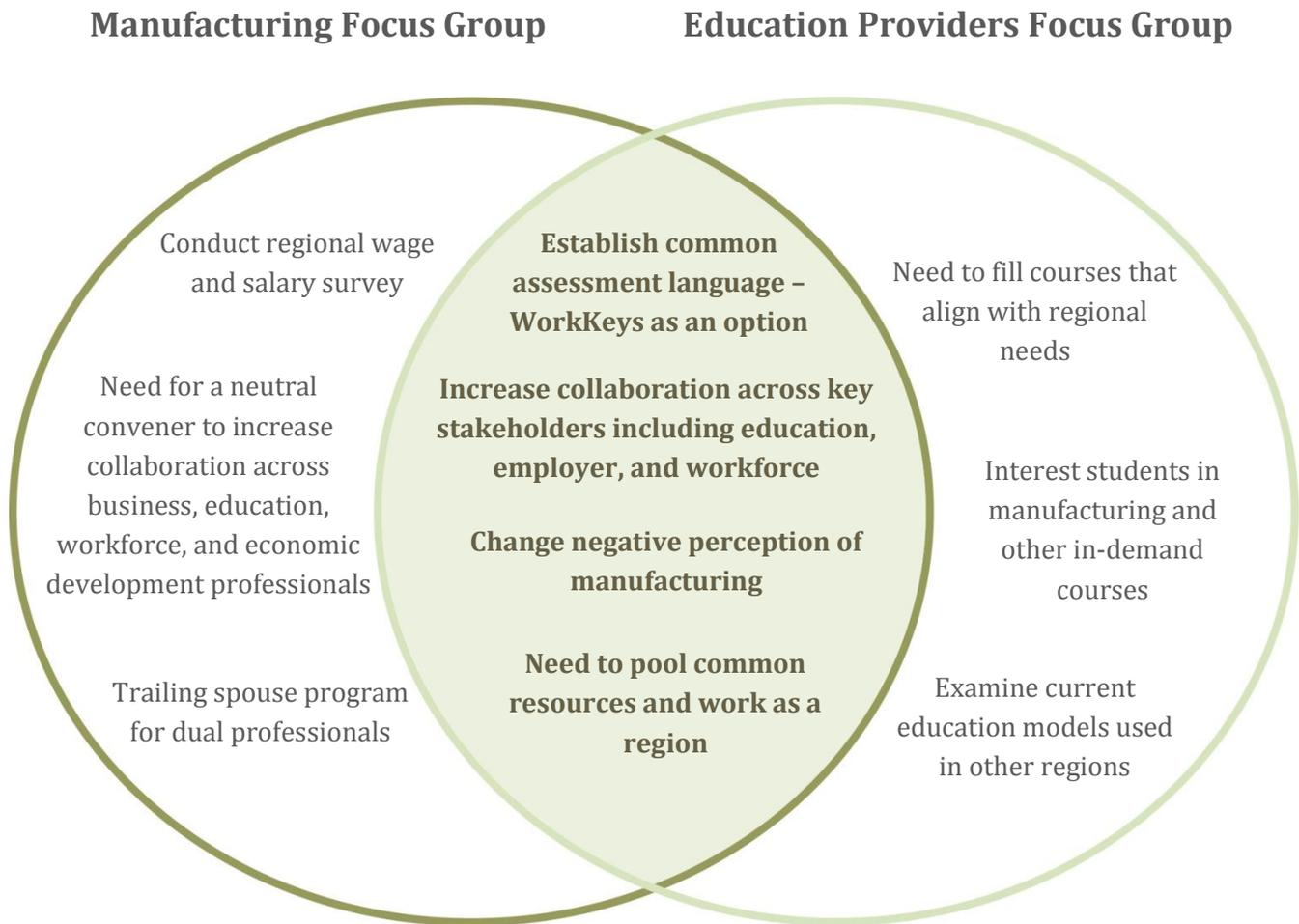
- Employers in Manufacturing, Healthcare, Orthopedics, and Information Technology
- Education Providers
- Workforce Professionals
- Economic Development Professionals

OVERALL TAKEAWAYS FROM THE CONVERSATIONS INCLUDED AN INTEREST IN:

- Addressing gaps in the region through collaboration
- Improving partnerships and communication throughout the region
- Changing the perception of manufacturing to better align with current industry practices and skill requirements
- Profiling jobs in a consistent manner for open positions across businesses to more accurately determine the knowledge, skills and abilities required for the job
- Increasing employer knowledge and use of assessments and credentials to create a common language to validate skills and competencies of workers
- Connecting employers with educational institutions for internship programs and customized training programs
- Developing a dual professional program
- Conducting a wage and salary survey for the region
- Advocating for competitive wages and advanced workplace practices
- Identifying information technology technical support to industries including manufacturing and healthcare
- Establishing a neutral facilitator or moderator to assist with bringing together employers, educational institutions, and workforce professionals

In addition to the overall takeaways, it is important to understand overlapping ideas within the focus groups and interviews. These areas of overlap present strong opportunities for consensus building and initiative development across key stakeholders in the region. Diving deeper into the

qualitative data, extensive similarities across focus group sessions for employers in manufacturing and education providers were discovered:



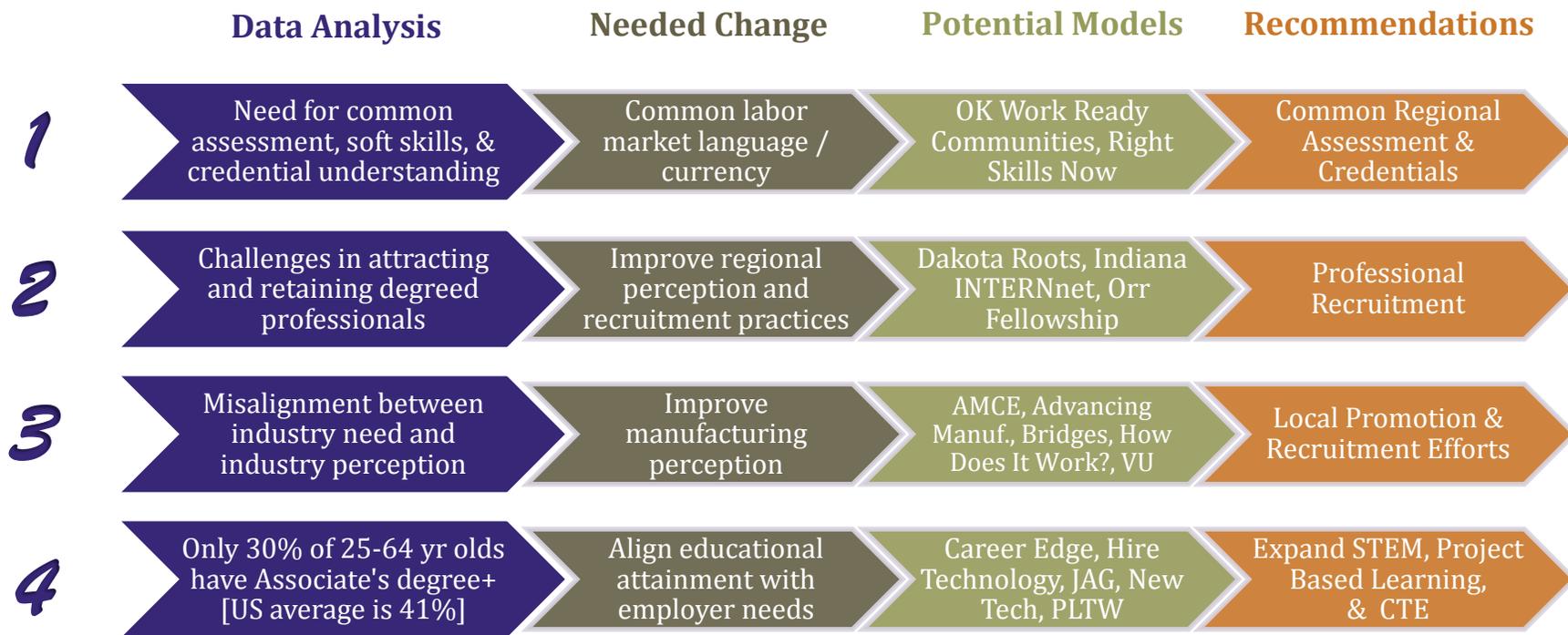
As identified in the quantitative data analysis, the survey of regional employers and the focus groups and interviews, the long-term success of Northern Indiana depends on the region's skilled and talented workforce. Thus, it is essential to continue to engage employers, education providers, workforce professionals, economic developers, and other regional stakeholders in conversation.

For additional detail regarding Focus Groups and Interviews, see Appendix B

DATA DRIVEN RECOMMENDATIONS

All information was collected through quantitative data analysis, a survey of regional employers, job posting analysis, and focus groups and interviews. This data was condensed to create a roadmap for the *Talent Roadmap for Northern Indiana*.

PROGRAMS



1

COMMON REGIONAL ASSESSMENT & CREDENTIALS

It is imperative that the greater Northern Indiana area implement and utilize *common* assessments for both open positions and potential job candidates to be competitive in the global talent market. Understanding that assessments and credentials are already in use within Northern Indiana, this recommendation focuses on the regional need for common labor market currency through the use of WorkKeys Job Profiling and industry recognized credentials to create a Work Ready Community. This effort also includes partnering with the Manufacturing Institute either directly or indirectly to promote the value of credentials and assessments to employers, educators, and the community.



DATA ANALYSIS

An analysis of the qualitative data collected through focus groups and interviews uncovered the following:

WorkKeys works well for employers as an indicator of prospective employee's talent (Manufacturing Focus Group)

Manufacturers who attended the focus group expressed great interest in the possibility of a single common language used to identify talent. At present, several companies use WorkKeys almost exclusively to recognize the skills and abilities of individual applicants. These businesses reported that the WorkKeys assessment was accurate in profiling open positions and matching

these positions with the skills and abilities of the applicants. Applicants are given a WorkKeys assessment primarily through WorkOne offices, however, not every employee who goes through WorkOne or a staffing agency receive a WorkKeys score – as the acquisition of these scores by employees are often employer driven. Since not all applicants come prepared with a WorkKeys score, employers may request that prospective employees be given a WorkKeys assessment. Unfortunately, the time needed for the assessment to be conducted and scores to be returned to the employer often results in individuals abandoning their application to pursue other opportunities.

Interest in a common language for identifying talent was not just voiced by employers currently using the WorkKeys assessment. The education providers' focus group also expressed great interest in establishing one assessment system that would be used by all employers, workforce professionals, and education providers. Utilizing WorkKeys as a common language would assist education providers in assessing the skillsets of current students, assessing the value of courses offered through the institutions, and customizing curriculum to meet the demands of employers and the current workforce.

WorkKeys Job Profiling

WorkKeys is a workplace literacy assessment measuring "real-world" skills that employers believe are critical to job success. It quantifies workplace employability skills in Applied Mathematics, Locating Information, and Reading for Information. Through the Indiana Department of Workforce Development (DWD), employers can work with a business services representative to have occupations at their facility or place of employment profiled and linked back to numerical WorkKeys scores. This can improve the hiring process by narrowing the candidate pool to those who qualify with minimum scores in required fields to perform functions of an occupation.

The need for a common assessment language also highlighted the need for assessing and addressing the soft skill capabilities of job applicants. Through focus groups and interviews, employers strongly stressed the need for new hires to possess significant soft skills. In manufacturing, most highly desired soft skills include teamwork, active listening, and reading comprehension. Within the healthcare field, employers stressed the need for employees to have strong interpersonal skills, personable and clear communication to clients, and sensitivity to situations and problems. Education providers and workforce professionals also stated the importance of soft skill development to meet the needs of today's workforce.

Soft skills are essential for success in the workplace (Focus Groups and Interviews)

In addition to discussing the need for a common assessment tool, the focus groups looked at the use of credentials. Most manufacturers who participated in the focus groups indicated they were not currently requiring nationally recognized credentials, such as those within the NAM-endorsed Skills Certification System, but were interested in learning more and saw value in competency-based

Nationally recognized manufacturing credentials are not widely adopted in the region but should be utilized (Focus Groups and Interviews)

credentials. These NAM-endorsed credentials, including certifications from the Manufacturing Skills Standards Council (MSSC) and the National Institute for Metalworking Skills (NIMS), prepare individuals for work within specific manufacturing occupations.

RECOMMENDATION: COMMON REGIONAL ASSESSMENT & CREDENTIALS

Understanding that employers and entities within the region are currently using assessments and credentials, this recommendation focuses on the need for a coordinated, regional effort. The utilization of a common language of assessments and credentials, will not only assist regional employers, but will also position Northern Indiana to increase its competitiveness through coordinating needs of employers, workforce professionals, and education providers.

Indiana’s education providers and employers should have a common language to describe the skills required for open positions and evaluate the skill levels of available workers. Northern Indiana should consider increasing the adoption of industry recognized credentials by employers and training providers in the region through: increasing the use of job profiling to more accurately describe open positions, widely adopting WorkKeys as a common pre-employment assessment to verify work readiness, and creating a common currency in the labor market through adoption of the NAM-endorsed Skills Certification System.

While there are several different tools for assessing employees and the workplace, WorkKeys is designated by the State of Indiana as its chosen assessment tool, and is already in use by WorkOne and other companies within the region. When examining credentials, the National Association of Manufacturers vetted and endorsed a set of national and international credentials which includes ACT’s National Career Readiness Certificate, National Institute of Management Skills (NIMS), American Welding Society (AWS), Manufacturing Skill Standards Council (MSSC), and Society of Manufacturing Engineers (SME) certifications. These tools should be evaluated and considered for adoption throughout the Northern Indiana region. Accordingly, the following are recommended:

BECOME A WORK READY COMMUNITY

Increase adoption of WorkKeys job profiling & Career Readiness Certificates by employers and education and service providers throughout the community. With adoption of job profiling and credentials it is important to stress the need for regional collaboration and coordination. The community as a whole must fully implement the same profiling and credentialing assessments for the creation of a Work Ready Community to be successful.

Oklahoma Work Ready Communities

This is a yearly certification process coordinated by the Oklahoma Department of Commerce which assures employers of the objective data at the core of the program. The Work Ready Communities program is focused on the Career Readiness Certificate (CRC), a certification using the WorkKeys ACT tool that measures individuals on their workplace employability skills in Applied Mathematics, Locating Information, and Reading for Information. For a community in Oklahoma to gain the Work Ready Community Certification, 3% of the existing workforce must earn a Career Readiness Certificate (CRC) credential; 25% of the available workforce must earn a CRC; and there must be either a minimum of 85% high school graduation rate or 82% of high school seniors earning a CRC. For existing and potential employers, the Work Ready designation is an objective and verifiable seal of approval of the quality of the area’s workforce. It helps jobseekers identify any skill gaps and validates their qualifications. For students, it can help with career planning to bridge the gap between school and the workplace.

1. Assess whether WorkOne and local staffing firms could partner to enable staffing firms to use WorkKeys licensing on WorkOne's behalf to expedite the evaluation and hiring process.
2. Encourage schools to test students as they graduate and list WorkKeys scores on students' diplomas or have scores easily accessible to WorkOne, staffing agencies, and employers, especially if students are not planning to attend a postsecondary institution.
3. Coordinate the education of industry on the national certification standards and convene a committee of industry and education providers to assist in the development of curriculum based upon the national certifications.
4. Examine currently available assessments and training programs for soft skills applicability. The region may consider utilization of soft skill specific training curriculum in education institutions for workforce offices and soft skill focused assessments for potential employees.

UTILIZE INDUSTRY RECOGNIZED CREDENTIALS

Identify the specific skills and competencies required for high-demand occupations and match these sets of knowledge, skills, and abilities to industry-recognized credentials. Such credentials might include certifications by the American Welding Society (AWS), the Manufacturing Skills Standards Council (MSSC), the National Institute of Metalworking (NIMS), and the Society of Manufacturing Engineers (SME). To facilitate the use of industry recognized credentials, the region may consider directly or indirectly partnering with the Manufacturing Institute's Right Skills Now initiative. The Manufacturing Institute is the non-profit arm of the National Association of Manufacturers (NAM).

Right Skills Now

The Manufacturing Institute's Right Skills Now is a concise for-credit career pathway that provides jobseekers with nationally portable, industry-recognized certifications combined with for-credit education programs. The foundation is ACT's National Career Readiness Certificate (CRC) with a stackable certification program completed through a local training provider. This leads to a National Institute of Metalworking Skills (NIMS) credential in in-demand machining and/or metalworking skills. The initial model is focused on high-demand machining skills and is currently being piloted at Dunwoody College of Technology in Minneapolis, Minnesota. The modular nature of the curriculum and stackable credentials makes it possible to build-out into other areas of advanced manufacturing such as production or welding.



PROFESSIONAL RECRUITMENT

Northern Indiana employers face challenges attracting and retaining degreed professionals. The recommendation for Professional Recruitment addresses these regional hurdles through specific internship programs, fellowship programs, awareness campaigns, and other initiatives that focus on young or international professionals and professionals with specialized skill sets that are typically difficult to attract to Northern Indiana.



DATA ANALYSIS

An analysis of the quantitative and qualitative data has highlighted the challenges employers and job seekers face when considering opportunities in Northern Indiana:

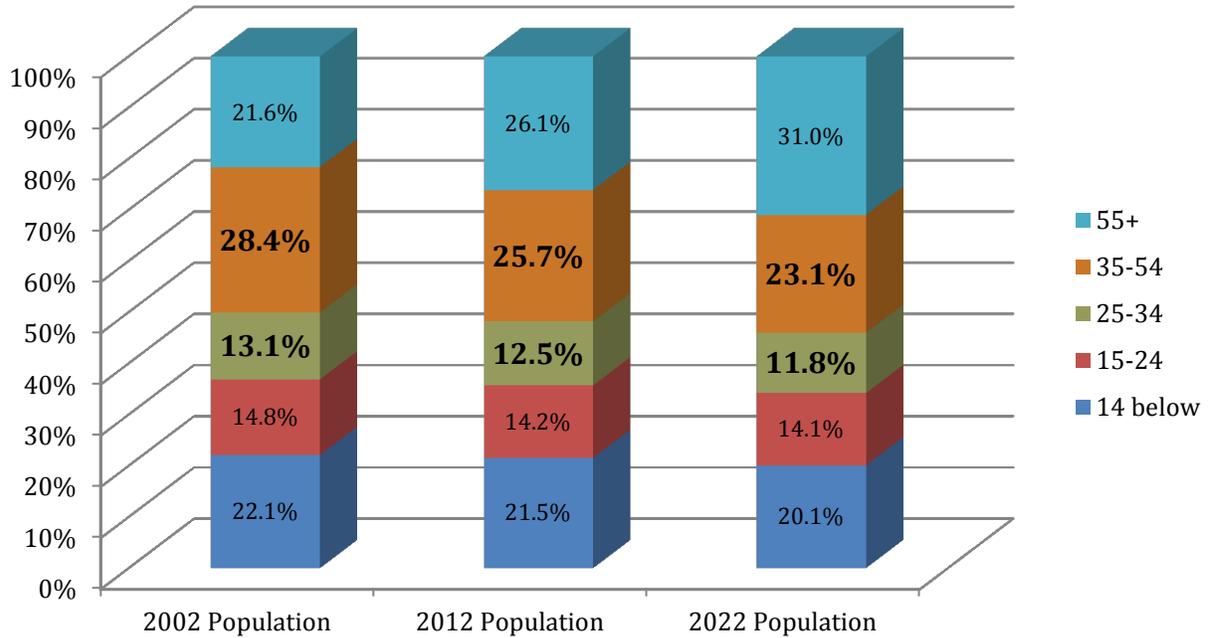
Degreed Recruiting Challenges: (Survey of Regional Employers & Focus Groups and Interviews)

- *Perception of the region*
- *Spousal jobs*
- *Young professional culture*
- *International culture*

Initially identified in the Survey of Regional Employers, obstacles to recruiting qualified job candidates into the region include a lack of job opportunities for dual professionals, cultural activities for young professionals, and an overall challenge with the perception of the region. These themes were discussed during focus groups and interviews as both barriers to recruiting and challenges of retaining young people in the region.

As employers have an increasingly difficult time recruiting young professionals into the area, the percent of young professionals in Northern Indiana has decreased over time, and is projected to continue declining. Today there are a little over 76,000 25-34 year olds in Northern Indiana, which is approximately 12% of the overall population. This is a decrease of 1,000 from 2002 with another projected decrease of 3,000 by 2022 should trends in Northern Indiana remain the same. Overall, Northern Indiana is projected to experience a 4% decrease in adults 25-34 in the next ten years. Without the recruitment and retention of young professionals into Northern Indiana, current businesses will continue to suffer and prospective employers may be deterred from moving into the region.

Northern Indiana Population Change (% of Population)



EMSI Analyst 3.0, using Indiana DWD data

Compounding these recruitment and retention challenges is the fact that the region produces far fewer postsecondary degrees than similar regions within Indiana. Northern Indiana has a total of 7,618 higher education completers, but only 4,241 completers when excluding the University of Notre Dame – a higher education institution that tends to recruit heavily from out of state and may only retain a few of their recent graduates within the region after graduation.* Conversely, students who graduate from local institutions are more likely to stay in the region following graduation. When comparing to other regions in Indiana, this figure of 4,241 higher education completions is much lower than comparison regions:

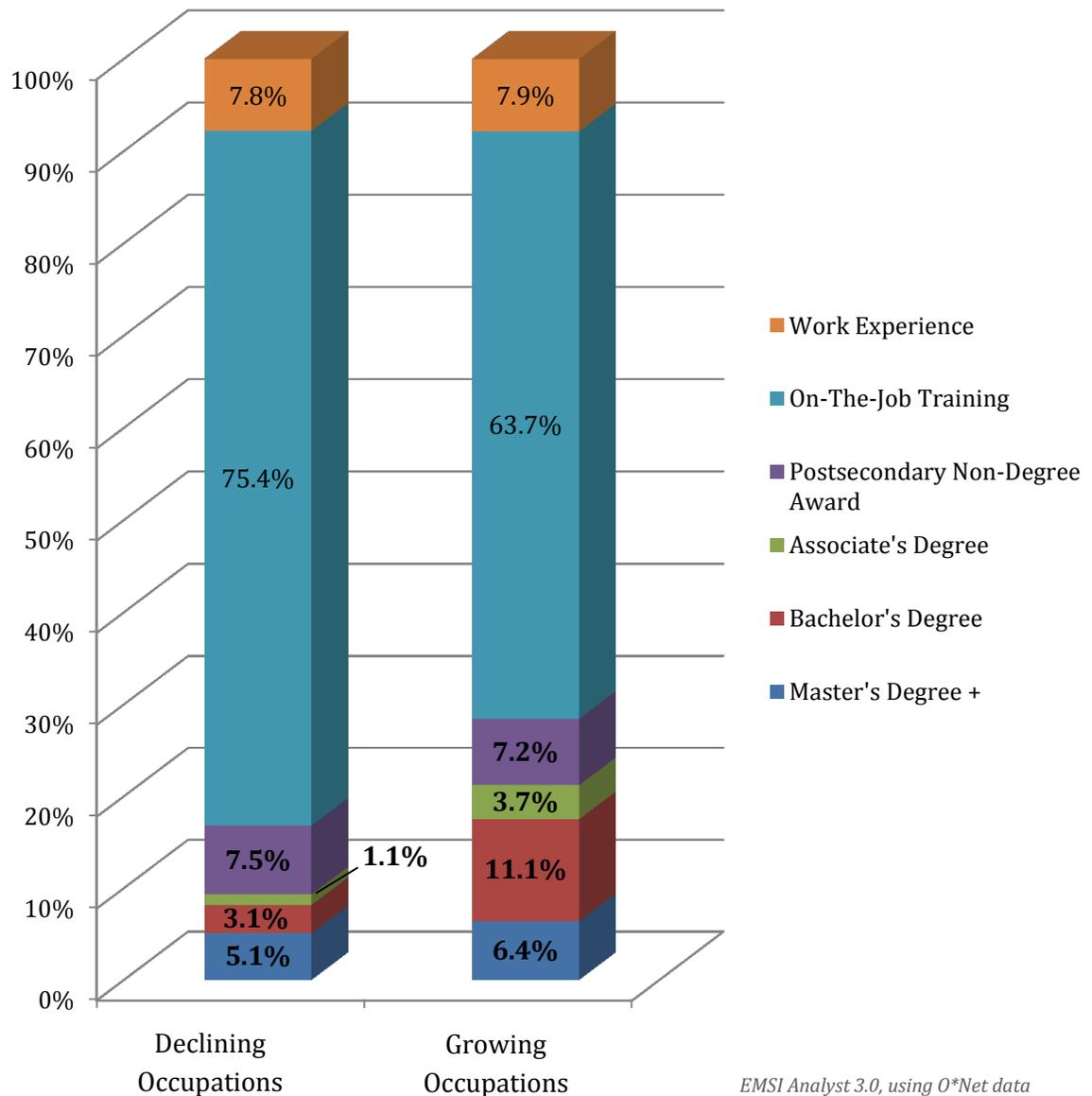
Northern Indiana	4,241 Higher Ed. Completions
Northeast Indiana	9,736 Higher Ed. Completions
Northwest Indiana	7,090 Higher Ed. Completions
Southwest Indiana	5,204 Higher Ed. Completions

National Center for Education Statistics, 2010-2011 School Year

* The University of Notre Dame is ranked 17th in the nation by US News and World Report for top colleges/universities as of December 2012, a significantly higher ranking than all other post-secondary institutions in Indiana. Notre Dame's high ranking draws large numbers of out of state students, making post-graduation retention within the region less likely. For this reason, graduates from Notre Dame were excluded from the higher education completion figures for Northern Indiana.

Low higher education completions will prove especially challenging as Northern Indiana looks to the future. Growing jobs and industries within the region will require higher education levels. Today, almost one-third of jobs projected to grow in Northern Indiana require some form of postsecondary education and one-sixth or around 18% of growing jobs require a Bachelor's degree or higher.

Northern Indiana Workforce Requirements (2012)



For a full listing of growing and declining occupations see Appendix D

RECOMMENDATION: PROFESSIONAL RECRUITMENT

Attracting and retaining degreed talent in Northern Indiana is important for meeting the high-skill demands of regional employers. Identified below are opportunities for Northern Indiana to strengthen its current recruitment efforts.

RECENT GRADUATES

Northern Indiana stakeholders should collaborate to develop strategies that better retain and attract recent higher education graduates, including those with masters and professional degrees, to the region. This attraction will seek to combat regional brain drain, the lack of degrees produced in the region relative to peer regions, and the large number of professional positions available. In addition, professional recruitment will also focus on strengthening regional perceptions and young professional culture. Efforts to attract and retain recent graduates may include:

1. **Internship Programs** – Experiential learning through internships, where students apply college learning in a real-world setting, is an effective way to ensure college graduates have the skills and knowledge necessary to succeed in entry-level positions.¹ In addition, after acquiring these skills, students are more likely to be hired by their internship employers and after one year on the job, students from an internship are more likely to stay with their companies of employment.² The region should consider promoting Indiana INTERNnet and other internship support for the area.

Indiana INTERNnet

Indiana INTERNnet is a free resource provided by the Indiana Chamber that serves as an internship-matching service to link employers to college and high school students. Through its website, students and employers can access a searchable database of internship postings and resumes. A toll-free hotline is available to answer questions and provide internship guidance and resource materials. The goal is to help create and expand experiential learning opportunities within Indiana. The database contains more than 10,200 students, 5,090 employers, and 870 available positions.

2. **Fellowship Programs** – Understanding the unique needs of Northern Indiana, the region might consider targeting fellowship opportunities for in-demand occupations. Because of the region's population size and lack of business density, these fellowship programs should be regional in the involvement of potential employers while trying to develop clusters of young professionals at the local level. In order to provide fellowship candidates with unique, value-added experiences, these programs require collaboration between community leaders, employers, education institutions, and local non-profits. Distinguishing the fellowships from internships, which are opportunities for current students, the fellowship programs are targeted at young professionals post-graduation. The fellowship programs should be a coordinated effort by education institutions, city entities, and

¹ Association of American Colleges and Universities. 2008 Business Leader Poll

² National Association of Colleges and Employers. 2011 Internship & Co-op Survey

local non-profits. The main objective of these programs is to increase skilled and qualified employees for businesses within Northern Indiana while providing unique opportunities for young Fellows to experience Northern Indiana. These opportunities will allow candidates to build connections within the region and position themselves for career success for both now and into the future.

The effort should focus on graduates likely to stay or return to the region. This includes students at existing higher education institutions in the region, students originally from the region, or those who graduated from universities in the Midwest. Further research or interviews of likely business participants and graduates around specific proposals should be conducted.

3. **Young Professional Networks** – The region should utilize currently available networking opportunities for young professionals including the Greater Elkhart Young Professionals, Young Adult Professionals (YAP)- Warsaw/Kosciusko County, and Young Professionals Network of St. Joseph County. In addition, improving downtown and community spaces for young professionals and providing incentives to socialize and reside in those spaces may also assist in the retention of young talent. Ultimately, the goal for developing and enhancing these networks is to create a self-sustaining density of young professionals that continually attracts new young professionals to the region, while retaining current young residents.
4. **Higher Education Offerings & Coordination** – Focusing on occupations that are in-demand will allow higher education institutions to more effectively support the local economy and allow recent graduates to more easily find jobs after graduation. In addition, coordinating postsecondary education with employer needs will assist in retaining young professionals, as quality jobs within the region will be available in their field of study. Increasing in-demand degrees may require the addition of new programs or include the expansion of currently available offerings, such as Purdue University’s recent expansion of the Mechanical Engineering program.

Orr Fellowship

The Orr Fellowship offers paid positions to recent graduates for opportunities within Indiana’s high growth businesses. Orr Fellowships are a two year commitment by business leaders and graduates, by which Fellows receive executive-level mentorship and the opportunity to build and develop a professional network. In addition, Fellows attend monthly Business Leader Meetings that allow Fellows the opportunity to engage with professionals in entrepreneurial innovation, academia, government, and corporate leadership.

AWARENESS CAMPAIGN

The region has had the most success with attracting families and individuals who have existing ties to the area. The region should leverage this success by exploring a targeted campaign to encourage the community to recruit their family members and friends back to the region for existing

opportunities. Similar to recruiting recent graduates, this effort should focus on individuals most likely to return to the region, including individuals with ties to family, education institutions, and friends in the area. Additional research or interviews with economic development professionals, community leaders, and education providers are recommended.

Dakota Roots

Dakota Roots is a program designed by the South Dakota Department of Labor and Regulation to attract talent back to South Dakota. The program is focused on a website with three entry points: 1) a family or friend can refer a former South Dakota resident to the program who is interested in coming back to South Dakota, 2) an individual interested in relocating to South Dakota can self-refer themselves to the program, 3) South Dakota companies can post job openings on the website. The goal is to link individuals to job opportunities and provide assistance with their relocation to South Dakota. It is completely free and has been effective at meeting its goal. Since it was started in 2006, over 2,000 individuals have entered employment due to a job match completed using the website.

DUAL PROFESSIONALS

As indicated in the regional survey, spousal jobs are a critical issue for companies seeking to recruit talent. Northern Indiana should invest in the development of strategies to address this need, such as partnerships whereby companies agree to give trailing spouses/partners priority consideration for open positions provided they meet the hiring criteria. This type of free and voluntary service is specifically intended to accelerate the rate at which partners find employment opportunities through direct employer-to-employer communication. Other strategies might include increased cooperation among local staffing agencies to match trailing spouses/partners with open positions and a better understanding among area employers about the importance of recruiting and retaining dual professionals to improve the overall health of the regional economy.

Dual Professionals: Defined as two professionals within a household, where household decisions are based on both individuals finding employment. Typical professionals have acquired several years of work experience and hold at least one professional degree.

INTERNATIONAL PROFESSIONALS

The region should consider strategies to assist international professionals and their families who relocate to the area. Existing community tools (e.g. municipal web sites, convention and visitors' bureau literature and websites) should have the ability to be translated and tailored to potential international families. In addition, the region should consider establishing services to assist international recruits to assimilate into the community. These services could be used to train

individuals from Northern Indiana to provide initial contact and services for international professionals within the region.

In addition, it is recommended that the programs and strategies mentioned above be implemented through a collaborative regional effort to ensure effective implementation and long-term sustainability.

SPECIALIZED PROFESSIONALS

Industries in mid-sized regions, like Northern Indiana, often have difficulty attracting specialized professionals due to the lack of industry networks and the limited availability of employment alternatives. This difficulty often restricts the fostering of emerging industries and growth occupations. These professionals could include any number of occupations, including specialized research jobs within the field of science or specific service related jobs in information technology and marketing. To compete for these professions, the region should investigate opportunities to create networking support systems for specialized professionals, attracting entrepreneurs or faculty that may bring other similar professionals or students to the region, and continuous learning environments including expanded research centers and partnerships with local universities and companies. These opportunities will provide more stable specialized positions and foster additional growth within the occupations. The region should consider identifying the existing and emerging needs of the area by convening employment groups and developing aggressive strategies to collectively attract needed specialized professionals to the region. The region should also study its emerging clusters of talent and industry pools, which if fostered, could create organic growth in Northern Indiana.

3 LOCAL PROMOTION & RECRUITMENT EFFORTS

Northern Indiana has the opportunity to develop a local pipeline of talented individuals through a collaborative local promotion and recruitment effort. It is recommended that the region engage in efforts to change current manufacturing perceptions, to implement advanced workplace practices, to enhance regional talent, and to provide regional wage and salary surveys and open position surveys to companies within the region.



DATA ANALYSIS

Engagement with regional stakeholders through focus groups and interviews, in addition to the quantitative analysis, highlighted the challenges employers and job seekers face when considering opportunities in Northern Indiana:

Manufacturing occupations make up over one-fourth of total jobs available within the region (EMSI Analyst 3.0)

In Northern Indiana, manufacturers play a critical role in the regional economy. Over 92,800 jobs are currently within the manufacturing sector, which is over one-fourth of the total employment available within the region. For additional detail on the occupations present within the manufacturing sector see Appendix E.

When examining the 2,080 open positions within Northern Indiana, a high concentration of the positions are in the manufacturing industry, including:

- 165 Team Assemblers
- 69 Industrial Engineers
- 52 Computer-Controlled Machine Tool Operators
- 51 Maintenance and Repair Workers
- 44 Heavy Truck Drivers
- 40 Production Workers

Indiana Career Connect and Survey of Regional Employers

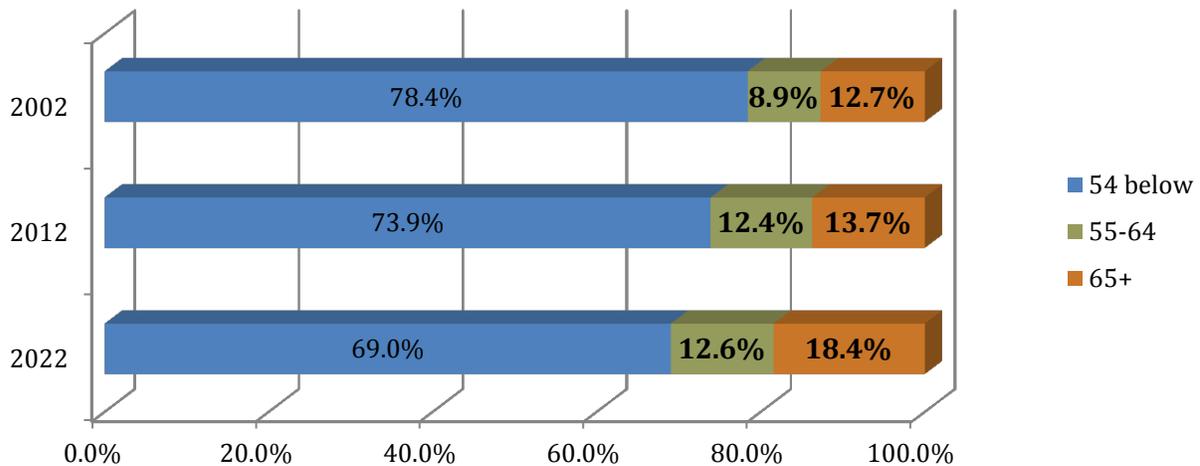
Focus group discussions with manufacturers highlighted the need for the manufacturing professionals above as well as a need for industrial sewers and sewing machine operators.

2,080 open positions with a heavy concentration of openings in manufacturing (Job Postings Analysis)

Survey of 254 open positions with 118 in manufacturing (Survey of Regional Employers)

Many employers in Northern Indiana face challenges filling open positions today and predict further challenges in filling projected openings in the future. This is especially true in the manufacturing sector. Over time, these open positions will create an even larger challenge as the baby-boomer generation begins retiring. As described in the recommendation for Professional Recruitment, Northern Indiana is projected to experience a demographic change. Breaking from current trends, the region will see a sharp increase in the older population from now until 2022.

Northern Indiana Population Change (% of Population)



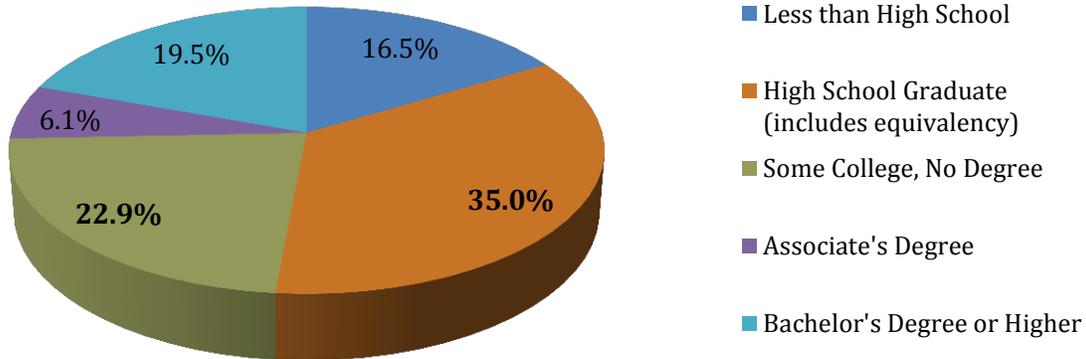
EMSI Analyst 3.0, using Indiana DWD data

As more individuals move into retirement, manufacturers and all employers will need to increase their number of new hires. However, these new hires to replace baby-boomers and to fill already open positions will require higher levels of education. As described in the recommendation for Professional Recruitment, almost one-third of today’s jobs projected to grow in Northern Indiana require some form of postsecondary education.

Almost one-third of today’s growing jobs require postsecondary education (EMSI Analyst 3.0)

To fill these postsecondary education requirements, Northern Indiana should consider tapping into current residents. As of the 2008-2010 American Community Survey, there are over 260,000 people in Northern Indiana whose highest educational attainment is a high school degree, or some college but no degree. These residents comprise over 57% of the population 18 and above, and would be an ideal target for vocational or manufacturing training and degree programs.

Northern Indiana Educational Attainment (Individuals 18+)



American Community Survey, 2008-2010

One key element for training program, and ultimately employment, success is the effective recruitment and retention of participants. One-on-one interviews and focus groups provided insight into local recruitment challenges for skilled tradesmen, line workers, and additional manufacturing-type positions for individuals who are already in the community.

Prevalent negative perception of manufacturing (Survey of Regional Employers & Focus Groups and Interviews)

Workforce and education providers expressed concerns over regional perceptions of the manufacturing industry. Current perceptions of a dark and dirty manufacturing setting have prevented many potential trainees from joining training or degree programs targeted for manufacturing positions.

Employers in manufacturing expressed a concern over regional perceptions of the industry, which increase challenges to recruiting locally. Education providers, economic development professionals, workforce professionals, and employers have all observed occasions where the regional community has expressed a negative and outdated view of manufacturing. This regional perception creates barriers for students and the mature workforce who may be considering manufacturing as a career.

In addition to perception recruitment challenges, recruitment is also challenging as oftentimes potential employees do not fully understand the position for which they are applying. Workforce and education professionals voiced challenges with students and job seekers who were pursuing careers without a full understanding of the occupational description and skills required for work in the field. These challenges with recruitment transition into retention challenges for employers.

Misunderstanding of regional businesses (Survey of Regional Employers & Focus Groups and Interviews)

Continual recruitment or short term turnover (Survey of Regional Employers & Focus Groups and Interviews)

From focus groups and employer engagement, employers discussed challenges with new employee retention due to required skills and understanding of occupation demands. As a result, recently hired employees may not possess the required skills or passion for the position. This employer-employee mismatch results in short term turnover and the need for continual recruitment.

Employers in the manufacturing focus group also voiced the need for a common understanding of regional business to increase their competitiveness in recruiting and retention. In the past, county-specific surveys have been conducted to examine the wages and salaries offered by employers. Within the focus group, there was a strong interest in conducting a regional Wage and Salary Survey to better identify current business practices and assist employers in being more competitive.

Regional Wage and Salary Survey would be beneficial (Manufacturing Focus Group)

Ultimately, employers, education providers, workforce professionals, and economic development professionals understand and embrace the need for regional collaboration and coordination. At present, there is significant energy around collaboration focused on manufacturing needs and this is an opportunity that should not be wasted by regional partners.

RECOMMENDATION: LOCAL PROMOTION & RECRUITMENT EFFORTS

Promoting and recruiting talent within Northern Indiana is key for meeting both the immediate needs of employers as well as future employment demands. While the region already contains several initiatives that assist in the promotion and recruitment of local talent, these initiatives may not be widely known or are industry specific. For these reasons, there is the need within Northern Indiana to increase coordination for current and future initiatives. Identified below are opportunities for Northern Indiana to strengthen its current promotion and recruitment efforts.

CHANGING MANUFACTURING PRECEPTIONS

Manufacturing occupations and opportunities are changing. Present day manufacturing requires higher skills in technology and a greater emphasis on teamwork. To assist in changing regional perceptions of available manufacturing jobs, Northern Indiana should consider implementing the following:

1. *Existing Workforce:* Regional training programs run through workforce or education providers and supported by employers, including financial support in the form of scholarships or financial contributions after hiring trained employees from the program. Efforts to equip and train the existing workforce have made significant improvements in the region over the last two years. This includes the development of an adult education program through a regional coalition of public school systems led by WorkOne Northern Indiana. This effort has improved enrollment 318% to nearly 3,054 students per year. With nearly 17% of individuals in the region over the age of 18 yet to acquire a high school diploma, these creative efforts should continue and be augmented as needed to increase workforce participation for those positions requiring remediation and a high school diploma.

Advancing Manufacturing

The Advancing Manufacturing program is partnership of businesses, education providers, and workforce professionals in mid-north Indiana. The initiative focuses on training qualified applicants to the standards required by businesses within the field of manufacturing. The program consists of 140 hours of hands-on training simulating a real work environment, with continuous engagement between students and employers. Following program completion, partner companies, including Caterpillar and Nanshan America, offer preferential treatment to recent graduates. In addition to training, the Advancing Manufacturing program utilizes sustainable funding techniques, as employers who hire graduates donate financial resources back into the program in the form of scholarships. Classes are taught by Ivy Tech Corporate College and participating high schools within the Lafayette region.

2. *Existing and Prospective Workforce:* Discovery center for manufacturing, located within the region. This center would provide hands-on learning opportunities with manufacturing equipment that promote experiential learning. To encourage participation and synergy, the center should be located near and utilized by WorkOnes, community colleges, and other manufacturing-focused entities. Placing recruitment, training, and hands-on learning opportunities for manufacturing close together allows students and prospective training

Advanced Manufacturing Center of Excellence

The Advanced Manufacturing Center of Excellence (AMCE) IN Columbus, Indiana is a state-of-the art facility dedicated to integrating Science, Technology, Engineering, and Mathematics (STEM) curriculum with technology labs and hands-on learning. Project Based Learning techniques, are integrated into the hands-on, team-centered projects and research. The center is a shared facility between Ivy Tech, Purdue College of Technology, and IUPUC, offering dual credit for high school students, 2-year Associate's degrees, 4-year degrees, and advanced certifications for workforce development.

participants to gather a holistic understanding of manufacturing occupations. Not only could this discovery center enhance recruitment of new participants, as they can observe first-hand the machines and programs available, but it will also strengthen communication across workforce and education.

3. *Postsecondary Education:* Additional programs that increase work experience while students are still in school. These programs can include alternating attendance at a postsecondary institution and working with a regional manufacturer and engaging high school students with hands-on classroom learning. Current postsecondary opportunities do exist within the region including Ivy Tech’s Advanced Manufacturing program, there students have the opportunity to alternate schooling with professional experience on a semester or day-by-day basis. This regional initiative to expand such programs may expand upon current programs offered via education providers and workforce professionals or create new opportunities within the region.

Vincennes University & Toyota

In partnership with Toyota’s Motor Manufacturing plant in Indiana, Vincennes University is offering a Toyota Advanced Manufacturing Technician program. The program provides a coordinated career pathway for students interested in a manufacturing technician position with Toyota. Each week participants spend three days in school and two days working at Toyota’s manufacturing facility throughout the two-year associate degree program. Starting in the fall of 2013, Vincennes University will accept 20 students into the Toyota program.

4. *High School:* High school and incentive programs that focus on promoting manufacturing occupations and opportunities
 - a. Internships that allow students the opportunity to gain hands-on experience in manufacturing and other key industries.
 - b. Externships to engage teachers by providing opportunities for high school teachers to visit and/or work in manufacturing industries, to gain a refreshed perspective on manufacturing careers.
 - c. Career counseling that focuses on opportunities for students who pursue occupations in the manufacturing field.
 - d. Initiatives or special events that promote STEM and project based learning ideals. STEM

How Does It Work?

Developed by the Michiana Science and Technology Center, Incorporated (MSTCi), *How Does It Work?* is an interactive event engaging students, families, and the community in Science, Technology, Engineering, and Mathematics (STEM) learning. The *How Does It Work?* event offered participants 20 hands-on learning opportunities related to local manufacturing to raise awareness of the importance of STEM within the workplace.

focuses on education in science, technology, engineering, and mathematics while project based learning focuses on active and dynamic learning models that allow students to explore real-world challenges. As shown in both the quantitative data analysis and survey of regional employers, STEM and project based learning are key skillsets required by today's employers.

ADVANCED WORKPLACE PRACTICES

Advanced Workplace Practices should be promoted to employers to assist them in understanding strategies they can employ to attract and retain talent. Trusted business associations and human resource organizations such as chambers of commerce and manufacturing associations should make the business case for such strategies, demonstrating the cost of vacancies and turnover, and the return on investment. Additionally, economic development organizations should understand advanced workplace practices and the benefits for employing such strategies to encourage thinking and planning around these issues. Advanced Workplace Strategies include:

1. Re-evaluate and improve current pre-employment assessments of prospective employees in a continuous and systematic fashion.
2. Adopt nationally recognized credentials to expand hiring opportunities and increase employee-position matching. These credentials can include certifications by the American Welding Society (AWS), the Manufacturing Skills Standards Council (MSSC), the National Institute of Metalworking (NIMS), and the Society of Manufacturing Engineers (SME).
3. Implement internal career pathways to incentivize and facilitate continual improvement and long-term success of the company. Internal career pathways are especially important components to motivating current employees and attracting new hires.
4. Utilize internships and other experiential learning opportunities. Some of these programs already exist within the region and should be promoted by the community and education providers. Additional internships and experiential learning opportunities may need to be developed to fit with employer's needs.
5. Engage in effective business planning to avoid forced overtime and cyclical layoff. Businesses should re-evaluate their current business planning techniques and consider the implementation of industry-specific tools, such as Enterprise Resource Planning (ERP), to more effectively manage internal and external information for the company.

ENHANCEMENT OF REGIONAL TALENT

The region should consider job readiness programs established to enhance the skills and abilities of current low-skilled workers in Northern Indiana. These readiness programs will prepare the current workforce for higher talent jobs across industries, including manufacturing. As described earlier in the report, growing occupations within the region and within the manufacturing industry as a whole are requiring and will continue to require workers with higher levels of education. For this reason, current training programs for low-skilled workers in Northern Indiana could be

enhanced and new programs could be developed, depending on the workforce needs of the community and the region as a whole.

Bridges to Careers

The Bridges to Careers Job Readiness Program was developed by Career Edge to enhance the skills and earning capabilities of low-skilled workers. The program engages both the community and employers to prepare local workers for entering into the workforce in entry-level occupations. In addition to training workers, Bridges to Careers also educates employers on the value of investing in and developing the local workforce through advanced workplace practices such as the establishment of career ladders.

PROMOTION OF REGIONAL SURVEYS

The region should conduct a regional Wage and Salary Survey. This survey should be created in coordination with local economic development officials and will provide better understanding of the current regional environment. The survey results should be shared with regional businesses so they can understand where they fall in the marketplace and improve their current practices to become more competitive.

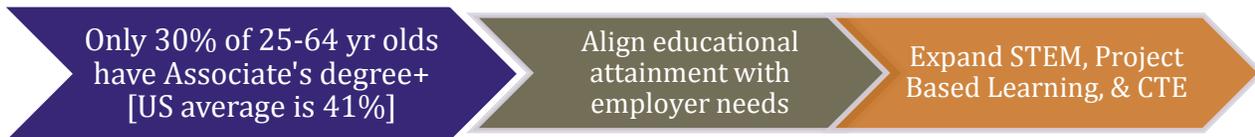
The regional Wage and Salary Survey will assist Northern Indiana in comparing themselves to state and national indicators. Through these comparisons, the region can identify and strengthen current areas of weakness as well as promote current regional strengths.

Additionally, Northern Indiana should continue to perform the Open Position Survey, initially begun in fall of 2012. The Open Position Survey catalogues all currently open positions within the region, in addition to expected openings, and recruitment and retention challenges.

Along with implementation of both surveys, the region should align data for open positions identified in the Open Position Survey with salary information from the Wage and Salary Survey. This combined information should be utilized to promote opportunities in Northern Indiana, offering the region a chance to describe the number of positions open within a specific industry and the average wage for each position type. This position and salary information can be used to recruit those currently in the workforce and looking for a change in careers, and those who are still in school and considering career path opportunities.

4 EXPAND STEM, PROJECT BASED LEARNING, & CTE

Ultimately, regional success hinges on building a skilled and qualified workforce for both the present and long-term needs of Northern Indiana. The recommendation to expand Science, Technology, Engineering, and Mathematics (STEM), Project Based Learning, and Career and Technical Education (CTE) provides an overarching and unifying vision to existing strong county initiatives with a common set of performance metrics to insure that the needs of Northern Indiana employers will be met. Determining how each school or county decides to programmatically drive education toward this common vision will be in the hands of county education coalitions and initiatives.



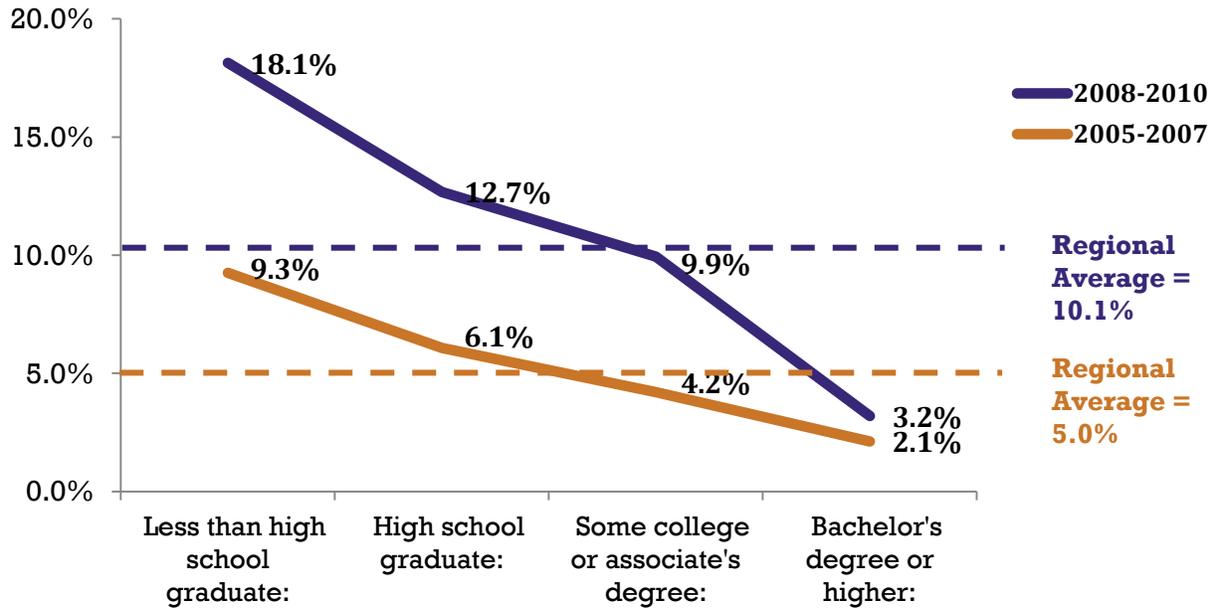
DATA ANALYSIS

Quantitative data analysis and stakeholder engagement through surveys, focus groups, and interviews have highlighted educational demands within the region.

Higher educated individuals have lower unemployment rates (Quantitative Data Analysis)

The quantitative data analysis highlights several significant trends within Northern Indiana. One such trend focuses on unemployment rates and education levels. Unemployment rates in Northern Indiana have increased over time and are negatively correlated with educational attainment – as educational attainment increases, unemployment decreases. As described earlier in the report, even before the recession, high unemployment levels were observed for individuals with lower levels of education as compared to those with higher education. In addition, employers today and in the future require higher levels of education, causing this gap between the undereducated and those with some form of postsecondary experience to continue to grow.

Unemployment Rate by Education Level

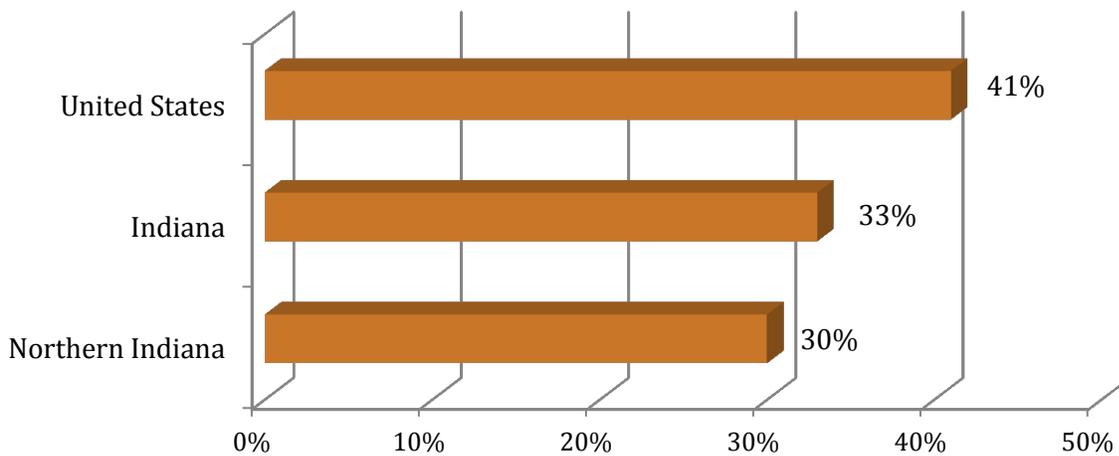


American Community Survey, 2008-2010 and 2005-2007

This relationship between unemployment and education presents a challenge, as Northern Indiana's education attainment rates are below both the state and the national averages. For example, of the region's core workforce, adults 25-64, only 30% have achieved an Associate's degree or higher. In comparison, 41% of adults 25-64 in the United States have attained an Associate's degree or higher.

30% of adults 25-64 have an Associate's degree or higher, the US average is 41% (Quantitative Data Analysis)

Percent of Adults 25-64 with an Associate's Degree +



College Board's The College Completion Agenda 2011, and American Community Survey, 2008-2010

In-Demand occupations require at least a postsecondary credential (Quantitative Data Analysis)

The region’s lower educational attainment rates are also systematic of a more significant challenge—supplying talent for in-demand occupations. Most in-demand occupations for the region – predominantly occupations in manufacturing and healthcare – require at least a postsecondary credential and

usually some form of STEM or project based learning background or skills. Examples of these requirements include:

Required Knowledge	Required Skills and Abilities
Biology	Active Listening
Computers and Electronics	Critical Thinking
Customer and Personal Service	Oral Expression
Engineering and Technology	Instructing
Mathematics	Problem Solving

*EMSI Analyst 3.0, using O*Net data*

Results from the quantitative data analysis, identifying the need for increased educational attainment within the region in areas of STEM and project based learning, have been validated through the survey of regional employers as well as the focus groups and interviews. Through the survey, multiple employers identified that a challenge to hiring locally is the lack of STEM education and project-based learning within the regional population. In addition, focus groups of manufacturers and healthcare professionals stressed the need for a strong math and science background, with the ability to problem solve and work well with a team.

STEM and project based learning skillsets are highly valued (Survey, Focus Groups, & Interviews)

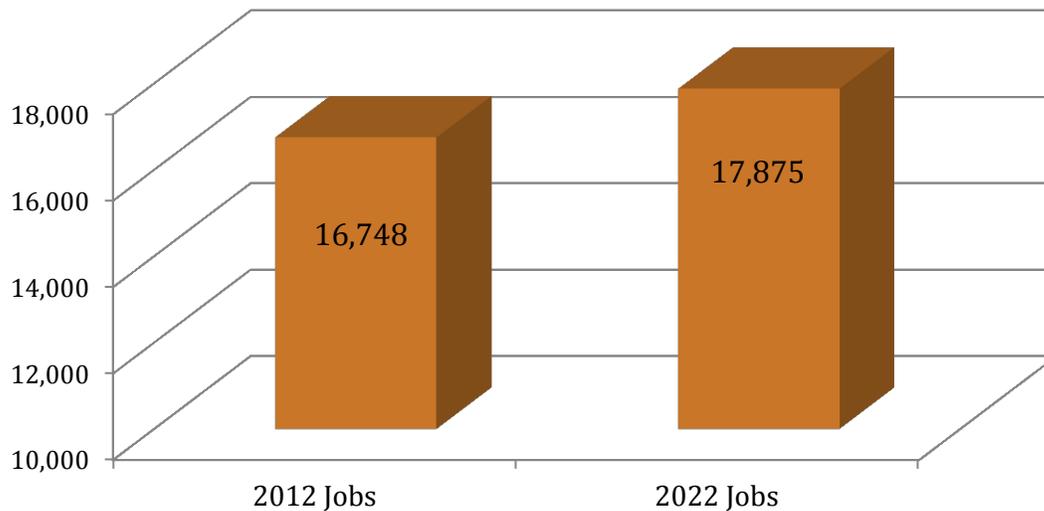
Of the over 2,080 open positions within Northern Indiana, a high concentration of these opportunities require a need for STEM and Project Based Learning, several of which can be acquired through CTE programs. These positions include:

- 69 Industrial Engineers
- 52 Computer-Controlled Machine Tool Operators
- 51 Registered Nurses
- 51 Maintenance and Repair Workers
- 43 Nurse Assistants
- 41 Software Quality Assurance Engineers and Testers
- 24 Computer and Information Systems Managers
- 20 Mechanical Engineers
- 19 Welders and Solderers

Indiana Career Connect and Survey of Regional Employers

In addition to the immediate importance of STEM-related jobs, opportunities within STEM occupations are expected to increase for the region. From 2012 to 2022 there is a projected increase of over 1,100 jobs available within STEM careers.

STEM Occupations in Northern Indiana



EMSI Analyst 3.0, using Indiana DWD data

Increased educational attainment in areas that align with employer needs

While there is a high demand by employers for STEM, Project Based Learning, and CTE education, it is not enough to simply educate. The education provided to residents of Northern Indiana should align with the needs of businesses, so the region can provide a pipeline of workers ready and able to fill current demand.

RECOMMENDATION: EXPAND STEM, PROJECT BASED LEARNING, & CTE

The long-term success of Northern Indiana is contingent on the region's ability to not only attract but create a skilled workforce. This recommendation provides an overarching and unifying vision to current county initiatives. This vision includes the expansion of Science, Technology, Engineering, and Mathematics (STEM), Project Based Learning and Career and Technical Education (CTE) opportunities while focusing on a common set of performance metrics to measure progress. After the vision is cast, implementation at the county level will be the responsibility of each county coalition.

Many of the recommended activities may already be underway through county coalitions and local education providers. It is important to understand current strengths, address weaknesses, and, if

necessary, implement new programs. The recommendations below serve to guide the region as it focuses on talent pipeline development through 2020 and beyond.

UTILIZE COMMON METRICS AND MEASURES TO MEET INDUSTRY DEMAND

Local efforts have sprung forth to focus on education and to align education with current and future industry needs: Horizon Educational Alliance (Elkhart), OrthoWorx (Kosciusko), and INFUSE (Marshall). These initiatives, in partnership with local community foundations, should develop collaborative approaches on how best to strengthen project-based learning and STEM education, along with CTE and dual or early college credit protocols in their respective county. Similar to the EcO15 model, each county community foundation and its education initiatives form an alliance, which uses best practice metrics and monitoring of STEM and Project Based Learning initiatives to position the coalition to secure funding to accelerate their progress. These initiatives should work together within the region, sharing best practices of implementation and measurement of their STEM Project Based Learning initiatives. If done well, this provides a strong case for attracting investments from philanthropic sources.

Career Edge

Career Edge is a collaborative effort in the Southeastern United States to build a skilled workforce, encourage accountability, and improve the public workforce system. The initiative builds key partnerships and leverages community assets to increase workforce talent and supply. Within its role, Career Edge also measures progress and drives data-driven discussions for the improvement of the region.

Throughout the United States, communities and regions are adopting standardized metrics and measures, such as those created by the Lumina Foundation. In Lumina's Big Goal initiative, the Foundation identifies target completion rates for schools and universities in order for the country to reach 60% of Americans with high-quality degrees and credentials by the year 2025. Ultimately, it is up to the region to determine the metrics and measures best suited for Northern Indiana. The utilization of these chosen common metrics and measures will allow Northern Indiana to measure regional progress toward the recommendations to follow.

EXPAND SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

Northern Indiana has the opportunity to focus support and develop curriculum around Science, Technology, Engineering, and Mathematics (STEM). STEM education focuses on integrating science, engineering, and mathematical concepts into more traditional classroom curriculum. The STEM curriculum also heavily engages a technology component, which provides students with innovative ways to apply the classroom concepts through hands-on problem solving. STEM curriculum is primarily utilized at secondary and postsecondary education institutions, but includes concepts that can be integrated into almost any coursework.

Project Lead The Way

Project Lead the Way (PLTW) has a curriculum built on fundamental problem-solving and critical-thinking skills taught in traditional career and technical education (CTE) with the integration of national academic and technical learning standards and STEM principles. More than 4,200 schools in all 50 states and the District of Columbia offered PLTW courses to their students in the 2011-12 school year. In addition, PLTW has trained more than 10,500 teachers to instruct its engaging, rigorous STEM education curriculum. It was recently cited by the Harvard Graduate School of Education as a 'model for 21st century career and technical education.'

ENHANCE AND EXPAND PROJECT BASED LEARNING

Project Based Learning (PBL) is an innovative and rigorous approach to education and curriculum development that utilizes small, collaborative student groups to further educational understanding. PBL focuses on teamwork and real-world applications to enhance student learning and more fully engage participants. Students explore real-life examples and challenges in smaller groups, developing their ability to think critically and honing their communication skills. In addition to group work, PBL often incorporates technology into the curriculum to develop a more fully rounded student experience that resembles real-world situations.

Project Based Learning can be adopted across disciplines and across educational attainment levels. Most often PBL is incorporated into curriculum at the high school and postsecondary level. However, PBL concepts and techniques can also be implemented within the K-12 education system. In addition, many communities are exploring the option of New Tech High Schools, which heavily utilize Project Based Learning techniques and approaches.

New Tech High School

New Tech High Schools (NTHSs) offer students a unique learning environment focused around Project Based Learning (PBL). NTHSs provide students with relevant, rigorous, and relationship-based learning opportunities that foster collaboration with family, business, and the community. Classrooms are an innovative and professional environment, which utilize advanced PBL learning methods and integrate technology into the curriculum.

SUPPORT PROMOTION AND EXPANSION OF CAREER AND TECHNICAL EDUCATION (CTE)

Career and Technical Education (CTE) is an essential component to the developing workforce within Northern Indiana. CTE focuses include advanced manufacturing opportunities, and provide participants with real world skills in preparation for a technical career path. Students are

graduating from high school with industry-credentials from industry associations such as the National Institute for Metalworking Skills (NIMS) and the American Welding Society (AWS)

The region contains numerous career and technical centers including the Elkhart Area Career Center, South Bend Career Academy, South Bend Community School Corporation, North Central Area Vocational Cooperative, and Warsaw Area Career Center.

A targeted approach to inform employers about the quality of students graduating from programs and to inform high school students about the ability to graduate and enter into employment with above-average pay could help alleviate near-term and long-term workforce challenges. CTE offers flexible programming and could work with employers to expand course offerings. CTE courses are opportunities that employers might not be aware of but should consider taking advantage of, in addition to traditional community college certification and training programs.

Hire Technology

Hire Technology is a two-year turn-key curriculum focused on Advanced Manufacturing and Logistics. This includes contextualized math and science concepts to reinforce key academic STEM concepts while promoting the development of the applied problem-solving skills demanded by Indiana-based manufacturers and logistic companies. Conexus is piloting the first year of the two-year curriculum in the fall of 2012 at ten sites throughout Indiana, and is expecting full implementation in the fall of 2013. They provide all course materials and training, including project-based activities, formative assessments, and educator instruction.

MAPPING REGIONAL ASSETS

Regional employers and jobseekers alike should understand current assets and resources already available within Northern Indiana for talent development. In addition to training programs offered by higher education institutions, there are also courses being taught through the K-12 school districts that can lead to industry-recognized credentials. An example would be programs offered through the region's Career and Technical Education (CTE) centers. Additionally, there are also innovative models for engaging high school students in STEM education and Project Based Learning such as Project Lead the Way and New Tech High Schools. Understanding these curricula and the availability of talent exiting these programs can provide better insight to employers about additional resources they could tap to meet not only their future but, in some cases, current workforce needs.

TARGETED COMPLETION EFFORTS

Northern Indiana should consider targeted efforts to drive completion rates at both the high school and postsecondary levels. These efforts could build upon current regional programs already in place or create new initiatives targeted at today's youth, young adults, or non-traditional learners.

Jobs for America's Graduates

Jobs for America's Graduates (JAG) is a WorkOne program created to keep young students in school through graduation, while providing learning experiences that are work or project based. WorkOne Northern Indiana has embraced the JAG program as the primary method of serving at risk high school aged youth within the region. Since July 1, 2011, the region has increased total enrollment by 43% and expanded "in school" programming to 10 schools, making the region second in the state in active programs. During this rapid expansion, graduation rates of over 80% were maintained for this high risk group. Northern Indiana should consider enhancing or expanding its JAG program and other similar initiatives, as needed.

MOVING FORWARD

To be competitive in the global economy, Northern Indiana should look at the region as a *workforce watershed*, whereby all efforts to improve and enhance the talent pipeline support the larger, regional economic development system. Key regional players including business, education, workforce, and economic development should commit to a process of collaboration that works to identify opportunities, address unmet regional needs, and capture emerging workforce and talent trends.

Northern Indiana has the opportunity to create profound and lasting impacts within the region. Utilization and implementation of recommendations from this strategic planning effort can initiate both immediate and long-term regional changes.

NEED FOR COLLABORATION & COORDINATION

In focus group discussion, manufacturers expressed significant challenges faced when attempting to initiate regional cooperation. In one example, manufacturers with the need to fill sewing positions formed a loosely knit group. After agreeing on common needs and a willingness to fund the training of prospective employees, this group approached educational institutions within the region, requesting assistance for training qualified sewers. After much effort, the initiative was disbanded without the successful implementation of a training program. Upon reflection about the process, employers from this sewers' group identified the lack of a neutral party to convene the employers and education institutions as one of the major obstacles to the group's success.

These types of concerns – lack of coordination and lack of a neutral convener – were also expressed throughout the interview and focus group process. In fact, *all* entities – employers, education providers, workforce professionals, and economic development professionals – expressed awareness of and an interest in rectifying the lack of coordination within the region.

Neutrality is OrthoWorx's key to success. As an entity outside of education and not connected with a specific employer, the organization was able to more successfully convene orthopedic stakeholders.

As expressed by manufacturers and other stakeholders, the adoption of a neutral party will be especially helpful in facilitating regional coordination. At present, there is no one entity or individual who is positioned as neutral with a main goal of convening employers, education providers, workforce professionals and economic developers. In addition, during the interview with OrthoWorx, one characteristic they described as a key to their success was

the organization's neutrality. Because OrthoWorx was an entity outside of education and not

Challenges accomplishing regional workforce needs due to a lack of cohesive effort by industry and service providers (Focus Groups and Interviews)

Challenges in coordinating with regional stakeholders (Focus Groups and Interviews)

connected with a specific employer, the organization was able to more successfully convene orthopedic stakeholders. As described by OrthoWorx staff, the safe and non-threatening environment offered by OrthoWorx allowed the opportunity for employers and education providers to more freely discuss their needs as well as possible solutions to their challenges.

RECOMMENDATIONS FOR IMPLEMENTATION

Understanding the importance of collaboration and coordination for the successful adoption of the data driven recommendations, key stakeholders in Northern Indiana should commit to create a strong foundation for regional collaboration. Key representatives from business, education, workforce, and economic development should be convened to discuss implementation strategies for the region, to build consensus surrounding actionable next steps, and to commit to implementing and fully supporting future initiatives.

Commit to create a strong foundation for regional collaboration & convene key regional stakeholders

Collaboration and coordination of regional efforts should align with current regional capacity, strengths, and opportunities, and with the desired future direction of Northern Indiana. In light of this report's recommendations, next steps for the region to consider include:

1 COMMON REGIONAL ASSESSMENT & CREDENTIALS BECOME A WORK READY COMMUNITY

In order to become a Work Ready Community, the entire regional community must engage within this effort. Key regional stakeholders should meet to discuss interest in pursuing a Work Ready Community within Northern Indiana. At present, WorkOne is well positioned within the region to lead this collaborative effort. However, the creation of a regional taskforce comprised of workforce, education, industry, and economic development professionals could also be the driving force for change within Northern Indiana. Once ownership of the Work Ready initiative is established, the region should move toward in defining work ready standards for Northern Indiana. Work Ready Communities to be used as examples can be found in Oklahoma, Georgia, and Kentucky.

UTILIZE INDUSTRY RECOGNIZED CREDENTIALS

Industry credentials are key for both long-term and short-term regional success. At present, the use of credentials within the region can be greatly strengthened and it is recommended that further research and interviews with employers, workforce professionals, and education providers are conducted to better understand current credential recognition and to build consensus around valuable credentials for the region.

2

PROFESSIONAL RECRUITMENT

Engagement in professional recruitment requires regional collaboration lead by a group or specific taskforce. Similar to recommendations for Common Regional Assessments & Credentials, key stakeholders within Northern Indiana should convene to discuss interest in pursuing recommendations falling under Professional Recruitment. Entities to participate within the discussion include CPEG, higher education institutions, economic development professionals, entrepreneurship and innovation focused organizations, businesses, and workforce professionals. CPEG is well positioned to lead the initiative, in collaboration with interested regional stakeholders as described above.

3

LOCAL PROMOTION & RECRUITMENT EFFORTS

Northern Indiana should consider creating, as needed, sector specific taskforces to address regional promotion and recruitment. These taskforces should be action-oriented and proactively identify and address key needs within the sector. Current challenges and opportunities related to manufacturing present an optimal choice for engagement.

At present, there is a pressing demand for the development of a Manufacturing Taskforce. As needed, additional sector specific initiatives for in-demand industries including taskforces in information technology, biomedical, and defense should also be considered.

Initial steps to development of the Manufacturing Taskforce include:

1. Engagement with local manufacturing coalitions to discuss their current initiatives and identify opportunities for alignment.
2. Collaboration with manufacturing focus group participants in developing quick wins, such as revitalization of the sewer's employer alliance and engagement of the group with education providers.

Action oriented goals for the Manufacturing Taskforce include:

1. Engaging partners with both decision-making authority and content expertise and solidifying buy-in from partner leadership.
2. Creating an ongoing mechanism to capture common manufacturing trends, opportunities, and challenges.
3. Identifying and prioritizing the most critical occupations.
4. Providing a continuous feedback loop for training and workforce programs.
5. Digging more deeply into specific skills and competencies required by industry.
6. Analyzing existing training and curricula and gaps within the region.
7. Encouraging responsiveness in structure and content—with an emphasis on including short-term, industry-recognized and stackable credentials.
8. Promoting advanced workplace practices to employers including the value of assessments and credentials, retention strategies, etc.

9. Coordinating with manufacturing coalitions for grassroots implementation (promoting manufacturing careers, etc.)

Workforce Development Initiative Task Force

The Workforce Development Initiative (WDI) Task Force was created in 2001 by the American Public Transportation Association to address the current and future workforce needs of the public transportation industry. The Task Force researched and analyzed current trends and stakeholder needs within the industry to develop an action plan for the association moving forward. Recommendations from the final report have been implemented to improve public transportation throughout the United States.

4

EXPANDING STEM, PROJECT BASED LEARNING & CTE

The long-term success of Northern Indiana is contingent on the region's ability to create a skilled workforce. As such, expansion of Science, Technology, Engineering, and Mathematics (STEM), Project Based Learning and Career and Technical Education (CTE) opportunities while focusing on a common set of performance metrics to measure progress is recommended as the vision for Northern Indiana.

To implement this regional vision, county coalitions, community foundations, and education providers from across Northern Indiana should meet to discuss strategies for collaboration and initiatives. These gatherings may take the form of an education taskforce or less formal regional meetings. While implementation at the county level will be the responsibility of each county coalition, it is important for regional actors, including community foundations, to discuss strategies, current programs, and future opportunities.

Over time, the unique taskforces created in the recommendation on Local Promotion & Recruitment Efforts and the recommendation on Expanding STEM, Project Based Learning, & CTE may consider unifying their coalitions under the umbrella of a larger regional alliance. The purpose of this alliance would be to systematically engage regional stakeholders in strategic thinking around regional talent needs and to coordinate efforts among the numerous taskforces and initiatives created in the recommendations above. This alliance should be comprised of employers, education officials, county coalition leaders, economic developers, and workforce development professionals and would be assembled to:

1. Identify common regional workforce trends, challenges, opportunities, and unmet needs.
2. Identify solutions, align partners and resources, and attract additional resources to fill gaps.
3. Facilitate communication among partners to strengthen collaboration and build the talent support system.

4. Track progress and promote continuous improvement.
5. Facilitate best practice discussions for regional implementation.
6. Oversee/coordinate with sector-specific regional efforts, understanding how lessons learned might be incorporated and embedded into the broader workforce and education systems.

EcO15

EcO15 is a regional effort, funded by the Lilly Endowment, to improve the scale and quality of career and technical education in advanced manufacturing, healthcare, and hospitality/tourism. The initiative provides overarching goals that include: creating education pathways for careers in industry sectors that drive the economy; assisting participants to move at least one level up in educational attainment or career position; and increasing regional leadership and engagement to strengthen the economy. While the goals are created at the state level, EcO15 initiatives are carried out by counties and may look different depending on county need and implementation style.

IN CONCLUSION

Northern Indiana has the opportunity to create profound and lasting impacts within the region and greater workforce watershed. This area is rich in diversity and has dedicated stakeholders who are committed to solving problems today and into the future. It is through this collaborative and cooperative approach that Northern Indiana possesses great opportunity to enhance the quality of life and talent within the region. Key opportunities for growth and expansion are highlighted within each of the four programmatic recommendations:

- **COMMON REGIONAL ASSESSMENT & CREDENTIALS**
- **PROFESSIONAL RECRUITMENT**
- **LOCAL PROMOTION & RECRUITMENT EFFORTS**
- **EXPAND STEM, PROJECT BASED LEARNING, AND CTE**

Through the utilization and implementation of recommendations from this *Talent Roadmap*, businesses, education providers, community leaders, workforce professionals, and economic development professionals have the opportunity to create both immediate and long-term regional change.

These key stakeholders should be convened to discuss regional strategies for implementation, to build consensus surrounding actionable next steps, and to commit to fully supporting and implementing future initiatives. While developing next steps from this *Talent Roadmap*, it is advised that the region's leaders reach out and tap into statewide opportunities. These can include initiatives lead by the governor, the Education Roundtable, the Center of Excellence in Leadership of Learning (CELL), and Conexus Indiana.

Ultimately, it is through a coordinated effort that Northern Indiana will build and sustain a talent pipeline for present and future needs. The region is full of potential and opportunity for implementing successful initiatives – key leaders should take advantage of present momentum developed through stakeholder engagement with this strategic talent and workforce initiative.

APPENDIX

APPENDIX A: METHODOLOGY

QUANTITATIVE DATA ANALYSIS:

The quantitative data analysis was conducted using an extensive analysis of:

- **Publicly Available Data** – ACT Workforce Resources, Bureau of Labor Statistics, College Board’s The Complete College Completion Agenda 2011, Indiana Commission for Higher Education, Indiana Department of Education, Indiana Department of Workforce Development, National Center for Education Statistics, Organization for Economic and Co-operative Development, and U.S. Census Bureau
- **Proprietary Data** – EMSI Analyst. EMSI Analyst provides in-depth and current local employment data, updated it four times per year. To extrapolate data to the county and ZIP code level where it is otherwise unavailable, EMSI 2012.1 relies on more than 90 data sources, including the following: Bureau of Economic Analysis and U.S. Census Bureau from the U.S. Department of Commerce; Bureau of Labor Statistics and Employment and Training Administration (ETA) from the U.S. Department of Labor; and Integrated Postsecondary Education Data System (IPEDS), Common Core of Data (CCD), and Characteristics of Private Schools in the United States from the U.S. Department of Education, National Center for Education Statistics.

The report covered five main topics of analysis, including:

1. **Demographics** – Demographics provides a look into Northern Indiana’s educational attainment levels, including education by age group as well as the relationship between education and poverty, median earnings, and employment. It concludes by placing Northern Indiana in an international context of educational attainment, comparing it with Indiana, the Midwest, and nations around the globe.
2. **Education Completions** – Education Completions examines high schools across Northern Indiana by diploma type, along with certificate, associate degree and bachelor degree+ completions at the region’s postsecondary institutions.
3. **Education Performance** – The region’s high school student remediation rates are found in Education Performance. This section also reviews graduation rates of the region’s postsecondary institutions, including four-year public and private colleges and universities, 2-year public and for-profit colleges, and certificate-granting institutions.
4. **Occupational Requirements** – Occupational Requirements provides an in-depth analysis of growing occupations in the health care, manufacturing, and transportation industries and the areas of knowledge, skill, and ability required to build a quality workforce for the coming decade.
5. **Math of the Big Goal** – Finally, to achieve the goal that 60% of Indiana’s students go on to complete some form of postsecondary education, we should understand The Math of the Big Goal. That is, if 90% of Indiana’s high school students graduate from high school, roughly

70% should complete postsecondary education to reach an overall postsecondary achievement rate of 60%.

For a full copy of the Quantitative Data Analysis report contact the Corporate Partnership for Economic Growth.

SURVEY OF REGIONAL EMPLOYERS:

Questions for the survey of regional employers were created in collaboration between Corporate Partnership for Economic Growth (CPEG), Economic Development Corporation of Elkhart County, Kosciusko Economic Development Corporation, Marshall County Economic Development Corporation, the Chamber of Commerce of St. Joseph County, Fulton Economic Development Corporation, and Thomas P. Miller and Associates. Upon finalization of the survey format and content, an introduction to and link for the survey were sent via email from the local economic development organizations (LEDOs) listed previously, to companies within the respective regions.

Throughout the course of the survey, follow up emails were sent by the LEDOs while CPEG initiated a campaign to raise awareness and stress the importance of the survey through meetings and discussions with regional groups, employers, and other stakeholders.

Although this survey contained a relatively modest response rate of 71 respondents, the survey was administered early in CPEG's tenure. The Corporate Partnership for Economic Growth, being a relatively new organization, continues to gain traction and trust within the region.

Upon survey completion, all results were aggregated to the regional level, ensuring confidentiality for individual survey respondents. Survey questions asked of regional organizations included:

Identifying Information

1. Company information – including name, address, and industry type
2. Individual's contact information – including name, title, phone, and email

Current Workforce Needs

3. Please describe your company's future workforce needs – details include position description, starting salary, number of open positions, estimation of annual need, required education, and difficulty in filling the position

Future Workforce Needs

4. If you had the available workforce here, how many new positions do you project to create in the next: 1-2 years, 3-7 years?
5. What is your annual turnover rate?
6. Estimate the number of workers at your company who will be 55 years or older within the next 10 years

7. Estimate the percent of workers at your company who will be 55 years or older within the next 10 years
8. Please describe any workforce constraints you may have in this region if your business expanded or transitioned into supplying new products or services

Local Workforce in Northern Indiana

9. How would you rate the quality of job applicants in this area?
10. How would you rate the overall skills of existing employees in comparison to your company's needs and requirements?
11. Please select the top five obstacles limiting your ability to hire locally – ability to learn, childcare, computer literacy, drug tests, English proficiency, honesty, machine competency, mathematics and measurement skills, oral presentation skills, proof of citizenship or work visa, reading comprehension, teamwork skills, work ethic, other
12. Please provide any additional information on specific programs (computer) or skills that would improve your ability to hire locally

New Worker Attraction

13. What are your current job recruitment methods? (please check top three) – College recruitment activities & career centers; high school teachers/administrators; local community colleges; newspapers; paid internship job boards; recruiters or staffing companies; social media; word of mouth; WorkOne centers; other
14. For any degreed positions, please check all that apply – I am able to find talent within the region and do not need to recruit outside of the region; I am able to find talent within the state and do not need to recruit outside of the state; I have or would consider recruiting internationally; I recruit externally and would benefit from a program that helps trailing spouses and families; I would more heavily recruit new college graduates from outside the area if this region was more attractive and enabled me to retain them; Other
15. Current and future offerings, rank on a scale of currently offer, would consider offering, and do not offer – apprenticeships; career advancement opportunities; internships; job shadowing; plant tours; programs for ex-offenders; programs for veterans; tuition reimbursement
16. Please select the top three obstacles limiting your ability to attract and recruit talent – inability to sell home in current location; K-12 educational system; perception of region; recreation and amenities; spousal jobs; young professional culture; other
17. Additional obstacles that limit your ability to attract and recruit talent?
18. Any additional questions or comments regarding the content of this survey?

JOB POSTING ANALYSIS:

The job postings analysis combined data from the survey of regional employers with additional data collected from Indiana Career Connect (ICC). All job descriptions were normalized to correspond with O*Net SOC codes and job titles. Combining both data sets, key job openings and employers were identified for the region as a whole, as well as for each individual county. The job posting analysis included an extensive evaluation of currently available jobs within four-counties in Northern Indiana: Elkhart, Kosciusko, Marshall, and St. Joseph counties. The traditional definition of Northern Indiana for the Corporate Partnership for Economic Growth includes the four counties in the job posting analysis. As Fulton County is included within Economic Growth Region 2, Fulton was included in both the quantitative data analysis as well as in stakeholder engagement to assist in creating regional unity and a more comprehensive understanding of the needs and opportunities in Northern Indiana.

Key findings included:

Top SOC Occupations in Region with Open Positions

<i>Normalized Job Title</i>	<i>No. Positions Currently Available</i>
51-2092 Team Assemblers	165
43-4051 Customer Services Representatives	73
17-2112.00 Industrial Engineers	69
41-2031 Retail Salespersons	66
51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic	52
29-1141 Registered Nurses	51
49-9071 Maintenance and Repair Workers, General	51
31-1014 Nursing Assistants	43
11-1021 General and Operations Managers	36
11-2022 Sales Managers	36

APPENDIX B: HIGHLIGHTS FROM FOCUS GROUPS AND INTERVIEWS

Combining data gathered from quantitative data analysis, the survey of regional employers, and job posting analysis key stakeholders to interview were identified:

- Employers in Manufacturing and Healthcare
- Education Providers
- Workforce Professionals
- Economic Development Professionals

EMPLOYERS IN MANUFACTURING

The quantitative data analysis, survey of regional employers, and job posting analysis all identified manufacturing as an industry with large employment figures for the region. Utilizing data collected during the earlier phases of the *Talent Roadmap* to drive conversation and data validation, a focus group was held for regional manufacturers. Discussion topics included current needs and future demands. Highlights from the focus group included an interest in:

- Conducting a wage and salary survey for the region
- Increasing employer knowledge and use of assessments and credentials to create a common language for assessment of workers
 - WorkKeys as a predictor of worker quality has worked well for some companies
- Connecting employers with educational institutions for internship and customized training programs
- Establishing a facilitator or moderator to assist with bringing together employers, educational institutions, and workforce professionals
- Creating a trailing spouse program
- Reaching out to education institutions
- Profiling jobs in a consistent manner for open positions across businesses
 - WorkOne had provided good job profiling services for several companies
- Working as a region, to pool resources and common needs

EMPLOYERS IN HEALTHCARE

The quantitative data analysis identified healthcare as a growing sector within Northern Indiana, where the region has a strong competitive advantage. In addition, the job posting analysis identified a large employment need for the region in healthcare related occupations. Again, data collected during the earlier phases of the *Talent Roadmap* were used to drive the conversation and validate the previously collected data. Within healthcare, two major types of providers were consulted:

ORTHOWORX

A one-on-one interview was held with OrthoWorx, with key takeaways including:

- Partnering with higher education institutions and businesses has worked because OrthoWorx is a neutral convener

- Addressing gaps in the region:
 - Asking companies what they needed and defining specific requirements.
 - Taking company feedback to education providers to create and/or revise programs based on industry recommendations.
 - Continuing with this circle of feedback between companies and education providers
- Using an International Center or additional assistance for international employees would be helpful

COMMUNITY HOSPITALS

Highlights from a one-on-one interview with the Kosciusko Community Hospital include interest in:

- Creating a trailing spouse program
- Increasing the number of healthcare graduates in areas like primary care physician, RNs, CMAs, and LPNs

Identified in both the quantitative data analysis and survey of regional employers, the long-term success of Northern Indiana depends on the region’s skilled and talented workforce. As such, it is essential to engage education providers, workforce professionals, and economic development professionals in conversation with each other and with employers and other regional stakeholders.

EMPLOYERS IN INFORMATION TECHNOLOGY

Information technology professionals are prevalent in industries throughout Northern Indiana. Data collected during the earlier phases of the *Talent Roadmap* were used to drive the conversations around current industry needs and opportunities. Key takeaways from the discussion include an interest in:

- Connecting employers with postsecondary institutions to assist the region in growing new IT professionals
- Developing on-going training initiatives to train current workers for today’s workforce needs
- Attracting specialized professionals to the region through collaborative regional initiatives such as community funded technology websites and other networking systems

EDUCATION PROVIDERS

Engagement with education providers is essential to ensure the programs and services offered in high school and postsecondary education fully prepare individuals for the region’s workforce. Both a focus group and one-on-one interviews were conducted to better understand the needs of education providers and spur conversations between education providers, employers, workforce, and economic development.

EDUCATION PROVIDERS FOCUS GROUP

Key takeaways from the education providers' focus group include an interest in:

- Changing the negative perception of manufacturing throughout the region
- Establishing a common assessment language for education providers and employers to utilize
 - WorkKeys was brought up as an example of a practical common assessment language to use for the region
- Increasing collaboration between employers, workforce professionals, and education providers
- Filling classes that align with regional employer demands
 - At present, courses offered for in-demand occupations have additional capacity

IVY TECH COMMUNITY COLLEGE

Highlights from the interview with Ivy Tech Community College officials include interest in:

- Incorporating standardized and portable credentials, such as those within the NAM Skills Certification System
- Providing soft skills training contextualized to specific industries
- Providing business-driven solutions
- Expanding use of credit for prior learning and experience
- Defining roles and expectations within the regional “system” of partners
- Identifying a neutral convener to bring together businesses with all training providers to identify current programs and strengths, define roles and align efforts moving forward

WORKFORCE PROFESSIONALS

Equally important in the conversation of building and sustaining a talented workforce in Northern Indiana is the engagement of workforce professionals. The most prominent workforce organization in the region is the Northern Indiana Workforce Investment Board, WorkOne Operator. Conducting a one-on-one interview with the workforce investment board, key takeaways from the conversation included an interest in:

- Continuing to build credibility with regional employers by communicating more effectively with industry
- Increasing capacity of the workforce board
- Improving partnerships throughout the region
- Advocating for competitive wages and advanced workplace practices
- Providing basic manufacturing readiness training
- Identifying a neutral convener in order to define the curriculum based on listening to industry needs and ensure responsive training

ECONOMIC DEVELOPMENT PROFESSIONALS

Similarly, it is essential that economic development professionals within the region are engaged in this collaborative effort. Local economic development officials (LEDOs) are already actively partnering with CPEG, but to gain a deeper understanding of the economic development perspective, a one-on-one interview was conducted with the Kosciusko Economic Development Corporation. Highlights from the conversation include an interest in:

- Creating a formal training program backed by companies
- Changing the perception of manufacturing
- Applying the OrthoWorx strategy to the region
 - Necessity of a neutral convener
- Attracting previous residents back to the region

APPENDIX C: HOOSIER HOT 50 JOBS

RANK	HOT JOB	SALARY	EDUCATION	HOT NOW
1	Physician and Surgeon	\$ 160,451	F	
2	Registered Nurse	\$ 57,034	A	
3	Physical Therapist	\$ 76,627	D	
4	Dental Hygienist	\$ 65,707	A	
5	Computer Software Engineer	\$ 72,197	B	
6	Postsecondary Teacher	\$ 60,237	B/M	
7	Plumber	\$ 50,856	LT	
8	Pharmacist	\$ 110,053	D	
9	Operating Engineer	\$ 49,920	MT	
10	Medical Services Manager	\$ 75,691	B	
11	Cost Estimator	\$ 56,555	B	
12	Construction Supervisor	\$ 59,301	W	
13	Social Worker	\$ 52,478	B/M	
14	Marketing Specialist	\$ 49,026	B	
15	Graphic Designer	\$ 36,005	B	
16	Management Analyst	\$ 68,307	BW	
17	Truck Driver	\$ 38,730	ST/W	
18	K-12 Teacher	\$ 47,611	B/M	
19	Sales Representative, Wholesale and Manufacturing	\$ 53,664	MT	
20	Occupational Therapist	\$ 73,382	M	
21	Heating, Air Conditioning and Refrigeration Mechanic	\$ 40,914	P/LT	
22	Electrician	\$ 54,995	LT	
23	Construction Superintendent	\$ 78,333	A/W	
24	Licensed Practical Nurse	\$ 38,189	P	
25	Occupational/Physical Therapist Aide	\$ 50,274	B	
26	Accountant	\$ 58,365	B	
27	Sales Representative, Services	\$ 44,782	A	

RANK	HOT JOB	SALARY	EDUCATION	HOT NOW
28	Computer Systems Analyst	\$ 69,347	B	
29	Network Systems and Data Communication Administrator	\$ 61,734	B	
30	Personal Financial Advisor	\$ 69,014	B	
31	Dental Assistant	\$ 34,362	P	
32	Veterinarian	\$ 77,854	D	
33	Optometrist	\$ 78,894	D	
34	Counselor	\$ 37,170	M	
35	Information Security Analyst and Computer Network Architect	\$ 66,290	B	
36	Training and Development Specialist	\$ 45,656	B	
37	Industrial Machinery Mechanic	\$ 46,072	LT	
38	Radiologic Technician	\$ 51,542	A	
39	Physician Assistant	\$ 85,634	M	
40	Actuary	\$ 88,920	B	
41	School Administrator	\$ 64,147	B/M	
42	Database Administrator	\$ 64,418	B	
43	Civil Engineer	\$ 68,328	B	
44	Medical Scientist	\$ 90,085	D	
45	School Psychologist	\$ 56,534	D	
46	Cement Mason/Concrete Finisher	\$ 36,795	MT	
47	Boilermaker	\$ 65,062	LT	
48	Brickmason/Blockmason	\$ 46,301	LT	
49	Biomedical Engineer	\$ 58,656	B	
50	Dentist	\$ 163,488	D	

 = Hot Jobs that are in demand now
A = Associate's Degree
B = Bachelor's Degree
BW = Bachelor's or higher degree, plus work experience
D = Doctoral Degree
F = First Professional Degree

LT = Long-term on-the-job training
M = Master's Degree
MT = Moderate on-the-job training
P = Postsecondary vocational training
ST = Short-term on-the-job training
W = Work experience in a related occupation

Hoosier Hot/50 Jobs
Data Pulled 12/14/12

APPENDIX D: GROWING AND DECLINING OCCUPATIONS

To better understand how education can and will affect job possibilities, an analysis of required educational attainment trends was conducted. All current occupations in Northern Indiana were analyzed for their minimum level of required educational attainment. Then each of these jobs were examined based on the projected growth or decline of the occupation from 2012 to 2022. The following is a list of occupations projected to grow and decline within Northern Indiana:

GROWING OCCUPATIONS

WORK EXPERIENCE

- Administrative Services Managers
- Choreographers
- Construction and Building Inspectors
- Detectives and Criminal Investigators
- Emergency Management Directors
- Executive Secretaries and Executive Administrative Assistants
- First-Line Supervisors of Construction Trades and Extraction Workers
- First-Line Supervisors of Correctional Officers
- First-Line Supervisors of Farming, Fishing, and Forestry Workers
- First-Line Supervisors of Fire Fighting and Prevention Workers
- First-Line Supervisors of Food Preparation and Serving Workers
- First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand
- First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers
- First-Line Supervisors of Mechanics, Installers, and Repairers
- First-Line Supervisors of Office and Administrative Support Workers
- First-Line Supervisors of Personal Service Workers
- First-Line Supervisors of Police and Detectives
- First-Line Supervisors of Protective Service Workers, All Other
- First-Line Supervisors of Retail Sales Workers
- First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators
- Food Service Managers
- Gaming Supervisors
- Managers, All Other
- Private Detectives and Investigators
- Real Estate Brokers
- Self-Enrichment Education Teachers
- Transportation, Storage, and Distribution Managers

ON-THE-JOB TRAINING

- Actors
- Advertising Sales Agents

- Agricultural Equipment Operators
- Agricultural Workers, All Other
- Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
- Ambulance Drivers and Attendants, Except Emergency Medical Technicians
- Amusement and Recreation Attendants
- Animal Control Workers
- Animal Trainers
- Artists and Related Workers, All Other
- Athletes and Sports Competitors
- Automotive and Watercraft Service Attendants
- Automotive Body and Related Repairers
- Automotive Glass Installers and Repairers
- Baggage Porters and Bellhops
- Bailiffs
- Bakers
- Bicycle Repairers
- Bill and Account Collectors
- Billing and Posting Clerks
- Bookkeeping, Accounting, and Auditing Clerks
- Bus Drivers, Transit and Intercity
- Business Operations Specialists, All Other
- Butchers and Meat Cutters
- Buyers and Purchasing Agents, Farm Products
- Cabinetmakers and Bench Carpenters
- Carpenters
- Carpet Installers
- Cashiers
- Cement Masons and Concrete Finishers
- Chemical Equipment Operators and Tenders
- Childcare Workers
- Claims Adjusters, Examiners, and Investigators
- Coaches and Scouts
- Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
- Combined Food Preparation and Serving Workers, Including Fast Food
- Computer-Controlled Machine Tool Operators, Metal and Plastic
- Concierges
- Construction and Related Workers, All Other
- Construction Laborers
- Cooks, All Other
- Cooks, Institution and Cafeteria
- Cooks, Restaurant
- Cooks, Short Order
- Cooling and Freezing Equipment Operators and Tenders
- Correctional Officers and Jailers

- Counter and Rental Clerks
- Counter Attendants, Cafeteria, Food Concession, and Coffee Shop
- Court, Municipal, and License Clerks
- Craft Artists
- Crossing Guards
- Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
- Customer Service Representatives
- Dancers
- Dental Laboratory Technicians
- Dining Room and Cafeteria Attendants and Bartender Helpers
- Dishwashers
- Dispatchers, Except Police, Fire, and Ambulance
- Driver/Sales Workers
- Drywall and Ceiling Tile Installers
- Electrical Power-Line Installers and Repairers
- Electricians
- Elevator Installers and Repairers
- Eligibility Interviewers, Government Programs
- Entertainers and Performers, Sports and Related Workers, All Other
- Entertainment Attendants and Related Workers, All Other
- Excavating and Loading Machine and Dragline Operators
- Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic
- Fallers
- Farmworkers and Laborers, Crop, Nursery, and Greenhouse
- Fence Erectors
- Fine Artists, Including Painters, Sculptors, and Illustrators
- Firefighters
- Fishers and Related Fishing Workers
- Flight Attendants
- Floor Sanders and Finishers
- Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
- Food Batchmakers
- Food Cooking Machine Operators and Tenders
- Food Preparation Workers
- Food Servers, Nonrestaurant
- Forest and Conservation Workers
- Funeral Attendants
- Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
- Gaming and Sports Book Writers and Runners
- Gaming Dealers
- Gaming Service Workers, All Other
- Glaziers
- Graders and Sorters, Agricultural Products
- Grounds Maintenance Workers, All Other

- Hazardous Materials Removal Workers
- Healthcare Support Workers, All Other
- Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic
- Heavy and Tractor-Trailer Truck Drivers
- Helpers, Construction Trades, All Other
- Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
- Helpers--Carpenters
- Helpers--Electricians
- Helpers--Installation, Maintenance, and Repair Workers
- Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
- Helpers--Roofers
- Highway Maintenance Workers
- Home Health Aides
- Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
- Hotel, Motel, and Resort Desk Clerks
- Human Resources Assistants, Except Payroll and Timekeeping
- Industrial Machinery Mechanics
- Information and Record Clerks, All Other
- Inspectors, Testers, Sorters, Samplers, and Weighers
- Installation, Maintenance, and Repair Workers, All Other
- Insulation Workers, Floor, Ceiling, and Wall
- Interpreters and Translators
- Interviewers, Except Eligibility and Loan
- Janitors and Cleaners, Except Maids and Housekeeping Cleaners
- Laborers and Freight, Stock, and Material Movers, Hand
- Landscaping and Groundskeeping Workers
- Laundry and Dry-Cleaning Workers
- Legal Support Workers, All Other
- Library Assistants, Clerical
- Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers
- Light Truck or Delivery Services Drivers
- Loan Officers
- Locker Room, Coatroom, and Dressing Room Attendants
- Locksmiths and Safe Repairers
- Logging Equipment Operators
- Maids and Housekeeping Cleaners
- Mail Clerks and Mail Machine Operators, Except Postal Service
- Maintenance and Repair Workers, General
- Maintenance Workers, Machinery
- Material Moving Workers, All Other
- Meat, Poultry, and Fish Cutters and Trimmers
- Media and Communication Equipment Workers, All Other
- Media and Communication Workers, All Other
- Medical Appliance Technicians

- Medical Assistants
- Medical Equipment Preparers
- Medical Secretaries
- Metal-Refining Furnace Operators and Tenders
- Meter Readers, Utilities
- Mobile Heavy Equipment Mechanics, Except Engines
- Models
- Molders, Shapers, and Casters, Except Metal and Plastic
- Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
- Musicians and Singers
- New Accounts Clerks
- Nonfarm Animal Caretakers
- Office and Administrative Support Workers, All Other
- Office Clerks, General
- Operating Engineers and Other Construction Equipment Operators
- Ophthalmic Laboratory Technicians
- Opticians, Dispensing
- Order Clerks
- Outdoor Power Equipment and Other Small Engine Mechanics
- Packaging and Filling Machine Operators and Tenders
- Packers and Packagers, Hand
- Painting, Coating, and Decorating Workers
- Parking Enforcement Workers
- Paving, Surfacing, and Tamping Equipment Operators
- Payroll and Timekeeping Clerks
- Personal Care Aides
- Personal Care and Service Workers, All Other
- Pest Control Workers
- Pesticide Handlers, Sprayers, and Applicators, Vegetation
- Pharmacy Aides
- Pharmacy Technicians
- Photographers
- Physical Therapist Aides
- Pipelayers
- Plasterers and Stucco Masons
- Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic
- Police and Sheriff's Patrol Officers
- Police, Fire, and Ambulance Dispatchers
- Postal Service Mail Carriers
- Power Plant Operators
- Precision Instrument and Equipment Repairers, All Other
- Procurement Clerks
- Production Workers, All Other
- Production, Planning, and Expediting Clerks

- Proofreaders and Copy Markers
- Protective Service Workers, All Other
- Psychiatric Aides
- Public Address System and Other Announcers
- Radio and Television Announcers
- Rail Car Repairers
- Receptionists and Information Clerks
- Recreation Workers
- Refuse and Recyclable Material Collectors
- Reinforcing Iron and Rebar Workers
- Reservation and Transportation Ticket Agents and Travel Clerks
- Residential Advisors
- Retail Salespersons
- Roofers
- Sailors and Marine Oilers
- Sales and Related Workers, All Other
- Sales Representatives, Services, All Other
- Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
- Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
- Security and Fire Alarm Systems Installers
- Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
- Septic Tank Servicers and Sewer Pipe Cleaners
- Sewers, Hand
- Shampooers
- Slaughterers and Meat Packers
- Social and Human Service Assistants
- Stationary Engineers and Boiler Operators
- Stonemasons
- Structural Iron and Steel Workers
- Surveying and Mapping Technicians
- Tailors, Dressmakers, and Custom Sewers
- Tapers
- Tax Preparers
- Taxi Drivers and Chauffeurs
- Teacher Assistants
- Team Assemblers
- Telecommunications Line Installers and Repairers
- Telemarketers
- Tellers
- Terrazzo Workers and Finishers
- Tile and Marble Setters
- Tire Repairers and Changers

- Tour Guides and Escorts
- Traffic Technicians
- Transportation Inspectors
- Transportation Security Screeners (federal only)
- Travel Guides
- Tree Trimmers and Pruners
- Umpires, Referees, and Other Sports Officials
- Ushers, Lobby Attendants, and Ticket Takers
- Veterinary Assistants and Laboratory Animal Caretakers
- Waiters and Waitresses
- Water and Wastewater Treatment Plant and System Operators
- Wholesale and Retail Buyers, Except Farm Products

POSTSECONDARY NON-DEGREE AWARD

- Audio and Video Equipment Technicians
- Automotive Service Technicians and Mechanics
- Barbers
- Court Reporters
- Dental Assistants
- Dietetic Technicians
- Electrical and Electronics Repairers, Powerhouse, Substation, and Relay
- Emergency Medical Technicians and Paramedics
- Fitness Trainers and Aerobics Instructors
- Hairdressers, Hairstylists, and Cosmetologists
- Health Technologists and Technicians, All Other
- Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- Insurance Sales Agents
- Jewelers and Precious Stone and Metal Workers
- Library Technicians
- Licensed Practical and Licensed Vocational Nurses
- Makeup Artists, Theatrical and Performance
- Manicurists and Pedicurists
- Massage Therapists
- Nursing Aides, Orderlies, and Attendants
- Preschool Teachers, Except Special Education
- Psychiatric Technicians
- Real Estate Sales Agents
- Respiratory Therapy Technicians
- Skincare Specialists
- Slot Supervisors
- Sound Engineering Technicians
- Surgical Technologists

ASSOCIATE'S DEGREE

- Agricultural and Food Science Technicians
- Air Traffic Controllers
- Broadcast Technicians
- Cardiovascular Technologists and Technicians
- Chemical Technicians
- Civil Engineering Technicians
- Computer Occupations, All Other
- Computer Support Specialists
- Dental Hygienists
- Diagnostic Medical Sonographers
- Engineering Technicians, Except Drafters, All Other
- Environmental Engineering Technicians
- Environmental Science and Protection Technicians, Including Health
- Fashion Designers
- Forest and Conservation Technicians
- Funeral Service Managers, Directors, Morticians, and Undertakers
- Industrial Engineering Technicians
- Interior Designers
- Legal Secretaries
- Life, Physical, and Social Science Technicians, All Other
- Mechanical Engineering Technicians
- Medical and Clinical Laboratory Technicians
- Medical Equipment Repairers
- Medical Records and Health Information Technicians
- Nuclear Medicine Technologists
- Occupational Health and Safety Technicians
- Occupational Therapy Assistants
- Paralegals and Legal Assistants
- Physical Therapist Assistants
- Radiation Therapists
- Radiologic Technologists and Technicians
- Registered Nurses
- Respiratory Therapists
- Semiconductor Processors
- Social Science Research Assistants
- Veterinary Technologists and Technicians

BACHELOR'S DEGREE

- Accountants and Auditors
- Actuaries
- Administrative Law Judges, Adjudicators, and Hearing Officers
- Adult Basic and Secondary Education and Literacy Teachers and Instructors
- Agents and Business Managers of Artists, Performers, and Athletes
- Agricultural Inspectors
- Airline Pilots, Copilots, and Flight Engineers
- Arbitrators, Mediators, and Conciliators
- Architectural and Engineering Managers
- Art Directors
- Athletic Trainers
- Atmospheric and Space Scientists
- Audio-Visual and Multimedia Collections Specialists
- Biological Technicians
- Biomedical Engineers
- Broadcast News Analysts
- Budget Analysts
- Camera Operators, Television, Video, and Motion Picture
- Captains, Mates, and Pilots of Water Vessels
- Career/Technical Education Teachers, Middle School
- Chemical Engineers
- Chemists
- Chief Executives
- Child, Family, and School Social Workers
- Civil Engineers
- Commercial and Industrial Designers
- Community and Social Service Specialists, All Other
- Compensation and Benefits Managers
- Compensation, Benefits, and Job Analysis Specialists
- Compliance Officers
- Computer and Information Systems Managers
- Computer Programmers
- Computer Systems Analysts
- Conservation Scientists
- Cost Estimators
- Credit Analysts
- Credit Counselors
- Database Administrators
- Designers, All Other
- Dietitians and Nutritionists
- Directors, Religious Activities and Education
- Editors

- Education Administrators, All Other
- Education Administrators, Elementary and Secondary School
- Education Administrators, Postsecondary
- Education Administrators, Preschool and Childcare Center/Program
- Education, Training, and Library Workers, All Other
- Electrical Engineers
- Elementary School Teachers, Except Special Education
- Engineers, All Other
- Environmental Engineers
- Farm and Home Management Advisors
- Film and Video Editors
- Financial Analysts
- Financial Examiners
- Financial Managers
- Financial Specialists, All Other
- Forensic Science Technicians
- Foresters
- Graphic Designers
- Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
- Health Diagnosing and Treating Practitioners, All Other
- Health Educators
- Healthcare Practitioners and Technical Workers, All Other
- Healthcare Social Workers
- Human Resources Managers
- Human Resources, Training, and Labor Relations Specialists, All Other
- Industrial Engineers
- Industrial Production Managers
- Information Security Analysts, Web Developers, and Computer Network Architects
- Judges, Magistrate Judges, and Magistrates
- Kindergarten Teachers, Except Special Education
- Life Scientists, All Other
- Logisticians
- Management Analysts
- Market Research Analysts and Marketing Specialists
- Marketing Managers
- Medical and Clinical Laboratory Technologists
- Medical and Health Services Managers
- Meeting, Convention, and Event Planners
- Middle School Teachers, Except Special and Career/Technical Education
- Multimedia Artists and Animators
- Museum Technicians and Conservators
- Music Directors and Composers
- Natural Sciences Managers
- Network and Computer Systems Administrators

- Nuclear Engineers
- Occupational Health and Safety Specialists
- Orthotists and Prosthetists
- Personal Financial Advisors
- Physical Scientists, All Other
- Probation Officers and Correctional Treatment Specialists
- Producers and Directors
- Property, Real Estate, and Community Association Managers
- Public Relations and Fundraising Managers
- Public Relations Specialists
- Recreational Therapists
- Religious Workers, All Other
- Reporters and Correspondents
- Sales Managers
- Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
- Secondary School Teachers, Except Special and Career/Technical Education
- Securities, Commodities, and Financial Services Sales Agents
- Set and Exhibit Designers
- Social and Community Service Managers
- Social Workers, All Other
- Software Developers, Applications
- Software Developers, Systems Software
- Soil and Plant Scientists
- Special Education Teachers, Middle School
- Special Education Teachers, Preschool, Kindergarten, and Elementary School
- Special Education Teachers, Secondary School
- Statistical Assistants
- Substance Abuse and Behavioral Disorder Counselors
- Survey Researchers
- Surveyors
- Tax Examiners and Collectors, and Revenue Agents
- Teachers and Instructors, All Other
- Technical Writers
- Training and Development Managers
- Training and Development Specialists
- Writers and Authors

MASTER'S DEGREE+

- Anesthesiologists
- Archivists
- Audiologists
- Biochemists and Biophysicists

- Biological Scientists, All Other
- Chiropractors
- Clergy
- Clinical, Counseling, and School Psychologists
- Computer and Information Research Scientists
- Counselors, All Other
- Curators
- Dentists, General
- Educational, Guidance, School, and Vocational Counselors
- Environmental Scientists and Specialists, Including Health
- Family and General Practitioners
- Geoscientists, Except Hydrologists and Geographers
- Instructional Coordinators
- Internists, General
- Librarians
- Marriage and Family Therapists
- Medical Scientists, Except Epidemiologists
- Mental Health and Substance Abuse Social Workers
- Mental Health Counselors
- Microbiologists
- Obstetricians and Gynecologists
- Occupational Therapists
- Operations Research Analysts
- Optometrists
- Oral and Maxillofacial Surgeons
- Orthodontists
- Pediatricians, General
- Pharmacists
- Physical Therapists
- Physician Assistants
- Physicians and Surgeons, All Other
- Physicists
- Postsecondary Teachers
- Psychiatrists
- Psychologists, All Other
- Rehabilitation Counselors
- Social Scientists and Related Workers, All Other
- Speech-Language Pathologists
- Statisticians
- Surgeons
- Therapists, All Other
- Urban and Regional Planners
- Veterinarians

DECLINING OCCUPATIONS

WORK EXPERIENCE

- Aircraft Cargo Handling Supervisors
- Chefs and Head Cooks
- First-Line Supervisors of Housekeeping and Janitorial Workers
- First-Line Supervisors of Non-Retail Sales Workers
- First-Line Supervisors of Production and Operating Workers
- Lodging Managers
- Postmasters and Mail Superintendents

ON-THE-JOB TRAINING

- Adhesive Bonding Machine Operators and Tenders
- Assemblers and Fabricators, All Other
- Bartenders
- Boilermakers
- Brickmasons and Blockmasons
- Brokerage Clerks
- Building Cleaning Workers, All Other
- Bus Drivers, School or Special Client
- Cargo and Freight Agents
- Chemical Plant and System Operators
- Cleaners of Vehicles and Equipment
- Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders
- Coil Winders, Tapers, and Finishers
- Coin, Vending, and Amusement Machine Servicers and Repairers
- Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
- Computer Operators
- Control and Valve Installers and Repairers, Except Mechanical Door
- Conveyor Operators and Tenders
- Cooks, Fast Food
- Couriers and Messengers
- Crane and Tower Operators
- Credit Authorizers, Checkers, and Clerks
- Cutters and Trimmers, Hand
- Cutting and Slicing Machine Setters, Operators, and Tenders
- Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
- Data Entry Keyers
- Demonstrators and Product Promoters
- Door-to-Door Sales Workers, News and Street Vendors, and Related Workers
- Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
- Earth Drillers, Except Oil and Gas

- Electrical and Electronic Equipment Assemblers
- Electromechanical Equipment Assemblers
- Engine and Other Machine Assemblers
- Etchers and Engravers
- Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers
- Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
- Farm Equipment Mechanics and Service Technicians
- Farmers, Ranchers, and Other Agricultural Managers
- Farmworkers, Farm, Ranch, and Aquacultural Animals
- Fiberglass Laminators and Fabricators
- File Clerks
- Floor Layers, Except Carpet, Wood, and Hard Tiles
- Floral Designers
- Food Preparation and Serving Related Workers, All Other
- Forging Machine Setters, Operators, and Tenders, Metal and Plastic
- Foundry Mold and Coremakers
- Furniture Finishers
- Gaming Change Persons and Booth Cashiers
- Grinding and Polishing Workers, Hand
- Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic
- Helpers--Production Workers
- Home Appliance Repairers
- Industrial Truck and Tractor Operators
- Insulation Workers, Mechanical
- Insurance Claims and Policy Processing Clerks
- Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic
- Layout Workers, Metal and Plastic
- Loading Machine Operators, Underground Mining
- Loan Interviewers and Clerks
- Locomotive Engineers
- Logging Workers, All Other
- Machine Feeders and Offbearers
- Machinists
- Manufactured Building and Mobile Home Installers
- Mechanical Door Repairers
- Merchandise Displayers and Window Trimmers
- Metal Workers and Plastic Workers, All Other
- Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
- Millwrights
- Mine Shuttle Car Operators
- Mixing and Blending Machine Setters, Operators, and Tenders
- Model Makers, Metal and Plastic
- Model Makers, Wood

- Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic
- Motor Vehicle Operators, All Other
- Motorboat Mechanics and Service Technicians
- Motorcycle Mechanics
- Musical Instrument Repairers and Tuners
- Office Machine Operators, Except Computer
- Painters, Construction and Maintenance
- Painters, Transportation Equipment
- Paper Goods Machine Setters, Operators, and Tenders
- Paperhangers
- Parking Lot Attendants
- Parts Salespersons
- Patternmakers, Metal and Plastic
- Patternmakers, Wood
- Photographic Process Workers and Processing Machine Operators
- Plant and System Operators, All Other
- Plumbers, Pipefitters, and Steamfitters
- Postal Service Clerks
- Postal Service Mail Sorters, Processors, and Processing Machine Operators
- Pourers and Casters, Metal
- Pressers, Textile, Garment, and Related Materials
- Print Binding and Finishing Workers
- Printing Press Operators
- Purchasing Agents, Except Wholesale, Retail, and Farm Products
- Railroad Brake, Signal, and Switch Operators
- Railroad Conductors and Yardmasters
- Rail-Track Laying and Maintenance Equipment Operators
- Recreational Vehicle Service Technicians
- Riggers
- Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
- Roof Bolters, Mining
- Sawing Machine Setters, Operators, and Tenders, Wood
- Security Guards
- Sewing Machine Operators
- Sheet Metal Workers
- Shipping, Receiving, and Traffic Clerks
- Shoe and Leather Workers and Repairers
- Shoe Machine Operators and Tenders
- Signal and Track Switch Repairers
- Stock Clerks and Order Fillers
- Structural Metal Fabricators and Fitters
- Switchboard Operators, Including Answering Service
- Textile Bleaching and Dyeing Machine Operators and Tenders
- Textile Cutting Machine Setters, Operators, and Tenders

- Textile Knitting and Weaving Machine Setters, Operators, and Tenders
- Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
- Textile, Apparel, and Furnishings Workers, All Other
- Timing Device Assemblers and Adjusters
- Tire Builders
- Title Examiners, Abstractors, and Searchers
- Tool and Die Makers
- Tool Grinders, Filers, and Sharpeners
- Transportation Attendants, Except Flight Attendants
- Transportation Workers, All Other
- Upholsterers
- Watch Repairers
- Weighers, Measurers, Checkers, and Samplers, Recordkeeping
- Woodworkers, All Other
- Woodworking Machine Setters, Operators, and Tenders, Except Sawing
- Word Processors and Typists

POSTSECONDARY NON-DEGREE AWARD

- Aircraft Mechanics and Service Technicians
- Architectural and Civil Drafters
- Bus and Truck Mechanics and Diesel Engine Specialists
- Commercial Divers
- Commercial Pilots
- Computer, Automated Teller, and Office Machine Repairers
- Drafters, All Other
- Electric Motor, Power Tool, and Related Repairers
- Electrical and Electronics Drafters
- Electrical and Electronics Installers and Repairers, Transportation Equipment
- Electrical and Electronics Repairers, Commercial and Industrial Equipment
- Electronic Equipment Installers and Repairers, Motor Vehicles
- Electronic Home Entertainment Equipment Installers and Repairers
- Insurance Appraisers, Auto Damage
- Mechanical Drafters
- Medical Transcriptionists
- Prepress Technicians and Workers
- Telecommunications Equipment Installers and Repairers, Except Line Installers
- Travel Agents
- Welders, Cutters, Solderers, and Brazers
- Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

ASSOCIATE'S DEGREE

- Aerospace Engineering and Operations Technicians
- Appraisers and Assessors of Real Estate
- Desktop Publishers
- Electrical and Electronics Engineering Technicians
- Electro-Mechanical Technicians
- Mathematical Technicians
- Radio, Cellular, and Tower Equipment Installers and Repairs

BACHELOR'S DEGREE

- Advertising and Promotions Managers
- Aerospace Engineers
- Agricultural Engineers
- Architects, Except Landscape and Naval
- Career/Technical Education Teachers, Secondary School
- Computer Hardware Engineers
- Construction Managers
- Electronics Engineers, Except Computer
- Food Scientists and Technologists
- General and Operations Managers
- Insurance Underwriters
- Landscape Architects
- Legislators
- Marine Engineers and Naval Architects
- Materials Engineers
- Materials Scientists
- Mechanical Engineers
- Purchasing Managers
- Sales Engineers

MASTER'S DEGREE+

- Historians
- Lawyers
- Podiatrists

APPENDIX E: OCCUPATIONS WITHIN THE MANUFACTURING INDUSTRY

The following represent a list of occupations that comprise the manufacturing sector in Northern Indiana. This list includes occupations with a least 25 jobs in 2012 ranked by largest to least number of jobs.

OCCUPATION

1	Team Assemblers
2	Assemblers and Fabricators, All Other
3	First-Line Supervisors of Production and Operating Workers
4	Helpers--Production Workers
5	Inspectors, Testers, Sorters, Samplers, and Weighers
6	Welders, Cutters, Solderers, and Brazers
7	Machinists
8	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
9	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic
10	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
11	Industrial Truck and Tractor Operators
12	Computer-Controlled Machine Tool Operators, Metal and Plastic
13	Shipping, Receiving, and Traffic Clerks
14	Laborers and Freight, Stock, and Material Movers, Hand
15	Fiberglass Laminators and Fabricators
16	Industrial Production Managers
17	Maintenance and Repair Workers, General
18	Office Clerks, General
19	Woodworking Machine Setters, Operators, and Tenders, Except Sawing
20	Packers and Packagers, Hand
21	Electrical and Electronic Equipment Assemblers
22	General and Operations Managers
23	Packaging and Filling Machine Operators and Tenders
24	Cabinetmakers and Bench Carpenters
25	Customer Service Representatives
26	Production Workers, All Other
27	Bookkeeping, Accounting, and Auditing Clerks
28	Tool and Die Makers
29	Industrial Machinery Mechanics
30	Painters, Transportation Equipment
31	Industrial Engineers
32	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
33	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic
34	Structural Metal Fabricators and Fitters
35	Purchasing Agents, Except Wholesale, Retail, and Farm Products
36	Mechanical Engineers
37	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders
38	Stock Clerks and Order Fillers
39	Machine Feeders and Offbearers
40	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic
41	Grinding and Polishing Workers, Hand
42	Managers, All Other

43	Heavy and Tractor-Trailer Truck Drivers
44	Carpenters
45	Printing Press Operators
46	Production, Planning, and Expediting Clerks
47	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic
48	Furniture Finishers
49	Sewing Machine Operators
50	Accountants and Auditors
51	Electricians
52	Mixing and Blending Machine Setters, Operators, and Tenders
53	Janitors and Cleaners, Except Maids and Housekeeping Cleaners
54	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders
55	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic
56	First-Line Supervisors of Office and Administrative Support Workers
57	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
58	Cutting and Slicing Machine Setters, Operators, and Tenders
59	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
60	Upholsterers
61	Light Truck or Delivery Services Drivers
62	Sawing Machine Setters, Operators, and Tenders, Wood
63	Dental Laboratory Technicians
64	First-Line Supervisors of Mechanics, Installers, and Repairers
65	Forging Machine Setters, Operators, and Tenders, Metal and Plastic
66	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic
67	Sales Managers
68	Mechanical Drafters
69	Paper Goods Machine Setters, Operators, and Tenders
70	Executive Secretaries and Executive Administrative Assistants
71	Architectural and Engineering Managers
72	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
73	Print Binding and Finishing Workers
74	Engineers, All Other
75	Unclassified Occupation
76	Financial Managers
77	Meat, Poultry, and Fish Cutters and Trimmers
78	Graphic Designers
79	Adhesive Bonding Machine Operators and Tenders
80	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
81	Metal Workers and Plastic Workers, All Other
82	Sheet Metal Workers
83	Electromechanical Equipment Assemblers
84	Receptionists and Information Clerks
85	Human Resources, Training, and Labor Relations Specialists, All Other
86	Industrial Engineering Technicians
87	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic
88	Chief Executives
89	Cost Estimators
90	Purchasing Managers
91	Order Clerks
92	Slaughterers and Meat Packers

93	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
94	Plumbers, Pipefitters, and Steamfitters
95	Woodworkers, All Other
96	Food Batchmakers
97	Chemical Plant and System Operators
98	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic
99	Bus and Truck Mechanics and Diesel Engine Specialists
100	Foundry Mold and Coremakers
101	Electrical and Electronics Engineering Technicians
102	Network and Computer Systems Administrators
103	Billing and Posting Clerks
104	First-Line Supervisors of Non-Retail Sales Workers
105	Engine and Other Machine Assemblers
106	Maintenance Workers, Machinery
107	Cleaners of Vehicles and Equipment
108	Payroll and Timekeeping Clerks
109	Recreational Vehicle Service Technicians
110	Commercial and Industrial Designers
111	Prepress Technicians and Workers
112	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand
113	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators
114	Metal-Refining Furnace Operators and Tenders
115	Retail Salespersons
116	Market Research Analysts and Marketing Specialists
117	Electronics Engineers, Except Computer
118	Pourers and Casters, Metal
119	Computer Programmers
120	Chemical Equipment Operators and Tenders
121	Tire Builders
122	Millwrights
123	Electrical Engineers
124	Bakers
125	Mechanical Engineering Technicians
126	Management Analysts
127	Food Cooking Machine Operators and Tenders
128	Business Operations Specialists, All Other
129	Computer Support Specialists
130	Software Developers, Applications
131	Marketing Managers
132	Ophthalmic Laboratory Technicians
133	Materials Engineers
134	Weighers, Measurers, Checkers, and Samplers, Recordkeeping
135	Molders, Shapers, and Casters, Except Metal and Plastic
136	Layout Workers, Metal and Plastic
137	Computer Systems Analysts
138	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
139	Logisticians
140	Painting, Coating, and Decorating Workers
141	Engineering Technicians, Except Drafters, All Other
142	Human Resources Assistants, Except Payroll and Timekeeping

143	Tool Grinders, Filers, and Sharpeners
144	Painters, Construction and Maintenance
145	Crane and Tower Operators
146	Biomedical Engineers
147	Orthotists and Prosthetists
148	Installation, Maintenance, and Repair Workers, All Other
149	Coil Winders, Tapers, and Finishers
150	First-Line Supervisors of Construction Trades and Extraction Workers
151	Conveyor Operators and Tenders
152	Jewelers and Precious Stone and Metal Workers
153	Human Resources Managers
154	Computer and Information Systems Managers
155	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders
156	Training and Development Specialists
157	Sales Representatives, Services, All Other
158	Security Guards
159	Aerospace Engineers
160	Chemical Technicians
161	Electrical and Electronics Repairers, Commercial and Industrial Equipment
162	Cutters and Trimmers, Hand
163	Medical Appliance Technicians
164	Compliance Officers
165	Transportation, Storage, and Distribution Managers
166	Procurement Clerks
167	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders
168	Automotive Service Technicians and Mechanics
169	Drafters, All Other
170	Occupational Health and Safety Specialists
171	Sales Engineers
172	Chemists
173	Textile Cutting Machine Setters, Operators, and Tenders
174	Administrative Services Managers
175	Financial Analysts
176	Model Makers, Metal and Plastic
177	Cashiers
178	Computer Hardware Engineers
179	Timing Device Assemblers and Adjusters
180	Compensation, Benefits, and Job Analysis Specialists
181	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
182	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers
183	Etchers and Engravers
184	Boilermakers
185	Riggers
186	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders
187	Information Security Analysts, Web Developers, and Computer Network Architects
188	Aircraft Mechanics and Service Technicians
189	Medical Equipment Repairers
190	Natural Sciences Managers
191	Driver/Sales Workers
192	Textile Bleaching and Dyeing Machine Operators and Tenders

193	Software Developers, Systems Software
194	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
195	Automotive Body and Related Repairers
196	Butchers and Meat Cutters
197	Operations Research Analysts
198	Dispatchers, Except Police, Fire, and Ambulance
199	Chemical Engineers
200	Model Makers, Wood
201	Patternmakers, Metal and Plastic
202	Mobile Heavy Equipment Mechanics, Except Engines

EMSI Analyst 3.0, using Indiana DWD data

APPENDIX F: SOURCES

POTENTIAL MODELS

COMMON REGIONAL ASSESSMENTS & CREDENTIALS

- Oklahoma Work Ready Communities – <http://okcommerce.gov/workforce-development/work-ready-communities/>
- Right Skills Now – <http://www.themanufacturinginstitute.org/Skills-Certification/Right-Skills-Now/Right-Skills-Now.aspx>
- WorkKeys – <http://www.act.org/products/workforce-act-workkeys/>

PROFESSIONAL RECRUITMENT

- Dakota Roots – <http://dakotaroots.com/>
- Indiana INTERNnet – <http://indianaintern.net/>
- Orr Fellowship – <http://www.orrfellowship.org/>

LOCAL PROMOTION & RECRUITMENT EFFORTS

- Advanced Manufacturing Center of Excellence – <http://www.columbusareachamber.com/documents/AMCE%20Handout>
- Advancing Manufacturing – <http://www.advancingmanufacturing.com/#!>
- Bridges to Careers – http://www.careeredgefunders.org/bridges_to_careers.html
- How Does It Work? – <http://mstci.wordpress.com/about/>
- Ivy Tech – <http://www.ivytech.edu/advanced-manufacturing/>
- Vincennes University & Toyota – <http://www.vinu.edu/articles/10-12/vincennes-university-and-toyota-announce-new-education-work-program>

EXPAND CTE, PROJECT BASED LEARNING, & STEM

- Career Edge – <http://www.careeredgefunders.org/>
- Hire Technology – <http://www.conexusindiana.com/hire>
- Jobs for America’s Graduates – <http://www.jag.org/>
- New Tech – http://www.newtechnetwork.org/newtech_schools
- Project Lead The Way – <http://www.pltw.org/>

MOVING FORWARD

- EcO15 – <http://www.eco15.org/>
- Workforce Development Initiative Taskforce – <http://www.apta.com/resources/profdev/workforce/Pages/WDI.aspx>

DATA SOURCES

EMSI ANALYST

EMSI Analyst provides in-depth and current local employment data, updated four times per year. To extrapolate data to the county and ZIP code level where it is otherwise unavailable, EMSI 2012.3 relies on more than 90 data sources, including the following: Bureau of Economic Analysis and U.S. Census Bureau from the U.S. Department of Commerce; Bureau of Labor Statistics and Employment and Training Administration (ETA) from the U.S. Department of Labor; Integrated Postsecondary Education Data System (IPEDS); Common Core of Data (CCD); occupational requirements and descriptions from O*Net; and characteristics of Private Schools in the United States from the U.S. Department of Education, National Center for Education Statistics.

ADDITIONAL RESOURCES

- ACT Workforce Resources
- American Community Survey, 2008-2010
- American Community Survey, 2005-2007
- Association of American Colleges and Universities, 2008 Business Leader Poll – www.aacu.org/leap/documents/2008_Business_Leader_Poll.pdf
- Bureau of Economic Analysis
- College Board's The College Completion Agenda 2011
- Hoosier Hot|50 Jobs – <https://netsolutions.dwd.in.gov/hh50/>
- Indiana Career Connect
- National Association of Colleges and Employers, 2011 Internship & Co-op Survey – http://indianaintern.net/documents/research/internship_co_op_survey_research_brief_2011.pdf
- National Center for Education Statistics, 2010-2011 School Year