



Region 2 Works Council
Evaluation of Career and Technical Education Opportunities
Submitted November 1, 2013

Executive Summary

According to Works Council legislation, each regional Works Council must evaluate Career and Technical Education (CTE) opportunities within their region by November 1, 2013. The Works Council addressed the following issues in developing this report: CTE pathways alignment, articulation of CTE secondary to postsecondary, overview of secondary CTE data, regional employment sector information, and an analysis that includes next steps for the Works Council.

In our report, the Region 2 Works Council addresses each of these points to the degree that they can be reliably reported on with our current level of understanding. Much of our report relies on the Northern Indiana Talent Roadmap, which was commissioned by the regional economic development group, Corporate Partnership for Economic Growth.

The Northern Indiana Talent Roadmap was created by analyzing available population, workforce, education, employment and CTE data, and by conducting focus groups with employers and educators in the region. It covers the five Region 2 counties.

In Section 5, we offer a preliminary view of potential next steps as our work progresses and we can thoughtfully prioritize areas that will represent the most productive uses of our time and resources.

CTE Pathways and Data

CTE courses are widely available throughout the region although not all courses have sufficient enrollment to be conducted. Our future analysis will include actual enrollment for the courses being conducted. Our initial observation is that teaching capacity is not a significant constraint in the region. Rather it is the awareness of and interest in CTE programs among students and their parents that limits participation and output (the number of students graduating from high school with certificates or dual credit).

Given the concentration of manufacturing employment in Region 2, we believe there are opportunities for improvement in connecting students, pathways and employment. We believe the Advanced Manufacturing Pathway is too vague to be meaningful and would benefit from greater specificity.

Council members believe that additional work must be done with employers to determine if the pathways are meaningful and useful to them.

Regional Employment Sector Information

The Talent Roadmap includes an analysis of primary sectors. Region 2 is heavily dependent on manufacturing employment. We have also attached available data from Hoosier Hot Jobs and other sources. We would propose that as we move forward we not rely heavily on these existing sources, which appear to be a collection of posting data. The report titled "Indiana's Forgotten Middle Skills

Jobs: 2013” also describes the situation that we believe exists in Region 2 with respect employment sectors that have greater needs than are being supplied by the education system.

Analysis and Next Steps

We believe that the availability of CTE courses and dual credit opportunities are a positive for our region, although we believe improvements in alignment are necessary.

in general, we think regional industry needs are not as well understood as they could be. For example, most entry-level manufacturing jobs are not posted, so they fly under the radar of existing methods of understanding job openings in the region. Many employers have found traditional recruiting methods inadequate and rely on their informal networks and word-of-mouth with existing employees.

We believe there must be a region-wide effort to promote the desirability of CTE education and the careers it can lead to. Attempts to “fix” the CTE system will be fruitless if students (and their parents) are not aware of and interested in the career opportunities that CTE programs can prepare them for.

We expect to develop a deeper and broader view of best practices in CTE as we move forward, but we are aware of programs in the region that are considered effective by employers and are serving students well. Selected examples are given.

Finally, although it may be not be strictly within our purview, we would argue for the need to attend to deficiencies in “Soft Skills.” We believe the most elegant pathways and relevant CTE education will be ineffective if Soft Skills do not improve.

1. CTE Pathways in Region 2

CTE courses are widely available throughout the region although not all courses have sufficient enrollment to be conducted. Our future analysis will include actual enrollment for the courses being conducted. Our initial observation is that teaching capacity is not a significant constraint in the region. Rather it is the awareness of and interest in CTE programs among students and their parents that limits participation and output (the number of students graduating from high school with certificates or dual credit).

CTE clusters and pathways that are offered in the region are summarized in the attachments below. Also attached is Form 30A for the CTE programs in the region detailing the specific courses offered.

Attached and responsive to this requirement you will find:

Area 7 Works Council Checklist

Area 8 Works Council Checklist

Area 11 Council Checklist

WACC Works Council Checklist

WACTC Career Pathways 2013-14

Region 2 Form 30A

2. CTE Articulation to Postsecondary Opportunities

Given the concentration of manufacturing employment in Region 2, we believe there are opportunities for improvement in connecting students, pathways and employment. We believe the Advanced Manufacturing Pathway is too vague to be meaningful and would benefit from greater specificity.

The summaries provided in the attachments below include an indication of the availability of dual credit. These are primarily with Ivy Tech and Vincennes, but many other post-secondary institutions are represented.

Council members believe that additional work must be done with employers to determine if the pathways are meaningful and useful to them.

Attached and responsive to this requirement you will find:

Area 7 Works Council Checklist

Area 8 Works Council Checklist

Area 11 Council Checklist

WACC Works Council Checklist

WACTC Career Pathways 2013-14

Region 2 Form 30A

3. Regional Employment Sectors

Please describe the primary employment sectors in your region.

The Talent Roadmap includes an analysis of primary sectors. Region 2 is heavily dependent on manufacturing employment, although there is great diversity within manufacturing—from medical devices to musical instruments to electronic components to recreational vehicles. We have also attached available data from Hoosier Hot Jobs and other sources. We would propose that as we move forward we not rely heavily on these existing sources, which appear to be a collection of posting data. For reasons we describe in Section 5 below, we believe industry in our area frequently do not use conventional recruiting means that would be captured in such secondary data searches.

The report titled “Indiana’s Forgotten Middle Skills Jobs: 2013” also describes the situation that we believe exists in Region 2 with respect employment sectors that have greater needs than are being supplied by the education system.

Attached and responsive to this requirement you will find:

Northern Indiana Talent Roadmap

2012_RegionalHot50_REGION2

Hoosier Data Jobs info Region 2

Middle_Skill_Jobs_2013

4. CTE Data Provided by State

Attached and responsive to this requirement you will find:

CTE Data Region 2 10.29.13

5. Analysis of Pathways Alignment

a. What is the degree and magnitude of the workforce challenges faced in the region?

The Talent Roadmap addresses the workforce challenges in the region in numerical terms and identifies a number of issues that lead to the shortage of qualified workers for the openings that exist in the region.

What perhaps needs more emphasis than the Talent Roadmap provides are the challenges associated with what are often described as “Soft Skills.” We realize that these Soft Skills may be technically outside of the CTE focus of our Work Council, but we believe the most elegant pathways and relevant CTE education will be ineffective if Soft Skills do not improve. Principally, these concerns relate to the attitude of the student toward work, timeliness, the ability to work in teams and the ability to think critically to solve problems. These issues manifest themselves well before high school and are often societal in nature. Still, we believe Indiana and our region must consider the willingness of the potential worker to work or employers will move jobs elsewhere.

b. How well do secondary CTE pathways outcomes align with regional industry needs?

Both the Talent Roadmap and our examples below demonstrate that there are excellent examples of programs that align well with industry needs. However, in general, we think regional industry needs are not as well understood as they could be. For example, most entry-level manufacturing jobs are not posted, so they fly under the radar of existing methods of understanding job openings in the region. Many employers have found traditional recruiting methods inadequate and rely on their informal networks and word-of-mouth with existing employees.

In our future work, we believe it will be important to devise mechanisms, through greater employer engagement or other methods, to more accurately understand true regional needs, again appreciating that the region is not homogenous and the needs of a medical device manufacturer will differ from those of a recreational vehicle manufacturer.

c. Does the talent pipeline available through CTE match the demand that exists in the region?

No, but not necessarily because CTE programs are deficient. A greater issue seems to be the “throughput,” or enrollment of students in the courses available to them. Many approved CTE courses are not taught because of a lack of enrollment. The Talent Roadmap report addresses this issue to some degree, particularly with respect to promotion of available CTE and careers, but we believe the topic requires focused analysis. Attempts to “fix” the CTE system will be fruitless if students (and their parents) are not aware of and interested in the career opportunities that CTE programs can prepare them for.

Further, our sense is that traditional guidance counseling is inadequate to support effective identification of CTE student prospects and may, in fact, currently discourage CTE pursuits.

D. What innovative examples from CTE curricula (internships, apprenticeships, certifications, etc.) are already happening within the region?

We expect to develop a deeper and broader view of best practices in CTE as we move forward, but we can say anecdotally that we are aware of programs that are considered effective by employers and are serving students well.

These examples include the following:

1. Plymouth High School vocational welding class. The students are in class four days per week and then go out into shops and weld on Fridays. Industry partners have welcomed the students with open arms. Every student in the class was hired by one of the industry partners last summer for employment.
2. ITAMCO, a Plymouth manufacturing tool company, Ivy Tech, and Plymouth Schools has combined their efforts to start a Precision Manufacturing Class on the campus of Plymouth High School. Plymouth Schools renovated a building, Ivy Tech is providing the instructor, and ITAMCO is providing the machines, including 2 CNC machines.
3. Plymouth Schools recently opened a New Tech school called the Weidner School of Inquiry. The school now has freshmen and sophomores, but eventually will house up to 100 students from each of the four classes. The school used a 2 million dollar bond to build the school. Over 20 local business and industry leaders donated nearly \$650,000 to provide the furniture, technology, and equipment. These partners participate with the students on relevant projects. The partners are also invited to use the rooms for their own training needs. It's very common to see a local industry holding a training in one room and students taking chemistry in the next room.
4. Wawasee High School has an engineering consultant who is the owner of Technical Services. Technical Services is an engineering firm that works with manufacturers to take their products to the next level to beat out their competition. Examples include: they brought Electronic Fuel Injection to Mastercraft Boats, they do the wiring harnesses for BOSS motorcycles, they are bringing fuel injection to Briggs N Stratton Engines, etc. Our consultant serves on our advisory boards for Marine Mechanics, Automotive, Robotics, Biomedical Sciences, and Engineering programs. Our consultant team teaches with our instructors on electronic components of their curriculum, meets with students on brainstorming sessions for super-mileage cars, is a helping hand to instructors and students where needed. Instructors are able to take students to his facility that house many in-house engineers working on projects that students can see, experience, and learn about their technologies and what they are trying to accomplish with the project. Students also have internship and work opportunities at this business.
5. Subject to greater analysis and validation, we believe programs such as the HIRE Technology program being implemented through Conexus Indiana offers promise in introducing students to advanced manufacturing careers and providing the basics in terms of knowledge and required skills. HIRE is being implemented in our region, although it is too early to evaluate its ultimate effectiveness. While this program is no substitute for hands-on learning, employers report having to hire employees who lack even a basic acquaintance with the requirements of a manufacturing job. HIRE can fill that gap.

6. Warsaw Area Career Center has good resources for students who desire a career in medical device manufacturing. Project Lead the Way courses are advised by an industry committee. Relevant machining equipment is available, although needs updating. Discussions are underway between the Career Center and the Ivy Tech Orthopedic and Advanced Manufacturing Training Center (OAMTC) to jointly utilize the OAMTC's advanced equipment. Career Center students with those experiences would be better prepared to enter the Ivy Tech certificate program in medical device manufacturing, which was developed with the guidance of the OrthoWorx Advanced Manufacturing Committee.

Additional illustrations of employer engagement/participation are attached in these files:

- EACC Auto Tech-AYES Advisory
- EACC Mfg Summit
- SBN Partnerships

E. What are the next steps that the Works Council needs to take to improve CTE opportunities?

As we've described in certain of the steps above, we believe moving forward we should:

- Gain a better appreciation of the role that Soft Skills play in the success of CTE programs and possible remedies to existing issues
- Work toward greater involvement by Employers in defining needs and developing pathways and content; further, we propose to develop a mechanism to work with employers to identify true workforce needs that are currently "invisible" because many employers don't utilize traditional recruiting/job posting mechanisms; we believe we must develop tools to demonstrate to students the broad range of vocations/careers there are available. Most have no idea what actually happens in most businesses or public sector jobs. If they see what interesting jobs are available and what education it takes to do them, they are more likely to get excited about education and personal success.
- Encourage region-wide implementation of programs that promote manufacturing careers to students and parents (such as Dream It. Do It. or similar programs)
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- Identify programs such as (and including) HIRE Technology that can expose students to fundamental principles and create a baseline of necessary skills and knowledge
- Develop policy recommendations—
 - We believe there should be an expansion of career counseling versus traditional guidance counseling

- That consideration be given to a critical review of existing funding mechanisms that seem to pit high schools against CTE centers and departments within both against each other