



**Region 10 Works Council**  
**Evaluation of Career and Technical Education Opportunities**  
**November 1, 2013**

# Executive Summary

The Region 10 Works Council, as mandated by the legislation establishing those Councils has prepared this document for review by the State Board of Education. We 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 the next steps for the Works Council.

## CTE Pathways and Data

Region 10's secondary CTE Assets include 13 public school districts, 19 high schools, several private schools and Prosser Career Education Center. Most schools were found to offer some form of individual CTE classes but were limited to relatively few Pathways within those CTE career paths. Those that had defined career pathways were found at the larger schools at Jeffersonville HS, Floyd Central HS, New Albany HS and Prosser, yet even then the vast majority of the defined pathways in terms of the number available would be found exclusively at Prosser.

The most prevalent pathways that currently exist in Region 10 are: Health Careers, Auto Tech, Criminal Justice, Cosmetology and Culinary and again are mostly found at Prosser. The few pathways that were found at the high schools are pre-engineering, welding, auto, construction and radio/TV, but again limited to the larger schools in general.

## Regional Employment Sector Information

Region 10 has a complex and diverse economy with many challenges. Manufacturing is our largest sector and held its own during the recent recession. Our local economy is now growing and we are finding significant interest from firms looking to relocate here.

Region 10 has five primary industry sectors: Manufacturing, Healthcare, Construction, Transportation/Logistics/Warehousing and Business/Professional Services. All of these sectors have and will continue to have solid employment growth, high wages, and significant worker populations.

## Analysis and Next Steps

We are finding that companies, new and existing, are becoming more automated and modernizing processes to incorporate more efficiencies into their business. That has begun to impact the type of worker and associated skills that many are now seeking, changing the mix from semi-skilled to more higher skilled workers. Most of these jobs can be filled by post-secondary graduates that have less than two years of technical training or even high school graduates.

However, our CTE pipeline needs significant strengthening if we are to provide sufficient numbers of workers with the right skills. Many of our CTE pathway programs appear to be well aligned with the needs of industry in these five sectors, but the Council did find a number of pathways that did not exist, such as advanced manufacturing; others that had low enrollments; and some that were not well-aligned, most notably business. Clearly, we have opportunities to improve.

Based on our limited time together, the Council believes we are merely scratching the surface of what is needed by the region. We see a definite need for further data gathering and analysis. The future looks bright and full of potential but the downside is that we also see many deficiencies in the mismatch between what is provided by today's students, the current CTE system and those skill sets needed by the employers in region; not coming out fast enough to meet the demand now or for future economic growth opportunities.

As a result of our review, the Council recommends that we do the following:

- Strengthen the involvement of business by adding more business members to our Works Council and holding forums specifically targeted at each primary industry sector to enable us to dive deeper into the needs of our industries.
- Review the data and industry feedback in more depth to determine how to improve existing pathways and identify/ design new pathways to fill the gaps.
- Research how we can incorporate soft skills/work ethic into curriculum.
- Determine how we can expand the number of students in key CTE programs by exposing students earlier to CTE, adding introductory courses at high schools that connect with pathways, involving business through work-based learning and other methods, and marketing outreach.
- Create a more systematic communication and partnership with key industry sectors and our educational community and make sure that our community buys into our new “plan A.” Consider how the Works Council can take a lead in ensuring these partnerships happen.

## CTE Pathways in Region 10

Region 10's secondary CTE assets, listed on the Asset Map contained in this section of the report, include 13 public school districts, 19 high schools, several private schools, and Prosser Career Education Center. Most schools are relatively small with a few exceptions, notably New Albany HS, Floyd Central HS, Jeffersonville HS, and Prosser.

The local post-secondary assets include Ivy Tech Community College, Purdue School of Technology, and Indiana University Southeast.

A wide range of CTE classes are offered by most of the high schools, as noted in Table 2 of this section. However, the instances at the high schools where sequenced classes form actual Pathways are relatively limited. Most of the Pathways are offered directly at Prosser, as noted in Table 1.

Full data on CTE enrollments for Region 10 are available in Appendix B of this report. In summary, Region 10 has a total high school population of 17,191 as of 2011-2012 School Year, with 6,566 of those students having participated in at least one CTE course. Of that number, 1,984 students were considered Concentrators.

### Prevalent Pathways

The most prevalent pathways at Prosser include:

- Health Careers
- Auto Tech
- Criminal Justice
- Cosmetology
- Culinary

Very few pathways are available at the high schools themselves. The most prevalent are Pre-Engineering (PLTW). Four high schools offer at least a 3-course PLTW series to qualify as a pathway. Also, health careers, welding and auto tech are offered at one high school each; construction is offered at two high schools; and radio/TV is offered at three high schools.

### Prevalent Classes

While most high schools don't offer pathways, most do offer individual CTE classes, with the most common being Family and Consumer Sciences and other introductory level subjects.

**TABLE 1 DOE CAREER CLUSTERS with PATHWAYS (Region 10 Pathways highlighted in red)**

**CLUSTER: AGRICULTURE**

Pathway – Agribusiness (New Washington)  
 Pathway – Horticulture & Landscape (North Harrison, Prosser)  
 Pathway – Life Sciences  
 Concentrations in:  
 Animals (North Harrison, Salem, Scottsburg)  
 Foods  
 Natural Resources (Salem)  
 Plant & Soils

**CLUSTER: ARCHITECTURE & CONSTRUCTION**

Pathway – Commercial & Residential Facilities  
 Concentrations in:  
 Commercial & Residential Facilities Management  
 Building & Facility Management  
 Building & Facility Maintenance  
 Pathway – Construction Trades  
 Concentrations in:  
 Construction (Crawford, Jeffersonville, Prosser)  
 Electrical (Prosser)  
 Heavy Equipment (Prosser)  
 HVAC (Prosser)  
 Pathway – Drafting and Design  
 Concentration in:  
 Architectural (Prosser)  
 Mechanical

**CLUSTER: ARTS, AV & COMMUNICATION**

Pathway – Web & Digital Communication  
 Concentrations in:  
 Interactive Media (Prosser)  
 Radio/TV (New Albany, Floyd Central, Jeffersonville)  
 Pathway – Visual Arts  
 Concentrations in:  
 Commercial Photography  
 Fashion, Textiles, & Design  
 Visual Communications

**CLUSTER: BUSINESS AND MARKETING**

Pathway – Business Administration  
 Concentrations in:  
 Accounting & Finance (NAHS, FCHS, Salem, North Harrison, Silver Creek Prosser)  
 Entrepreneurship & Management  
 \*Bus Management focus (NAHS, FCHS, Salem, Silver Creek, North Harrison)  
 \*Entrepreneurship focus (NAHS, FCHS, Eastern, Prosser)  
 Marketing Management  
 \*Sports & Entertain focus (Jeffersonville, North Harrison)  
 \*Marketing focus  
 \*Hospitality & Tour focus

**CLUSTER: EDUCATION & TRAINING**

Pathway – Early Childhood Education  
 Concentrations in:  
 Early Childhood (Jeffersonville)  
 Education Careers (FCHS, NAHS, Scottsburg, Crawford)

**CLUSTER: HEALTH SCIENCE**

Pathway – Biotechnology (Silver Creek)  
 Pathway – Dental  
 Pathway – Health Careers Specialties  
 Concentrations in:  
 Health Science Careers  
 \*Emerging Careers focus  
 \*Pharmacy focus (Prosser)  
 \*Physical Therapy focus  
 Dietetics & Nutrition Science  
 Veterinary  
 Pathway – Nursing (Jeffersonville, Prosser)

**CLUSTER: HOSPITALITY & HUMAN SERVICES**

Pathway – Cosmetology (Prosser)  
 Pathway – Culinary Arts (Prosser)  
 Pathway – Hospitality Management  
 Pathway – Human & Social Services (Henryville, Scottsburg, South Central, Corydon, Borden, Jeffersonville, Eastern, North Harrison, Floyd Central, New Albany, Silver Creek, Salem)

**CLUSTER: INFORMATION TECHNOLOGY**

Pathway – Programming (Jeffersonville, Prosser)  
 Pathway – PC Networking & Support  
 Concentrations in:  
 Networking (Prosser)  
 PC Support (Jeffersonville, Charlestown)

**CLUSTER: MANUFACTURING & LOGISTICS**

Pathway – Advanced Manufacturing  
 Pathway – Electronics  
 Pathway – Engineering (Charlestown, Silver Creek, New Albany, Floyd Central)  
 Pathway – Logistics & Supply Chain Management  
 Pathway – Machine Tool (Prosser)  
 Pathway – Welding (Jeffersonville, Prosser)

**CLUSTER: PUBLIC SAFETY**

Pathway – Criminal Justice (Prosser)  
 Pathway – EMT/Paramedic (Scottsburg, Prosser)  
 Pathway – Fire & Rescue (Prosser)

**CLUSTER: TRANSPORTATION**

Pathway – Automotive Collision Repair (Prosser)  
 Pathway – Automotive Technology (Charlestown, Prosser)  
 Pathway – Aviation (Prosser)  
 Pathway – Diesel Services Technology (Prosser)  
 Pathway – Recreation & Mobile Equipment  
 Pathway – Tractor Trailer Operation

**TABLE 2 REGION 10 CTE CLASSES**

<b>GREATER CLARK</b>	<b>NEW ALBANY-FLOYD</b>	<b>SOUTH HARRISON</b>	<b>WEST CLARK</b>
<b>Charlestown</b> Prep for College/Careers Child Development Intro to Culinary Education Professions I Intro to Fashion and Textiles Intro to Interior Design Intro to Business Digital Citizenship Information Tech & Comm Financial Services Accounting Computer Tech Support Network Fundamentals Interactive Media Computer Programming Intro to Manufacturing PLTW Intro Eng Design PLTW Computer Int Man PLTW Principles of Engin PLTW Princ of Bio Med Auto Service Tech I Auto Service Tech II  <b>Jeffersonville</b> Prep for College/Careers Child Development Adult Roles/Responsibili Adv Nutrition/Wellness Early Childhood Devel I Early Childhood Devel II Nutrition and Wellness Human Devel/Wellness Intro to Fashion/Textiles Merchandising Principles of Bus Manag Accounting Prof Career Internships Principles of Marketing Strategic Marketing Computer Program I Computer Program II Interactive Media Network Fundamentals  Computer Tech Support Servers and Security Intro to Design Processes  PLTW Princ of Bio Med PLTW Intro to Eng Design Construction Tech I Health Careers Radio/TV I Radio/TV II Welding Tech I Welding Tech II	<b>New Albany</b> Child Development Adv Child Development Intro to Culinary Education Professions I Intro to Interior Design Nutrition and Wellness Adv Nutrition/Wellness Chemistry of Foods Interpersonal Relations Accounting Principles of Business Managem Web Design Business Marketing & Entrepre Business Law and Ethics Personal Financial Responsib Computer Science Principles of Marketing Computer Programming I Computer Programming II Intro to Manufacturing PLTW Digital Electronics PLTW Intro to Eng Design PLTW Princpls of Engin Radio/TV I Radio/TV II  <b>Floyd Central</b> Prep for Colleg/Careers Child Development Adv Child Development Nutrition and Wellness Adv Nutrition and Wellness Housing and Design Intro to Culinary Education Professions I Education Professions II Interpersonal Relationships Accounting Business Marketing & Entrepre Business Law and Ethics Personal Financial Responsib Principals of Marketing Web Design  Computer Science Intro to Communications Intro to Design Processes  Intro to Manufacturing PLTW Civil Engineering PLTW Principles of Engin PLTW Intro to Eng Design PLTW Digital Electronics Communications Systems Intro to Communications Transportation Systems	<b>Corydon</b> Prep for College/Careers Animal Science Plant and Soil Science Intro to Agriculture Natural Resources Adult Roles/Responsibilities Child Development Nutrition and Wellness Interpersonal Relations Early Childhood Education I Digital Citizenship Accounting Intro to Manufacturing Intro to Advanced Manufacturing PLTW Principles of Engin PLTW Intro to Eng Design  <b>South Central</b> Prep for College/Careers Animal Science Plant and Soil Science Agribusiness Management Intro to Agriculture Natural Resources Comptuer Design/Produc Intro to Manufacturing Intro to Advanced Manufacturing Technology Systems PLTW Intro to Eng Design Nutrition and Wellness Interpersonal Relations Intro to Fashion/Textiles Child Development Housing and Design Consumer Economics Personal Financial Responsibility Computer Science Web Design Intro to Business  <b>NORTH HARRISON</b> Prep. for College and Careers Animal Science  Adv. Life Sci. Animals  Plant and Soil Science Adv. Life Science Plant/Soil  Natural Resources Horticulture Intro to Agriculture Landscape Management Agribusiness Management Nutrition and Wellness Adv. Nut. Wellness Housing and Interior Design	<b>Borden</b> Prep for College/Careers Adv Business Management Child Development Adult Roles/Responsibilities Adv Child Development Chemistry of Foods Principles of Bus Managem Accounting Information Tech & Comm Sports Marketing Personal Finance Digital Citizenship  <b>Henryville</b> Prep for College/Careers Nutrition and Wellness Adv. Nutrition and Wellness Child Development Interpersonal Relations Accounting Principles of Marketing  <b>Silver Creek</b> Adv Life Science Foods Child Development Advanced Child Development Consumer Economics Interpersonal Relations Nutrition and Wellness Advanced Nutrition/Wellness Human Development/Wellness Technology Enterprises Intro to Manufacturing PLTW Intro to Eng Design PLTW Digital Electronics PLTW Principles of Engin PLTW Civil Engineering PLTW Medical Intervention PLTW Princ of Bio Med PLTW Biomed Innovation PLTW Human Body Accounting I Financial Services Principles of Business Managem Business Law and Ethics Digital Citizenship Personal financial Responsibility Web Design Advanced Web Design Computer Programming Intro to JAVA Programming
			<b>LANESVILLE</b> Prep for College/Careers

**TABLE 2 REGION 10 CTE CLASSES**

**New Washington**  
 Prep for College/Careers  
**Agribusiness Managemen**  
**Agri Power Structure**  
**Animal Science**  
**Intro to Agriculture**  
 Accounting

Intro to Design Processes  
 Intro to Adv Manuf & Logistics  
 Intro to Manufacturing  
 Construction Systems  
 Design Fundamentals  
 Radio/TV I  
 Radio/TV II

Child Development  
 Consumer Economics  
 Interpersonal Relationship  
 Intro to Fashion/Textiles  
 Accounting  
 Business Law and Ethics  
 Principles of Bus Managem  
 Sports/Entertain Marketing  
 Graphic Design and Layout  
 Interactive Media

Intro to Agriculture  
 Animal Science  
 Adv. Life Science Animals  
 Adv. Life Science Plants  
 Horticulture  
 Natural Resources  
 Accounting  
 Principles of Marketing  
 Personal Finance

**EASTERN WASHINGTON**

Prep for College/Careers  
 Ag Power, Structure  
 Horticulture  
 Intro to Agriculture  
 Landscape Management  
 Natural Resources  
 Adv Life Science Foods  
 Child Development  
 Nutrition and Wellness  
 Adult Roles and Responsibilities  
 Interpersonal Relations  
 Prof. Career Internship  
 Accounting  
 Principals of Marketing  
 Entrepreneurship & New Ventures

**CRAWFORD COUNTY**

Prep for College/Careers  
 Animal Science  
 Adv Life Science Animals  
 Ag Power Structure  
 Horticulture  
 Nutrition and Wellness  
 Adv Nutrition/Wellness  
 Child Development  
 Education Professions I  
 Education Professions II  
 Accounting  
 Web Design  
 Interactive Media  
 Intro to Construction Tech  
 Construction Technology I

**SALEM**

Prep for College/Careers  
 Animal Science  
 Adv. Life Science Animals  
 Intro to Agriculture  
 Plant and Soil Science  
 Natural Resources  
 Natural Resource Management  
 Child Development  
 Human Development  
 Interpersonal Relations  
 Intro to Interior Design  
 Nutrition and Wellness  
 Adv Nutrition and Wellness  
 Adult Roles/Responsibilities  
 Business Marketing & Entrepre  
 Personal Financial Responsibiliti  
 Business Law/Ethics

**SCOTTSBURG**

Animal Science  
 Adv. Life Science Animals  
 Intro to Agriculture  
 Adv. Life Science Foods  
 Education Professions  
 Child Development  
 Food Science  
 Interpersonal Relations  
 Nutrition and Wellness  
 PLTW Principls of Engin  
 PLTW Digital Electronics  
 Intro to EMT

**CHRISTIAN ACADEMY**

Compuer Programming  
 Interactive Media

**AUSTIN**

Prep for College/Careers  
 Child Development  
 Nutrition and Wellness  
 Advanced Nutrition  
 Intro to Fashion/Textiles  
 Housing and Design  
 Accounting

**PROVIDENCE**

Personal Finance  
 Business Law/Ethics  
 Web Design

**CLARKSVILLE**

none

**ROCK CREEK**

none

**COLOR CODE KEY**

Agriculture
Family /Consumer Sci. (Home Ec)
Business
IT/Computer Sci
Industrial Tech & PLTW

Black lettering: Multiple Credit  
 Hour CTE Program

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# REGION 10 CTE ASSET MAP

## Career, Technical, & Post-Secondary Education

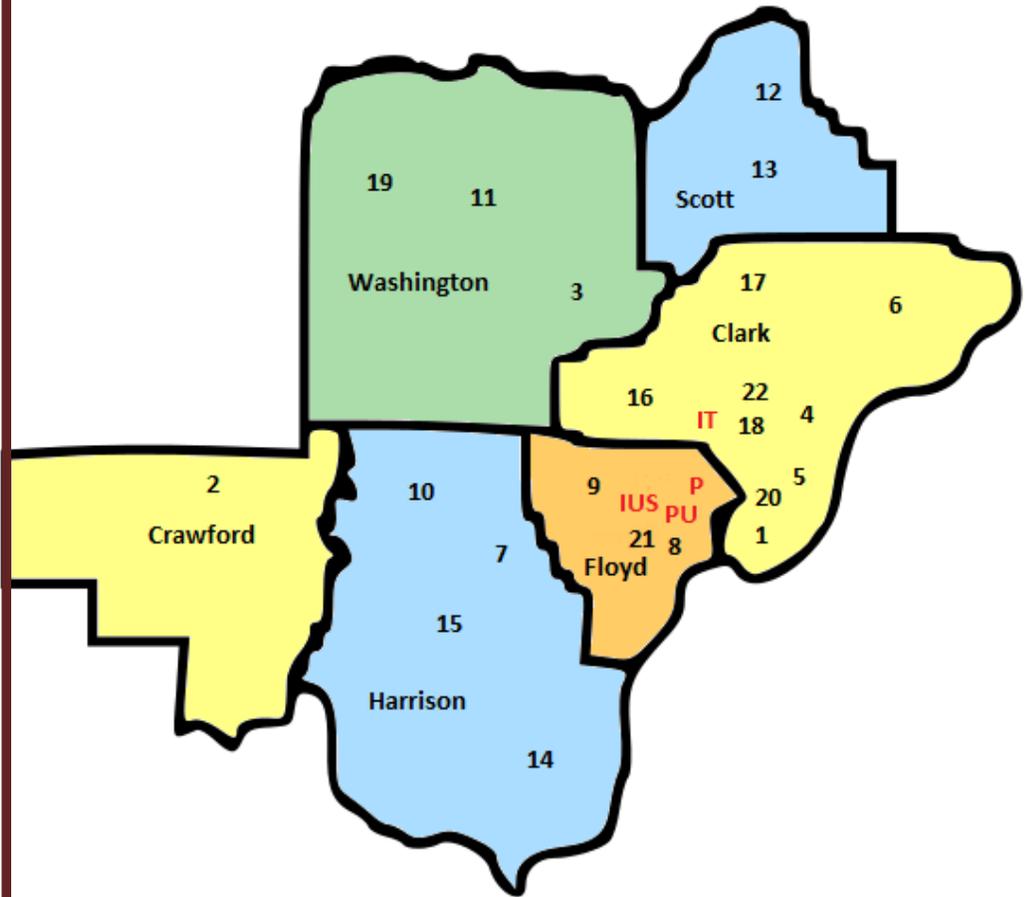
- P** - Prosser School of Technology (New Albany)
- PU** - Purdue University (New Albany)
- IT** - Ivy Tech (Sellersburg)
- IUS** - Indiana University Southeast (New Albany)

## 13 Public School Districts, 19 High Schools

- Clarksville
  - 1 - Clarksville H. S.
- Crawford County
  - 2 - Crawford County H. S. (Marengo)
- East Washington
  - 3 - Eastern H. S. (Pekin)
- Greater Clark
  - 4 - Charlestown H. S.
  - 5 - Jeffersonville H. S.
  - 6 - New Washington H. S.
- Lanesville
  - 7 - Lanesville H. S.
- New Albany/Floyd County
  - 8 - New Albany H. S.
  - 9 - Floyd Central H. S.
- North Harrison
  - 10 - North Harrison H. S. (Ramsey)
- Salem
  - 11 - Salem H. S.
- Scott County School District #1
  - 12 - Austin H. S.
- Scott County School District #2
  - 13 - Scottsburg H. S.
- South Harrison
  - 14 - South Central H. S. (Elizabeth)
  - 15 - Corydon Central H. S.
- West Clark
  - 16 - Borden H. S.
  - 17 - Henryville H. S.
  - 18 - Silver Creek H. S. (Sellersburg)
- West Washington
  - 19 - West Washington H. S.

## 3 Private/Charter High Schools

- 20 - Providence H. S. (Catholic-Clarksville)
- 21 - Christian Academy of Indiana (Christian-New Albany)
- 22 - Rock Creek Community Academy (Sellersburg)



## **CTE Articulation to Postsecondary Opportunities**

The Prosser pathways which are related to the primary industry sectors all have significant dual credit opportunities through Ivy Tech CC (IVTCC) and Vincennes University (VU), as evidenced by Appendix C, Prosser Dual Credit Agreements. There are also a number of dual credit agreements in place between high schools and IVTCC and VU for individual classes, as shown in Appendix D, Region 10 Dual Credit Agreements. However, since very few of the high schools offer pathways for the key industry sectors the value of these high school dual credit agreements has limited impact.

Additional observations and conclusions about the state of dual credit for each industry sector are offered as follows:

### **Healthcare**

Health Careers has solid dual credit opportunities through the dual credit agreement between Prosser and Ivy Tech CC. and there is a very robust health careers program at our local Ivy Tech-Sellersburg campus. Prosser students earn dual credits after completing each of their two years in high school. No health careers courses are offered at high schools, except for a few biomedical PLTW courses.

### **Manufacturing**

Prosser offers extensive dual credit in a number of key manufacturing occupations, including machining, welding, and electricity. In each of these programs, students earn dual credits in both years 1 and 2 of their high school program. Machining credits are earned through Vincennes University and Welding credits are earned through Ivy Tech Madison Campus, but these programs are not local. We currently do not have a post-secondary machining or welding program available in Region 10, although the Mid-America Science Park in conjunction with Ivy Tech Columbus is in the process of developing a welding program in Scottsburg.

The major gap in manufacturing dual credits lies in the area of industrial maintenance. Prosser has an Electrical Technology program that has some elements of industrial maintenance but not a complete Industrial Maintenance/Advanced Manufacturing program.

None of the high schools has this program either. However, Jeffersonville High School has the Conexus HIRE Technology program, which earns Manufacturing Credits through Ivy Tech's MPRO Degree and could be expanded to create an advanced manufacturing pathway.

Prosser is interested in converting the Electrical Technology into industrial maintenance. This would enable significant dual credits to be established with the industrial maintenance program at the local Ivy Tech Sellersburg Campus.

### **Construction**

Students in Region 10 can earn dual credits in construction technology by attending Prosser or Jeffersonville HS. The Prosser program is a two-year program with students earning dual credits in each of the two years, while Jeffersonville offers a one year program with dual credit. However, the dual credits are earned with Ivy Tech Evansville Campus, which is not local to Region 10.

One consideration that bears more investigation is the opportunity for apprenticeship through other post-secondary organizations.

### **Business/Professional**

The business classes are offered at the high schools rather than Prosser. Many of these classes earn dual credit with Ivy Tech CC in Sellersburg but they are often targeted to students bound for 4-year programs. There does not seem to be a CTE pathway, or even cohesive set of the courses in place to enable students to prepare for “Stepping Stone” jobs out of high school or the “Next Job-Out” opportunities out of Ivy Tech. Many of the business classes are stand-alone courses that do not tie together.

### **Transportation/Logistics/Warehousing**

Prosser has very well-developed automotive technology and collision programs that earn dual credit with Vincennes University. Charlestown HS and Jeffersonville HS also have their own programs, which are being considered for dual credit with Ivy Tech Indianapolis. Currently Ivy Tech CC Sellersburg does not offer a program, so these dual credits are earned with out-of-region institutions. However, Louisville’s Jefferson Community and Technical College has a program, which offers the potential for local articulation.

Driving various types of trucks is a high demand and reasonably well-paying occupation. However, our region does not offer any programs in this area, and consequently there are no dual credit opportunities. Some other regions offer truck driving programs and heavy equipment operator programs for seniors, which we would like to explore.

Currently, we have no pathway programs to prepare students to go into warehousing and distribution. However, the HIRE program at Jeffersonville HS does offer certification through MSSC in logistics.

# Regional Employment Sectors

Region 10 has a wide range of business /industry sectors that are growing now and are projected to grow in the future. Based on data from STATS Indiana 2011, a total of 15 business/industry sectors show modest to significant growth in Region 10. Of these many sectors, the following five industry sectors are Region 10's primary industry sectors, representing those with the largest levels of employment, high wages and a continued need for workers, including both new and replacement workers.

- Manufacturing
- Healthcare
- Transportation/Logistics/Warehousing
- Construction
- Business and Professional Services

Each of Region 10's primary sectors includes a number of occupations that have a high demand for workers, are projected to grow, and have high wages. The Council narrowed this list to the following occupations that can be supported by CTE programs and fit into a career ladder where there is an occupational opportunity for high school graduates (stepping stone occupations) and an occupational opportunity with additional training of less than 2 years at the post-secondary level (Next Job Out).

## Manufacturing

### Stepping Stone Occupations

- Team Assemblers
- Machine Operators

### Next Job-Out Occupations

- Welders
- Machinists
- Industrial Maintenance
- First-line supervisors

## Healthcare

### Stepping Stone Occupations

- CNAs/HHAs
- Physical Therapy Assistants
- Pharmacy Technician
- Respiratory Therapist
- Medical Records/Health Information Technicians—individuals who start can go on to RHIT (4-year degree)
- Dental Hygienists (low numbers)
- Rehabilitation Counselors/Counselors/Navigators (uninsured/underinsured) in general (particularly with healthcare reform)

### Next Job-Out Occupations

- Nursing—becoming a 4-year degree program (only will hire 4-year degreed nurses). LPNs in State of Indiana have more authority to do things, but it is going away. CNAs and Home Health Aides starting points

## **Construction**

### **Stepping Stone Occupations**

- Carpenters-Helpers
- Construction Laborers

### **Next Job-Out Occupations**

- Carpenters
- HVAC Technicians
- Plumber
- Electrician
- First Line Supervisors

## **Transportation/Logistics/Warehousing**

### **Stepping Stone Occupations**

- Light Truck and Semi Truck Drivers
- Warehousing/Material Movers
- Automotive Service Mechanic

### **Next Job-Out Occupations**

- Industrial Truck Drivers
- Automotive Service Technicians
- Diesel Service Technicians
- First Line Supervisors of Warehousing, Vehicle Operators

## **Business and Professional Services**

### **Stepping Stone Occupations**

- Administrative Assistant
- Bookkeeping Accounting Clerk
- Customer Service Reps

### **Next Job-Out Occupations**

- Sales Reps
- Bookkeeping Accounting Clerk
- First Line Supervisors of Office and Administrative Workers

**Note:** The data supporting these conclusions can be found in Appendix A, Region 10 Labor Market Information and Perspective, compiled by WorkOne Director, Mr. Ron McKulick.

# Analysis of Pathways Alignment

## ***What is the degree and magnitude of the workforce challenges faced in the region?***

Region 10 has a complex and dynamic economy that presents many workforce challenges. Manufacturing is our largest industry sector and it did well through the recession. The future of economic growth in our region is very bright because we have the largest industrial park in the state, River Ridge. River Ridge, and our region in general, is proving to be very attractive to companies due to our central location, multiple interstate highways, and proximity to Louisville, KY and the Ohio River. We expect the need for manufacturing workers to continue to grow as new companies move in and our existing companies expand.

Complicating matters though is the fact that we are a bi-state economy with Kentucky, and Louisville, in particular, represents 80% of our local economy. This offers many unique opportunities for our region due to our location between the South and Mid-West, as well as proximity to several national manufacturing corporations like UPS, GE, Ford and health providers like Humana, Vencor and Atria. It also allows us to attract businesses and more importantly workers because they can live in or work in an environment that suits them: rural, suburban, or urban, along with all the amenities those settings can offer.

However, most of our current manufacturers and the new companies looking to locate in Region 10 are successful today because they are automating and modernizing their processes at a blazing pace. As a result, some jobs, like industrial maintenance technician, are in much higher demand than ever before and other jobs like welding and assembly require high level skills sets. Even when employment levels stay the same at a given company, the composition within the company is changing; companies need fewer semi-skilled workers and more high skilled workers.

Unfortunately, our incumbent workforce has not been up-skilled at the rate necessary to meet this need and the pipeline of new workers coming through our educational institutions is not sufficient. In addition, a large number of highly skilled workers will retire in the next few years, further compounding this problem. Other key industry sectors such as healthcare and construction face similar challenges.

In all our industry sectors, most of the new jobs that will be created in the coming years and those existing jobs that will be filled by replacement workers will not require a 4-year degree. Instead, they will require workers with some type of modern CTE training provided by either a secondary vocational program or a post-secondary program of two years or less like that provided by a community college.

These CTE-related jobs pay well and are likely to be more stable than many other types of jobs, but we have a significant challenge to convince students, parents, counselors, and others in schools of the opportunity. At present, many do not see this as a “plan A.” Our challenge in Region 10 is further impeded by the fact that our six county region is comprised of many small communities and small school corporations. To effect comprehensive change across our region, we must engage many educational entities.

## ***How well do secondary CTE pathways outcomes align with regional industry needs?***

The CTE pathways in Region 10, mainly provided through Prosser, appear to be well aligned with the needs of the industries in our region. The Works Council plans to do a more in- depth analysis to determine if there are less obvious improvements that need to be made. However, our most immediate opportunity for improvement is to create pathways for key occupations that don't currently have a pathway and build them out to the high schools so we can improve enrollments. By industry sector, pathways that are currently missing include:

### **Manufacturing**

Region 10 does not have a secondary pathway for Advanced Manufacturing, which is the key program for creating maintenance technicians.

### **Healthcare**

We're doing well on nursing, but we don't have as many specializations as much as we might like. We currently focus on C.N.A. and pharm tech but need a way to help students to specialize in other areas like physical therapy assistant.

### **Construction**

We have well aligned pathways for most areas of construction: HVAC, General Construction, Carpentry, and Electrician. We appear to be light on plumbing.

### **Transportation/Logistics/Warehousing**

We have well aligned pathways for Automotive Service Techs and Collision, but we do not have pathways for truck driving and warehousing.

### **Business and Professional Services**

We do not have pathways for business unless it leads to a 4-year degree. We need pathways for students who want to get a job after graduating from high school or community college. Examples include: customer service reps, admin assistants, and bookkeepers.

## ***Does the talent pipeline available through CTE match the demand that exists in the region?***

Our talent pipeline is well matched to the demand in some industry occupations and not so well matched in others, most significantly in construction and manufacturing. In other primary industry sectors, the mismatch occurs in selected occupations.

Some of the causes are demographic and technological, which have affected the number of incumbent workers who possess the needed skills. There are fewer workers in the workforce now who have the skills that match with current industry requirements than once existed. As a result, the pipeline needs to be larger to restock the skilled worker pool. Unfortunately, students are not choosing many of these careers in sufficient numbers.

One reason for the current worker shortage is the lack of pathways for key occupations, such as industrial maintenance technician. In pathways that do exist, we still have a shortage due to low program enrollment. Through some discussion with Works Council members, we have concluded that increasing enrollments in these and other CTE programs will require re-establishment of high quality introductory programs in high schools that feed these pathways and provide more effective career counseling.

In the Business programs, our region actually has high enrollments, but the courses don't have a cohesion that leads to occupational opportunities out of high school or community college. As a result, we are producing the workers we need for many stepping stone and next-job-out occupations. We will need to create new courses or expand the focus of the existing courses to provide these pathways.

As part of addressing many of these issues, the Works Council also expects to encounter a capacity challenge, both in equipment and facilities. For instance, if we want to have a truck driving program in R10, there is no place to put it. Creating high school introductory manufacturing programs will require equipment, although computer simulations could relieve that need to some degree.

Lastly, our Council identified the need to better infuse work ethic skills and soft skills such as team work, problem solving, and communications for all students. Most companies value these skills above all else, and they seem to be lacking in many candidates they find today. In short, to solve our pipeline challenges we will need to address multiple issues.

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

Region 10 has a number of innovative CTE curricula elements being implemented at the high schools and Prosser, and opportunities exist to expand it.

### **Innovative Prosser Curricula**

Prosser has made an extensive effort to incorporate three elements of work based learning into its program: job shadowing, extended lab, and the mock interview. In addition, Prosser has implemented apprenticeships for a few programs and has put in place certifications for most programs. Each is described as follows:

### Job Shadowing

- ✓ All first-year students encouraged/expected to participate
- ✓ Minimum of a 4-hour experience during non-instructional school day
- ✓ Program-related business
- ✓ Location approved by instructor
- ✓ Student completes post-job shadowing experience assignment

Prosser incorporated the job shadowing experience as a school-wide initiative during the 2012-2013 school year. While seven programs had 100% student participation, approximately 80% of all of Prosser’s first-year students completed a job shadowing experience. Reflecting on the students’ experiences, teachers’ comments included:

- “very valuable for my course”
- “students had positive experience”
- “allowed students to narrow some choices for their career path”
- “students seemed excited.....enjoyed visiting a business”

To plan for 2013-2014, teachers reviewed their 2012-2013 end-of-year reflections and began this school year anticipating that student participation in job shadowing will increase. Not only did teachers identify strategies that truly assisted student participation, they identified strategies to more effectively facilitate student involvement.

- “give students list of possible contacts....make contact with business early”
- “shorter window of time...earlier deadline for students to complete...”
- “recognize students as they complete...”

### Student Participation in Job Shadowing 2012-2013

Aircraft Operations	33/37	90%
Architectural Drafting	15/21	70%
Auto Collision	13/26	50%
Auto Tech	35/42	80%
Computer Programming	13/19	70%
Construction Operators	16/16	100%
Construction Technology	20/20	100%
Cosmetology	94/94	100%
Criminal Justice	45/56	80%
Culinary Arts	41/55	75%
Diesel Technology	28/28	100%
Electrical Technology	16/21	75%
EMT	11 /11	100%
Entrepreneurship	15/15	100%
Fire/Rescue	20 /20	100%
Health Science	105/131	80%
Horticulture	4/12	30%

HVAC	0/12	0%
Interactive Media	15 /20	75%
Networking	25/41	60%
Precision Machines	20/22	90%
Welding	15/22	70%

### Extended Lab

- ✓ Second-year students
- ✓ Program-related place of employment
- ✓ Second semester of school year for most programs
- ✓ Experience up to 10 hours/week of Prosser instructional day; can work additional hours
  - Tuesday, Wednesday, Thursday
- ✓ 140-hour extended lab experience satisfies requirement of Technical Honors Diploma
- ✓ Weekly check sheet
  - Verification of attendance
  - Verification of program-related job responsibilities

Prosser students who enroll in the same program as the preceding school year may participate in extended lab, an on-the-job training experience. Students apply in an actual place of business the skills and proficiencies they learned in the classroom and lab setting. During the extended lab experience, students confirm their interest in a specific career and also create a network of professional contacts. Most of the students who participate in the extended lab program are paid, and many of the extended lab experiences lead beyond temporary placement.

During the 2012-2013 school year, 54 students in 10 programs participated in an extended lab experience, expanding their familiarity of the specific career area and gaining valuable knowledge of the expectations within that field.

### Student Participation in Extended Lab in 2012-2013

Auto Collision = 8 students	Electricity = 6 students
Auto Tech = 5 students	Horticulture = 5 students
Computer Networking = 2 students	HVAC = 3
Construction Equipment = 4 students	Precision Machine = 7 students
Diesel Tech = 7 students	Welding = 7 students

As illustrated, not all programs actively participate in the extended lab experience. During the past five years, approximately 12% of Prosser's seniors, excluding health sciences students, participated in the extended lab experience.

2008-2009	76/485	16%	94 HS students	(579)
2009-2010	56/475	12%	86 HS students	(561)
2010-2011	53/512	10%	98 HS students	(610)
2011-2012	54/502	11%	91 HS students	(593)
2012-2013	54/474	11%	94 HS students	(568)
2013-2014	NA/484	NA	103 HS students	(587)

In addition to the students of these programs participating in an extended lab experience during the 2012-2013 school year, all 94 students enrolled in the second-year program of Health Sciences participated at a local long-term care facility in a 75-hour clinical experience as part of their training to earn their Certified Nursing Assistant certificate. These 94 students also participated in an extended lab experience in a local hospital, medical office, or other health sciences related facility.

### **Mock Interview**

- ✓ All seniors eligible
  - 160 students participated in 2012-2013
- ✓ Human Resource personnel from local business and industry

Prosser hosted its second annual mock interview event in May, 2013, utilizing the professional services of over 50 human resource personnel from our local business and industry community. The HR representatives interview seniors from a specific program, and the students receive immediate feedback regarding their interview skills. Each interview resembles a real interview as closely as possible, and the students receive valuable experience as a job candidate and learn what is expected in all aspects of the interview process. Following the interview, the professional interviewer provides the student constructive feedback to improve self-presentation skills.

Prosser anticipates that all seniors in each program will participate in a mock interview event during the 2013-2014 school year.

### **Apprenticeships**

Two Prosser programs (heavy equipment and maintenance/construction technology) participate in apprenticeship program.

### **Certifications**

Prosser has made a significant effort to provide nationally portable, industry recognized certifications for many of its programs. Appendix E provides a list of the current certifications associated with Prosser programs and Appendix F shows the numbers of students receiving those certifications. Industry recognized certifications have high value because they show that a student is capable of doing the work that industry needs done, regardless of age or educational institution attended.

## **Innovative Curricula at high schools**

High schools throughout the area are implementing a number of innovative career elements, including online CTE programs, internships, and academies.

## **Internships**

Greater Clark School district is considering having every student do an internship before they graduate. Borden high school coordinated an effort a few years ago to work with business and industry to get all CTE students an internship in the summer. This program was discontinued due to personnel changes.

## **Career Academies**

Career Academies (mostly geared toward 4-year programs) also do job shadowing/paid internship toward junior/senior year of high school. Student needs to choose career path. Silver Creek HS has implemented these extensively, although they are geared toward 4-year programs

## **Online CTE Programs**

Jeffersonville has recently implemented an online curriculum from Conexus called the HIRE Technology Program. It is designed to provide an introductory advanced manufacturing and logistics program that is easy to implement and provides both dual credit and industry certifications through APICS and MSSC.

## ***What are the next steps that the Works Council needs to take to improve CTE opportunities?***

Region 10 Works Council members have identified a number of actions for its plan of work in the coming months. Key action items include:

- Recommend to the Governor additional business members for the Region 10 Works Council. We only have 3 now and 10 members total. It is very important to have the voice of business.
- Beyond input from our Works Council business members, we plan to hold forum meetings around each of the primary sectors, where business/industry community (maybe through One Southern Indiana) can offer more feedback about their needs and improvements to programs. The industry sectors must drive the curriculum.
- Review the data in more depth and tease out other ideas to identify missing pathways such as advanced manufacturing and make recommendations for new programs and curricula to support these pathways. We also plan review existing pathways to determine how to strengthen them.
- Research how we can incorporate soft skills/work ethic into curriculum. Consider leveraging the effort by the State Workforce Innovation Council to re-establish the DWD Works Ethics Certification.
- Investigate further introductory courses and/or programs that might align in the manufacturing area and other pathways—look further at programming. Find a better way to connect these high school programs to pathways, either at the high school itself or Prosser.

- Create a more systematic communication and partnership with key industry sectors and our educational community. Consider how the Works Council can take a lead in ensuring these partnerships happen.
- Identify other stakeholders in the community our Works Council needs to bring our work to in addition to business and industry.
- Determine how we can leverage the outreach group from DOE to communicate with schools. Rebecca Reeves is the outreach coordinator from the DOE for all of Region 10. She already has a relationships/ connections with schools and we need to make a benefit of her work and her organization.
- Investigate how we get students engaged earlier in their education so we can interest them in CTE, middle school or earlier? We must find ways to expand the pipeline.
- Determine how we can leverage best practices being implemented in Indiana and other states. We would like to investigate the success being enjoyed by Jefferson County, KY schools with the career academies and best practices that have been identified by the other Works Councils.
- Analyze the engineering track and determine how it fits in with CTE and our community.
- Review facilities and equipment to identify needs and then find ways to fund the programs.
- Consider how we can reduce duplication of effort and leverage technology tools like online delivery.
- Partner with business and industry to expand work-based learning to better connect students early with careers and people to find out expectations within different sectors. This takes partnership at business level.

## **Appendices (see attachments)**

Appendix A: Region 10 Labor Market Information and Perspective

Appendix B: CTE Enrollments

Appendix C: Prosser Dual Credit Enrollments

Appendix D, Region 10 All Dual Credit Agreements

Appendix E, Region 10 Prosser Certifications

Appendix F, Region 10 Prosser Certifications Earned