

**Elizabethtown Community and Technical College
Elizabethtown, KY**

1:30 CALL MEETING TO ORDER

WELCOME FROM ELIZABETHTOWN COMMUNITY AND TECHNICAL COLLEGE – GWENDOLYN G. JOSEPH, PH.D.

INTRODUCTION OF SPECIAL GUESTS, JUDGE MICHAEL HALE

Minutes of August 2016 KWIB Meeting.....*Hugh Haydon, Chairman
Kentucky Bioprocessing, Inc. of Owensboro*

1:40 PRESENTATION AND DISCUSSION

Governor's Workforce Funding Analysis.....*Bryan Sunderland, Legislative Director
Office of Governor Matt Bevin*

Education and Workforce Cabinet Updates.....*Hal Heiner, Secretary and Member
Education and Workforce Development Cabinet*

WIOA Update on Implementation and Planning.....*Beth Kuhn, Commissioner
Department of Workforce Investment*

2:15 ADMINISTRATIVE AND STRATEGIC ITEMS

Discussion and Action.....*Hugh Haydon, Chairman
Kentucky Bioprocessing, Inc. of Owensboro*

ADMINISTRATIVE

- Executive Committee Update (Minutes of Meeting November 2016 – FYI)
- Strategic Planning for the KWIB (RFP – FYI)

STRATEGIC

- Committee Updates
 - Business and Education Alignment Committee.....*Jason Luring, Member Chair
Catalent Pharma Solutions*
 - Data, Performance and Accountability Committee.....*Rob Southard, Member Chair
Southern Star Energy*
 - Policy and Process Committee.....*Pat Murphy, Member Chair
UPS*
 - Best Practices and Solutions Committee.....*Danette Wilder, Member Chair
Sealing Life Technologies*
- Career Center Certification Recognitions.....*David Boggs, Member
OWL*
- WorkReady Certifications.....*Kurt Krug, Member
INOAC, Inc.*

3:20 OTHER BUSINESS / DISCUSSION – SPECIAL RECOGNITION

3:30 ADJOURNMENT

MEMBERS PRESENT: Jared Arnett, Josh Benton for Secretary Erik Dunnigan, David Boggs, Sharon Fields, Parvin Gibbs, Lt. Governor Jenean Hampton for Governor Bevin, Judge Michael Hale, Hugh Haydon, Secretary Hal Heiner, Senator Higdon, Rodney Hitch, Marlin Jiranek, Jason Luring, Amy Luttrell, Heidi Margulis, Ashley Miller, Debbie Morris, Kay Moss for Peter Feil, James Neihof, Lynn Parrish, Freddy Peralta, Scott Pierce, Mike Price, Secretary Derrick Ramsey, Madison Silvert, Terry Spears, Reecie Stagnolia for President Bob King, Mayor George Steele, Mary Taylor for Commissioner Stephen Pruitt, John Thacker, Dan Thomas for Pat Murphy, Dr. Rhonda Tracy for Dr. Box, Carla Webster, Bill Weier, Danette Wilder and Steve Willinghurst (37)

CABINET STAFF PRESENT: Melissa A. Aguilar, Rick Jordan, Commissioner Beth Kuhn, Holly Neal, Susan Riddell

WKU President, Dr. Gary Ransdell, welcomed the KWIB and guests.

CALL TO ORDER

Hugh Haydon, Chair, called the meeting to order at 1:30 p.m.

Minutes of May 19, 2016 KWIB Meeting

ACTION: A motion was made by Representative Clark to approve the May 14, 2015 minutes. Senator Higdon seconded. Motion carried.

INTRODUCTION OF SPECIAL GUESTS, JUDGE MICHAEL HALE

PRESENTATION AND DISCUSSION

Learn and Earn

Judge Michael Hale introduced special guests.

WorkReady Skills Initiative - \$100 Million Dollar Fund Update.

Secretary Heiner provided an update on the WorkReady Skills Initiative stating that an overwhelming response happened. After the committee members are designated, the committee will meet to begin the process of review.

Update on WIOA Implementation and Planning

Commissioner Beth Kuhn reported on the following:

- State, Local and Regional Planning
- Statewide Reserve Investment Strategy Funds, both as an update from last year and a new plan for the current fiscal year
- Kentucky Career Center Re-Organization

ADMINISTRATIVE AND STRATEGIC ITEMS

ADMINISTRATIVE

Chairman Haydon provided a copy of the Executive Committee Minutes August 12, 2016 to the Board for informational purposes.

COMMITTEE UPDATES

Data, Performance and Accountability Committee – Rob Southard, Chair

Rob was absent therefore, Melissa presented an update in his place stating the committee had met several times to learn about the data that was available. There is a committee meeting scheduled specifically with the Chamber and KCEWS to begin discussing the dashboard of data which the committee will make recommendations on within the coming months.

Policy and Process Committee – Pat Murphy, Chair

In Pat's place, Melissa updated the Board on the hold process for the current committee as they were awaiting final federal regs to be released. There is also an internal team working on policies that will coincide with the Policy Committee at a later date.

Best Practices and Solutions Committee – Danette Wilder, Chair

Business and Education Alignment Committee – Jason Luring, Chair

CAREER CENTER CERTIFICATION RECOGNITIONS

David Boggs announced the following Kentucky Career Center recognitions:

Bluegrass

- Danville – Full Service
- Georgetown – Full Service
- Winchester – Affiliate

Cumberlands

- Albany / Clinton – Affiliate
- Columbia – Affiliate
- Monticello - Affiliate
- Russell Springs - Affiliate
- Somerset – Affiliate

EKCEP

- Pikeville – Affiliate

Northern Kentucky

- Florence – Full Service
- Carrollton – Affiliate

TENCO

- Ashland – Full Service
- Morehead – Affiliate
- Mt. Sterling - Affiliate

Local area directors were asked to stand to be recognized during the meeting and were presented certificates and photographed after the meeting.

WORKREADY COMMUNITIES

Rick Jordan reported that the Kentucky Work Ready Communities Review Panel met on July 12th to review three applications for certification as a Work Ready Community and seven applications for certification as Work Ready in Progress.

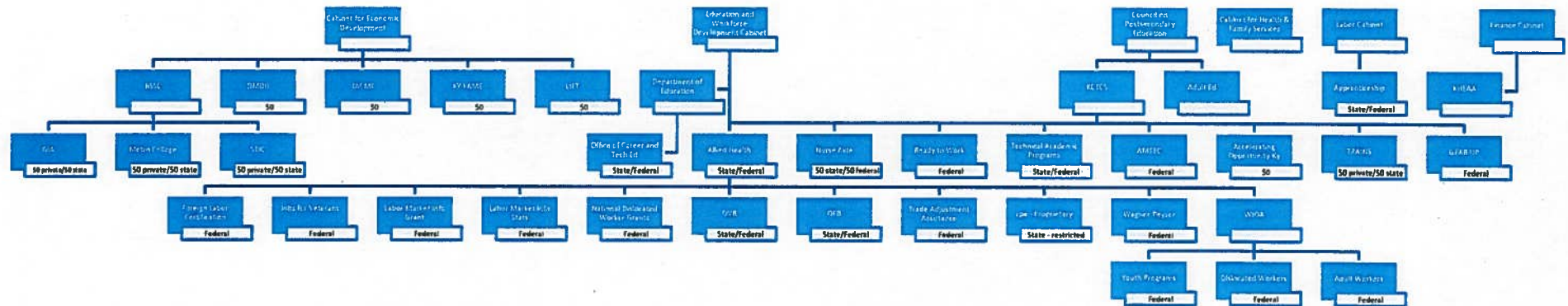
ACTION: Based on the recommendation from the review panel, Mr. Jordan motioned that the KWIB certifies Adair, Bourbon and Caldwell Counties as Work Ready and Breckinridge, Casey, Crittenden, Knox, Magoffin, Owsley and Whitley Counties as Work Ready in Progress. Scott Pierce seconded the motion. Motion passed.

County representatives were asked to stand to be recognized during the meeting and were presented certificates and signage and were photographed after the meeting.

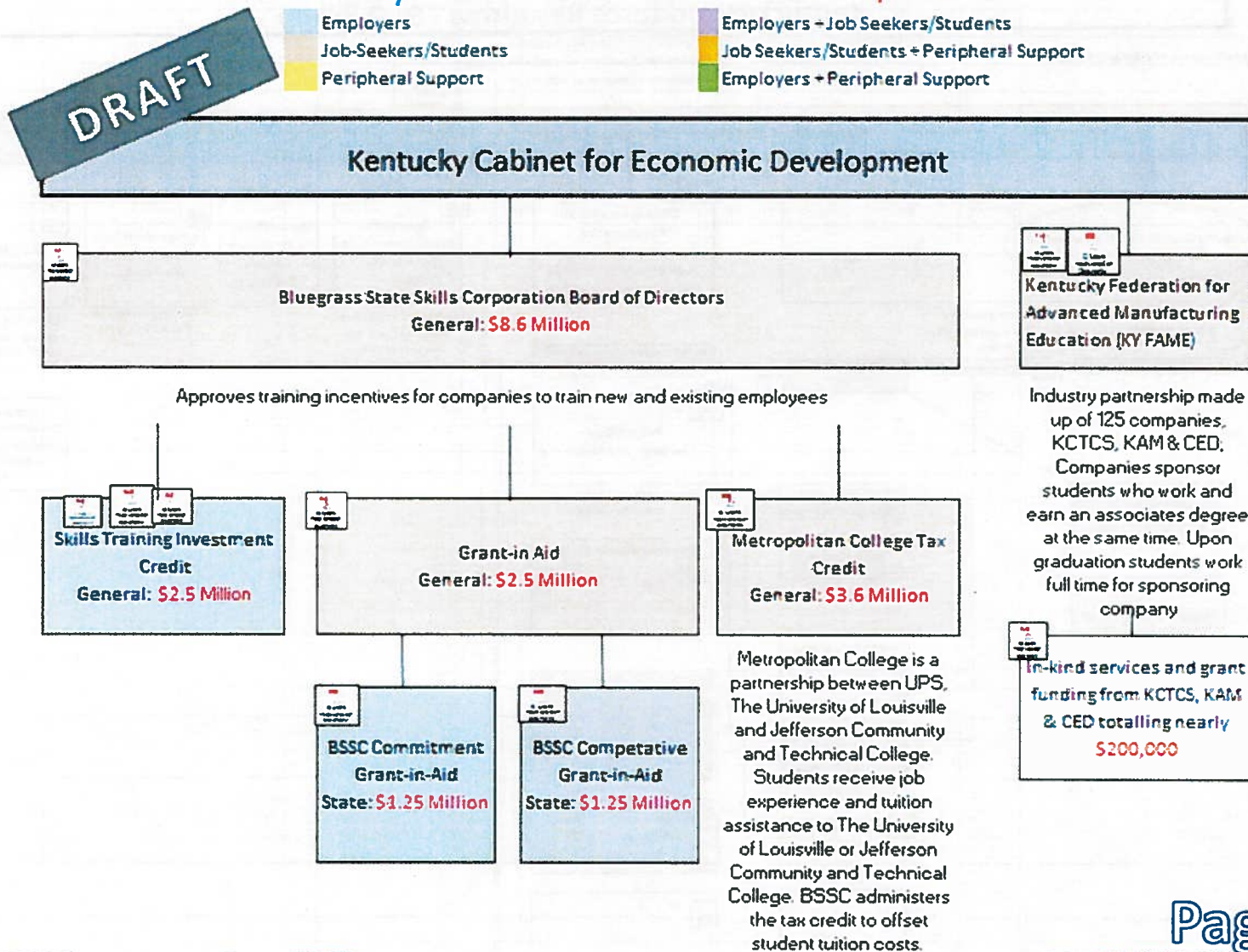
ADJOURNMENT

With no further business, the meeting adjourned at 3:45 p.m.

Workforce Funding Analysis



Kentucky Workforce Resources - \$1.2 Billion



○ Funding Discrepancy

Kentucky Workforce Resources - \$1.2 Billion

Employers + Job Seekers/Students + Peripheral Support

Employers
Job-Seekers/Students
Peripheral Support

Employers + Job Seekers/Students
Job Seekers/Students + Peripheral Support
Employers + Peripheral Support



DRAFT

Kentucky Education and Workforce Development Cabinet

Kentucky Dept. of Workforce Investment
\$138.3 Million

State & Federal funding allocated on a formula basis to local workforce boards and administered through Kentucky Career Centers

POWER Grant

Funding for retaining individuals in coal counties

KCC GO

Funding for companies that hire and retain the long term unemployed

Trade Adjustment Act

Wagner-Peyser

WICA

Labor Market Information (BADI)
Federal: \$535,000

National Emergency Grant
Federal: \$5,500,000

WICA Title I: Adult & Dislocated Workers
WICA Title I: Youth

WICA Title II: Adult Education & Family Literacy Act

WICA Title III: Employment Services (Wagner-Peyser)

WICA Title IV: Vocational Rehabilitation Services

Office of Vocational Rehabilitation
General Funds: \$12.8 Million
Federal Funds: \$48.9 Million
Restricted Funds: \$3.4 Million

Independent Living Federal: \$265,700 State:

Project Case
Federal: \$4.4 Million

Funding to train individuals with disabilities

Independent Living - Older
Federal: \$30,000
State: \$48,000
Restricted: \$175,500

Independent Living - State Grants
Federal: \$40,000
State: \$4,800
Restricted: \$295,600

In-Service Basic Training
Federal: \$66,100
State: \$7,400

In-Service Training Quality Award
Federal: \$85,000
State: \$9,500

Governor's Discretionary Fund
Federal: \$4.1 Million

Funding can be used at the discretion of the Governor for workforce purposes

Special Project Federal Grant Funding
\$18.1 Million

Longitudinal Data Grant Federal: \$6.7 Million

Funding to improve Kentucky's data system

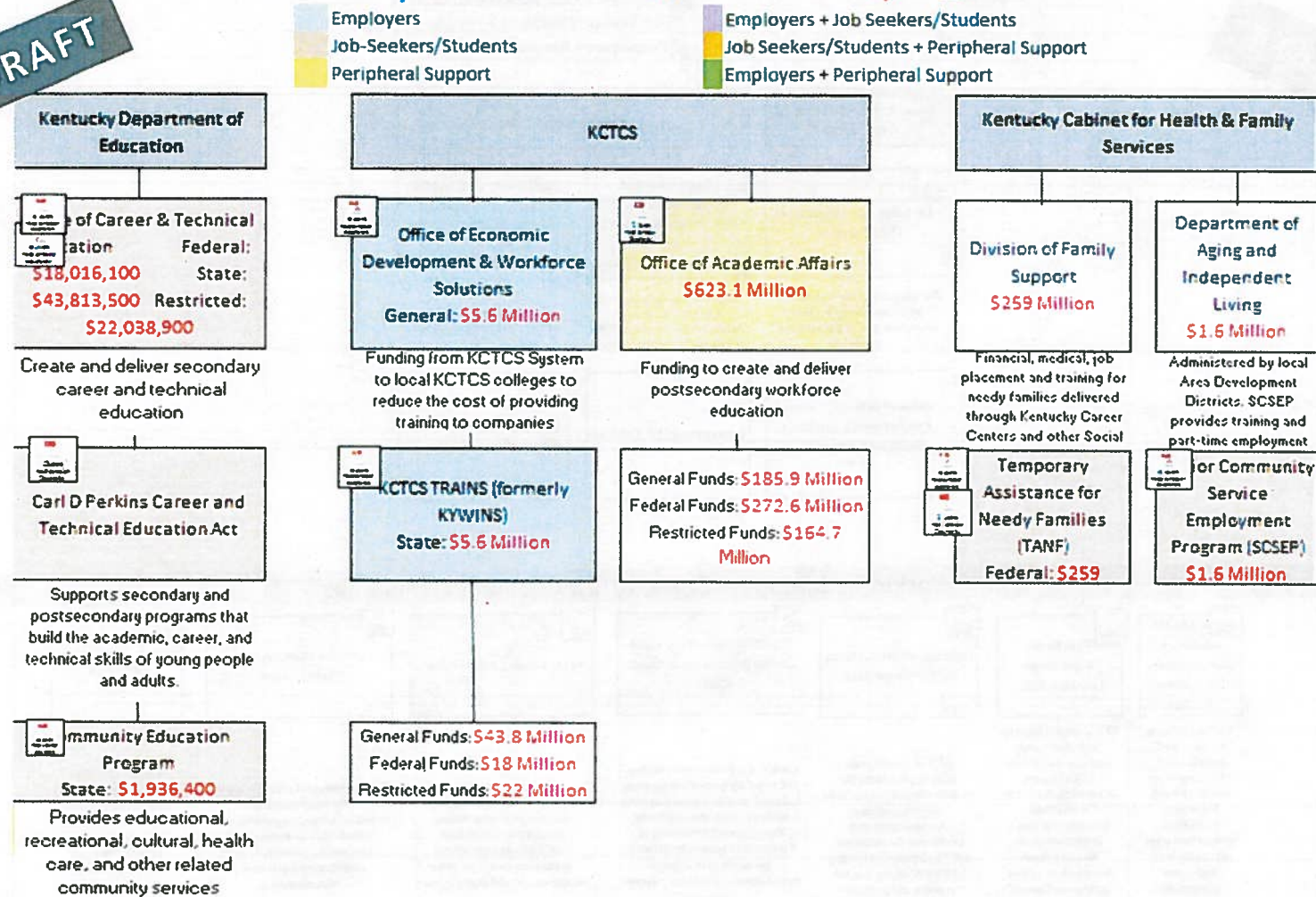
Kentucky Workforce Innovation Board

Objective is to establish policies and guidelines for KY workforce system

Local workforce development boards set policies & guidelines for local admin of WIA/WIDA funds

Kentucky Workforce Resources - \$1.2 Billion

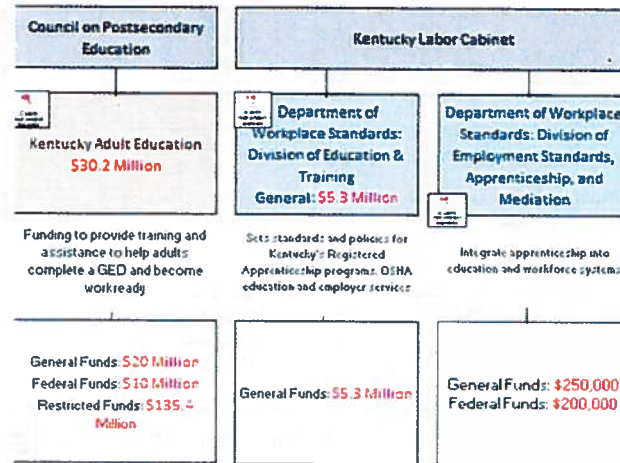
DRAFT



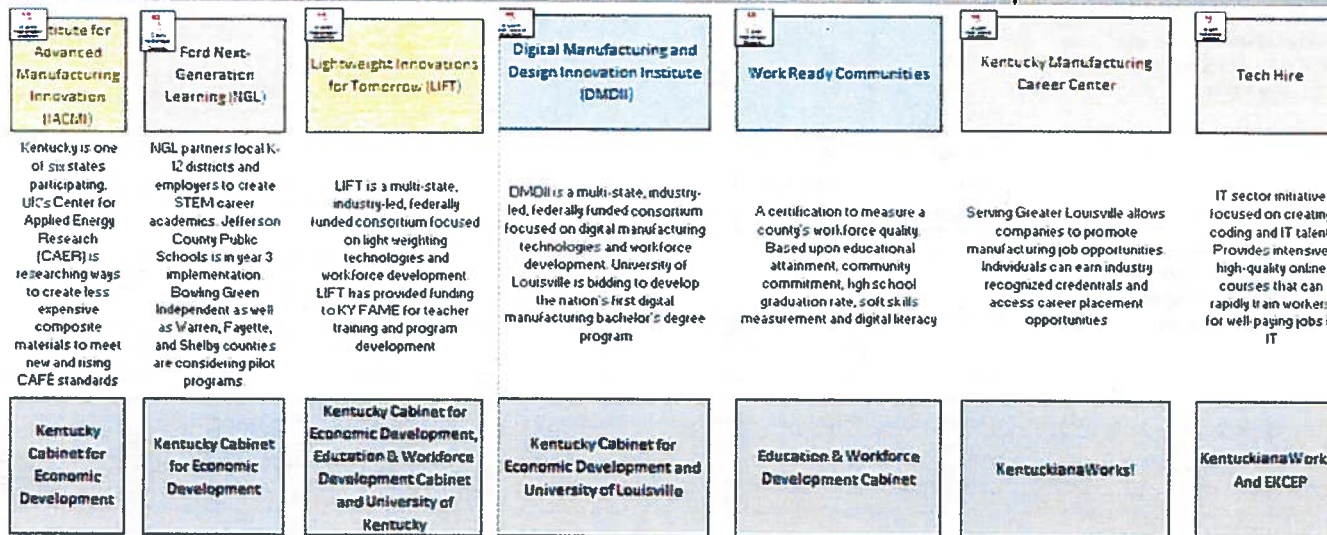
Kentucky Workforce Resources - \$1.2 Billion

DRAFT

- Employers
- Job-Seekers/Students
- Peripheral Support
- Employers + Job Seekers/Students
- Job Seekers/Students + Peripheral Support
- Employers + Peripheral Support



Other Workforce Initiatives Shared Thru Cabinet Partnerships

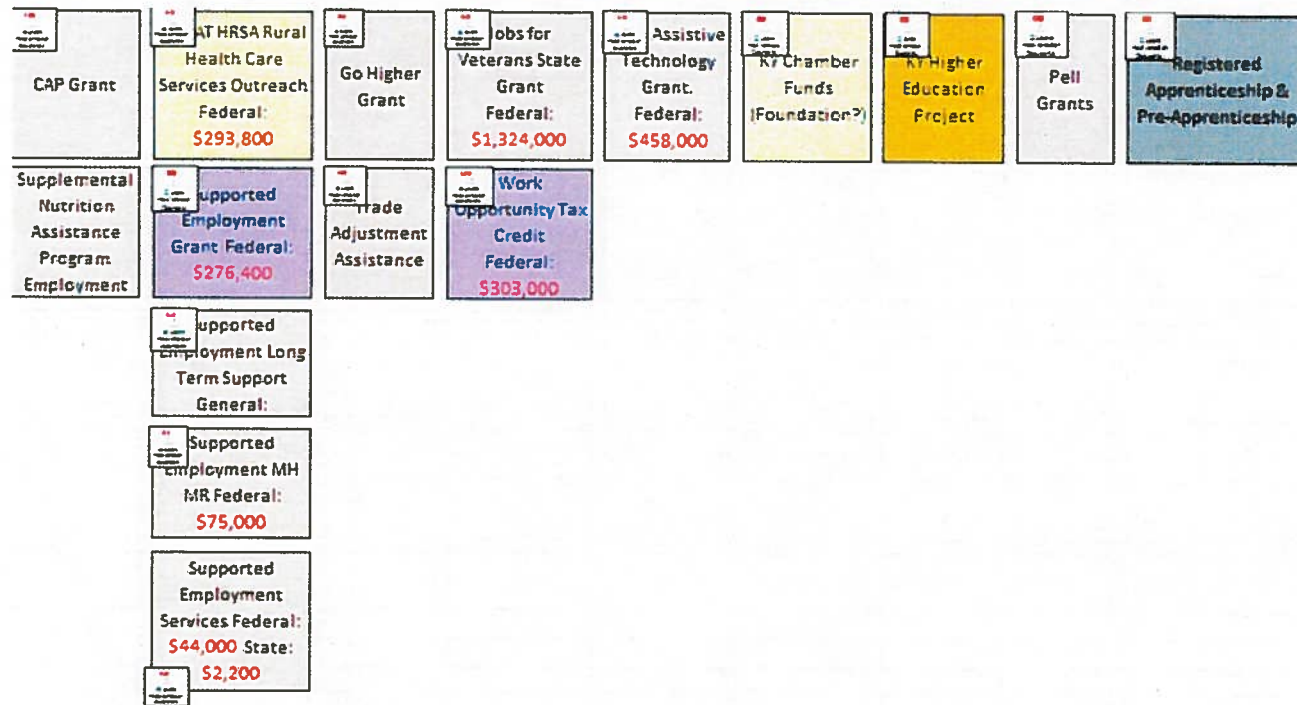


Kentucky Workforce Resources - \$1.2 Billion

DRAFT

- Employers
- Job-Seekers/Students
- Peripheral Support
- Employers + Job Seekers/Students
- Job Seekers/Students + Peripheral Support
- Employers + Peripheral Support

Still Researching



Work Ready Skills Initiative Applicants Invited to Submit Full Application

Adair Co Bd of Ed.....	\$3,769,138.00	Johnson Co Schools.....	\$14,972,000.00
Allen Co - Scottsville Ind Dev Authority	\$2,486,772.00	KCEOC Community Action Partnership	\$3,600,000.00
Allen Co Career & Tech Ctr	\$750,000.00	Kenton Co Schools.....	\$7,487,490.00
AMTECK LLC.....	\$475,000.00	Ky Ed Dev Corp.....	\$15,925,000.00
Ashland CTC	\$318,831.00	Ky Tech - Warren Co ATC.....	\$899,439.00
Barren Co Bd of Ed	\$15,000,000.00	Lee Co ATC	\$40,500.00
Big Sandy CTC.....	\$20,000,000.00	Lee Co ATC	\$66,900.00
Bill Schneider.....	\$140,000.00	Lewis Co Schools.....	\$255,900.00
Bluegrass CTC	\$6,000,000.00	Lindsey Wilson College	\$549,000.00
Bluegrass CTC	\$4,500,000.00	Logan Co Schools	\$3,000,000.00
Boone Co ATC.....	\$810,000.00	Louisville Central Community Ctrs	\$4,140,000.00
Boone Co Schools.....	\$10,000,000.00	Madison Co Schools.....	\$650,000.00
Bowling Green HS	\$202,040.00	Madison Co Schools.....	\$19,520,000.00
Breathitt Co Schools	\$8,500,000.00	Madisonville CC.....	\$671,500.00
Breckinridge Co Schools	\$8,690,000.00	Magoffin Career & Tech Ctr	\$65,000.00
Brighton Center	\$298,964.00	Martin Co ATC	\$6,500,000.00
Bullitt Co Bd of Ed	\$4,005,000.00	Meade Co Schools	\$6,000,000.00
Caldwell Co Schools.....	\$3,924,612.00	MMRC Reg Ind Dev Authority/Maysville CTC	\$5,000,000.00
Campbellsville University.....	\$3,699,000.00	Monroe Co ATC	\$54,300.00
Casey Co Schools	\$8,500,000.00	Morehead St U - School of Engineering & Info.....	\$1,427,000.00
Child Care Advocates of KY	\$995,000.00	Morgan Co Schools.....	\$750,000.00
Clark Co ATC.....	\$239,000.00	Nelson Co ATC	\$85,000.00
Clay Co Bd Ed	\$15,000,000.00	NKU	\$4,030,000.00
Clinton Co Bd of Ed.....	\$9,500,000.00	NKU	\$5,031,000.00
Corbin Ind Schools	\$888,240.00	Ohio County Work Ready Cmte	\$912,000.00
Diversified Structural Composites Inc.....	\$310,500.00	OVEC	\$17,100,000.00
EKU	\$15,000,000.00	Owensboro CTC.....	\$5,760,846.96
EKU - Aviation	\$11,300,000.00	Paducah Public Schools.....	\$9,800,000.00
EKU Ctr for Career and Workforce Dev	\$1,979,275.00	Perry Co Fiscal Court	\$235,000.00
Elizabethtown CTC.....	\$4,745,000.00	Rockcastle Co Schools.....	\$2,995,400.00
Estill Co Schools.....	\$9,750,000.00	Russell County Bd of Ed.....	\$12,291,075.70
Fleming Co Schools	\$12,000,000.00	Signature Healthcare.....	\$5,346,000.00
Floyd Co Schools	\$1,000,000.00	Simpson Co Schools	\$1,474,258.50
Franklin Co Career & Tech Ctr / Franklin Co HS	\$3,114,504.00	Somerset CC	\$10,000,000.00
Freestore Foodbank	\$342,000.00	South Central KY Works Inc.....	\$6,095,000.00
Garrard Co Schools.....	\$2,586,000.00	Southcentral CTC	\$400,000.00
Grant Co Schools	\$465,000.00	Spencer Co Bd of Ed.....	\$3,801,643.00
Greater Hopkinsville / Christian Co Chamber.....	\$3,300,000.00	Tech Allies Solutions.....	\$2,300,000.00
Green Co Bd of Ed	\$3,693,000.00	U of L	\$14,350,000.00
Hart Co Schools	\$10,400,000.00	University of the Cumberlands	\$10,000,000.00
Hazard CTC.....	\$7,187,000.00	Washington Co Schools	\$1,200,000.00
Henderson CC.....	\$1,582,587.00	Webster Co Bd of Ed.....	\$1,692,598.57
Home Builders Assoc of Northern KY.....	\$3,285,849.00	West KY CTC	\$4,631,868.03
Jackson Co Schools	\$50,000.00	Wireless Telecom Coop.....	\$3,000,000.00
Jefferson CTC	\$28,136,000.00	WKU	\$2,700,000.00
Jessamine Co Schools	\$2,392,512.00		

Work Ready Skills Initiative

Full Applications Received

Public Secondary Schools and Technology Centers

- Public A1 Schools with Graduates in 2013-14
- KY Tech ATC Operated by KDE (53)
- CTC Operated Locally (42)*

Colleges and Universities

- * 4-Year Public and Independent Main Campus
- ✱ 2-Year Public (KCTCS) Main Campus
- ✱ 2-Year Public (KCTCS) Secondary Campus*

WIOA Boundaries

- WIOA Boundaries

Kentucky Career Centers

- ★ Certified Full Service (11)
- ✱ Uncertified Full Service (16)
- ▲ Certified Affiliate (3)
- ▲ Uncertified Affiliate (13)
- OET Stand Alone (8)
- ◆ OFB Stand Alone (4)
- ✱ OVR Stand Alone (18)
- LWDB Stand Alone (21)

Major Roads

- Interstate
- Parkway
- US Highway

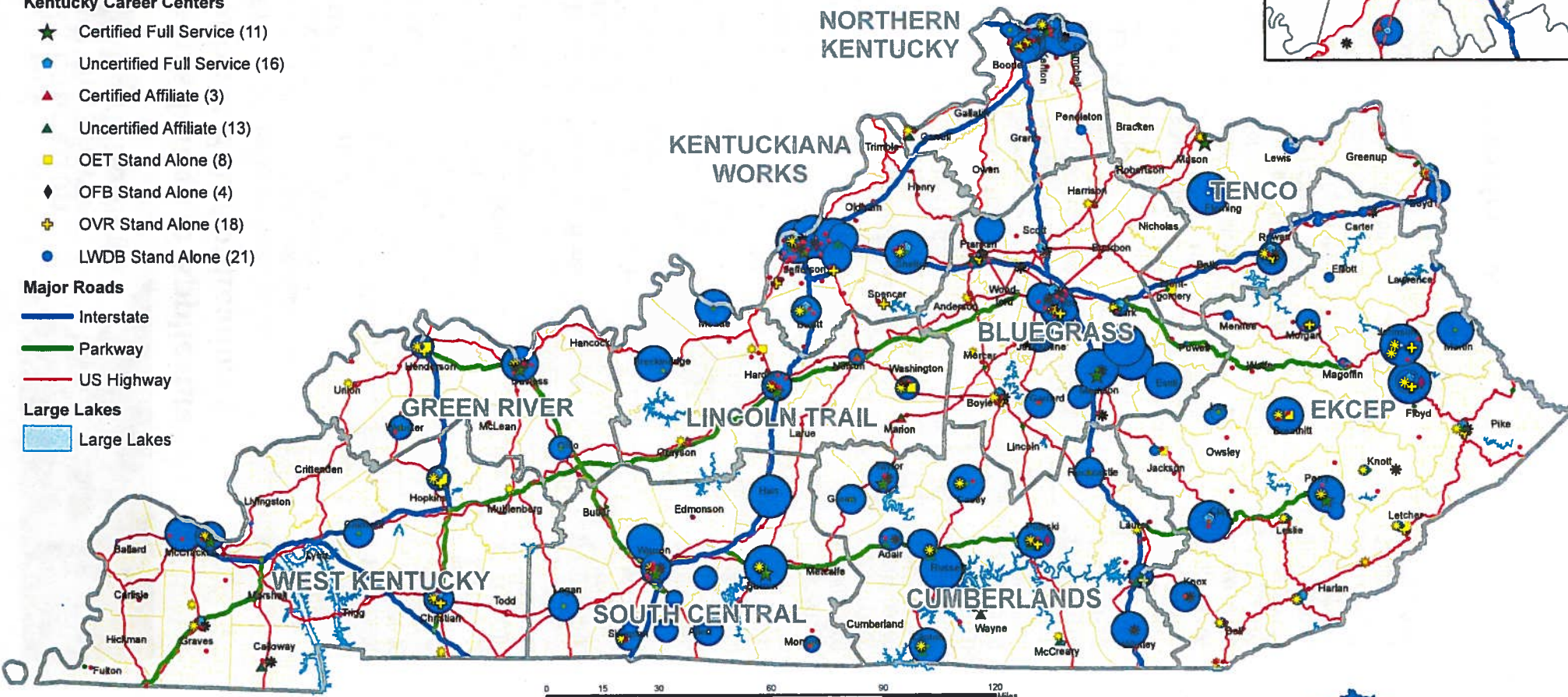
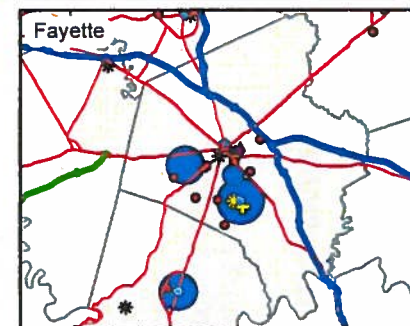
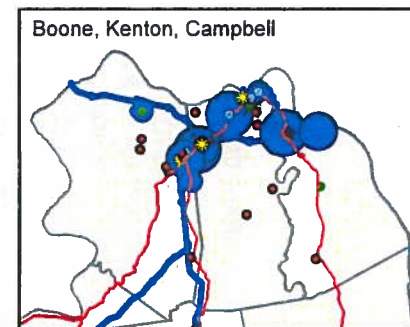
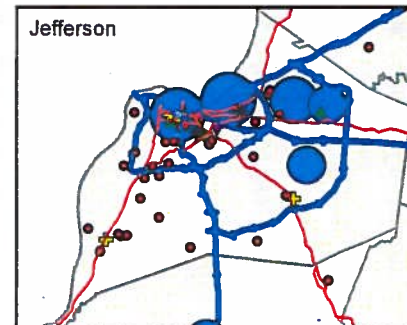
Large Lakes

- Large Lakes

Work Ready Skills Initiative

Amount Requested

- \$500,000 or Less
- \$500,001 - \$2,000,000
- \$2,000,001 - \$5,000,000
- \$5,000,001 - \$10,000,000
- More than \$10,000,000



*Symbols on map may represent more than one location.

Updated October 27, 2016

Frequently Asked Questions: Kentucky Dual Credit Scholarship Program

Do students need to complete an application?

No. School districts will apply for DCS funding on behalf of students. Students will still need to complete the admissions process if required by the postsecondary institution where they are enrolling for dual credit coursework.

Are all Kentucky high school students eligible for the program?

No. To be eligible for a DCS, a student must be a Kentucky resident, be enrolled in a Kentucky public high school during the 2016-2017 year, be enrolled in an eligible dual credit course at a participating Kentucky postsecondary institution, and complete a 30-minute college success counseling session each year of scholarship eligibility.

Who will provide the 30-minute college success counseling session for students?

KHEAA and the Kentucky Department of Education (KDE) are developing a counseling session that will fulfill the college success counseling requirement. Session materials will be distributed to high schools in early August. The session may be conducted by a high school faculty member, staff person, high school administrator, or a Kentucky Career Center specialist designated by the student's school counselor.

Are postsecondary institutions required to participate in the program?

No. Institutions must notify KHEAA if they desire to participate each year by the established deadline. If an institution decides not to participate in the 2016-2017 DCS program, they may join the program in a future year.

What kinds of college courses are eligible for the Dual Credit Scholarship?

Dual credit courses are those for which students receive both high school and postsecondary course credit for the same course. DCS-eligible courses include general education courses and career and technical education courses within a state-approved career pathway leading to an industry recognized credential, and developed in accordance with KRS 164.098.

Can students take dual credit coursework online?

Yes. Dual credit courses may be offered to students through a participating postsecondary institution online, delivered at a high school or at a participating postsecondary institution's campus.

What happens if a student wants to take more than two dual credit courses during the 2016-2017 year? What if the student is enrolled at more than one postsecondary institution during the same semester?

The student's high school will identify the courses that count toward the DCS program when applying to KHEAA as well as the institution where those courses are being taken. KHEAA will inform the postsecondary institution where the student is enrolled if courses are eligible for the program. The student will be responsible for payment of coursework that is not eligible under the DCS program.

Can a participating postsecondary institution charge more than the dual credit rate if students want to take more than two courses?

No. Participating postsecondary institutions must charge no more than the dual credit rate, which is \$52 per credit hour for the 2016-2017 year, regardless of the number of dual credit courses a student takes.

Can Dual Credit Scholarship funds be used for dual enrollment?

No. Only dual credit courses are eligible for program funding.

Can Dual Credit Scholarship funds be used to reimburse students and/or parents for expenses related to dual credit coursework?

No. LEAs and PPIs are eligible for the funds. Excess funds may be used by LEAs for dual credit program expenses which may include required textbooks and course materials.

Will the Mary Jo Young Scholarship (MJYS) be available?

Yes. KHEAA will be awarding MJYS to help low-income students who are not eligible for the DCS program, such as students attending Kentucky non-public high schools. Students must be eligible for the free or reduced-price lunch program to be considered for an award. Funds are limited, and awards will be made on a first-come, first-serve basis. Students may apply for the MJYS at www.kheaa.com before Sept. 1, 2016. Additional information will be made available by KHEAA.

Can LEAs include students attending either the Gatton Academy or Craft Academy in their Dual Credit Scholarship population?

No. State funding is already provided to support those programs.

How will LEAs request additional funding if they need more than their initial allocation for DCS?

KHEAA will evaluate the utilization of funds and notify LEAs of the availability of additional allocation by Nov. 15 for the fall semester and April 15 for the spring semester. LEAs will be given an opportunity to request these funds from KHEAA. A detailed explanation of the process will be provided by KHEAA when the additional allocations are announced this fall.

The amount appropriated for the program is \$7.5 million each year. What happens if the entire appropriation is not used?

The DCS program's General Fund appropriation does not lapse at the close of the fiscal year, KHEAA will include those additional amounts to increase each district's allotment for the 2017-2018 year.

Who can I contact if I have additional questions regarding the DCS or MJYS?

You may contact KHEAA's Director of Student Aid Services, Becky Gilpatrick, at rgilpatrick@kheaa.com or (800) 928-8926 ext. 67394.

NOTES

The meeting was called to order at 1:36 pm by Chairman Hugh Haydon with a quorum in existence.

Michael Gritton and Cindy Read of Kentuckiana Works welcomed everyone to the Health Career Center, explained its use and existence as well as how the employer community works to partner on endeavors. A representative from ResCare (the Kentuckiana Works one stop provider) also spoke about the role of coordination between the partners and employer community.

Adrienne Southworth with the Lieutenant Governor's Office gave an update on the funding analysis that is taking place in Kentucky. She explained the intent of the review is to first understand where dollars flow in and out of organizations in the state and then to begin to analyze the most efficient way to group those dollars on behalf of their reason for use. She handed out a chart of potential funding sources and explained they are meeting with Cabinets and Departments one by one.

Secretary Hal Heiner gave an update on the WorkReady Skills Initiative whereas the committee begins meeting tomorrow to review the 80+ applications submitted. Additionally, he explained the intent is to begin pairing down the applications in a way that makes the most efficient use of dollars around Kentucky.

Heiner also discussed the dual credit initiative in that a 40% increase has been seen in enrollment for dual credit. It is expected the enrollment percentage will increase significantly in the upcoming school year.

Commissioner Beth Kuhn updated the executive committee members on the WIOA Planning that is currently taking place. She explained there is an internal team of staff reviewing the final regulations and consistently meeting to continue planning efforts in conjunction with local boards and partners. She expects that soon the KWIB's Policy and Process Committee will be needed to begin discussing policy which will be needed for implementation.

Melissa A. Aguilar gave an update of the Sector Strategy Initiative which has just begun. She explained this initiative is the second phase of the New Skills for youth Initiative administered by Kentucky Career and Technical Education. This initiative will be taking the data that has been formulated under the new 5 sectors to be recommended at the KWIB meeting and attach career pathway options to each sector. Additionally, there will be regional planning sessions which include business, partners, workforce boards, education, chambers, etc. to begin dialog on supply and demand and the relative career pathway design.

Rick Jordan discussed the upcoming WorkReady Communities certifications which will be: Work Ready: Nicholas / Work Ready in Progress: Bell, Cumberland, Garrard & Lee / Extensions: Logan, Taylor & Webster. He also explained there is a continuing effort in updating and modifying the WorkReady Community criteria as well as looking at more regionalized planning efforts.

Dr. Kate Akers discussing the upcoming KY Future Skills Report that will be released in the coming months. She explained the nature of the report which reviews supply and demand sides of the labor market. Additionally she spoke about the upcoming metric dashboards which will be available early 2017 for reviewing measures across each entity and across the Board. She explained the KWIB will be looking at the template dashboard for its upcoming use.

Committee Updates

Pat Murphy explained his committee is on alert to begin reviewing policy as related to new federal regs that were released in August. He explained there are internal staff currently reviewing the regs and policy that will be needed.

Melissa A. Aguilar reported for Rob Southard for the Data and Performance Committee and stated the committee had just met with KCEWS to review the template dashboard. The committee will be in reviewing the data currently available on dashboards and then formulate metrics that are needed but not currently measured. It is expected that the KWIB committee should be forthcoming with a recommendation by February.

Melissa A. Aguilar also reported on behalf of Jason Luring's Business / Education Alignment committee stating she was aware that Jason's committee will be meeting this week and will be discussing 6 different recommendations of which one will be the update of the 5 industry sectors.

Danette Wilder reported on behalf of her committee in stating that she has been meeting with different entities throughout Kentucky to get a better understanding as to how to include multiple populations in the workforce pipeline. She specifically discussed entrepreneurship and inventors as a group that could potentially help us grow the economy. More information will be forthcoming at the KWIB meeting.

Hugh Haydon discussed the strategic planning DRAFT RFP that was included in the packet. Chairman Haydon discussed the timeline as associated. He explained the RFP would go to the full Board as an FYI at the next meeting.

The committee agreed that Haydon and Aguilar should work on the finalized agenda for the November 17th Board Meeting.

PROPOSAL SUBMISSION CHECKLIST

The vendor **MUST** include the following with the proposal submission.
If the items highlighted below are not submitted with the proposal submission,
the Commonwealth **MUST** deem the proposal **non-responsive and**
SHALL NOT consider for award.

All other items **MUST** be submitted prior to award.

SIGNED AND COMPLETED SOLICITATION (Section 8.10 of this RFP)

LATEST ADDENDUM SIGNED (Section 8.10 of this RFP)

*PROPOSED SOLUTION (TECHNICAL) UNDER SEALED COVER AND BY CLOSING DATE
Section(s) 8.00 and 8.10 of this RFP

*PROPOSED SOLUTION (COST) UNDER SEALED COVER AND BY CLOSING DATE
Section(s) 8.00 and 8.20 of this RFP

TRANSMITTAL LETTER – Section 8.10 of this RFP

PROOF OF REGISTRATION WITH SECRETARY OF STATE BY A FOREIGN ENTITY
(Section 11 of this RFP)

REQUIRED AFFIDAVIT(S) – Section 8.10 of this RFP

*The Commonwealth defines SEALED as “a closure that must be broken to be opened and that thus reveals tampering” (Merriam-Webster Dictionary, <http://www.merriam-webster.com/dictionary/seal>)

REQUEST FOR PROPOSAL
FOR
PERSONAL SERVICE CONTRACT

**Education and Workforce Development Cabinet
Kentucky Workforce Innovation Board
Strategic Planning Process and Facilitation
RFP 531 1700000118**

This document constitutes a Request for Proposals for a Personal Service Contract from qualified individuals and organizations to furnish those services as described herein for the Commonwealth of Kentucky, Education and Workforce Development Cabinet- Kentucky Workforce Innovation Board.

Offerors are advised that any personal service contract resulting from this RFP must comply with all applicable provisions of KRS 45A and KRS 12.210 prior to becoming effective.

A contract, based on this RFP, may or may not be awarded. Any contract award from this RFP is invalid until properly approved and executed by the Finance and Administration Cabinet and filed with the Legislative Research Commission, Government Contract Review Committee.

1.00 Purpose and Background

The Kentucky Workforce Innovation Board (administratively attached to the Education and Workforce Development Cabinet) was created and established in July 2015, with members appointed by Kentucky's Governor and a history of working to connect education, workforce development and economic development since 2000. The Workforce Innovation and Opportunity Act requires the Governor to establish a state workforce development board (the Kentucky Workforce Innovation Board) and sets forth the requirements and responsibilities of the board; the Kentucky Workforce Innovation Board currently operates under the Kentucky plan (found at <http://kwib.ky.gov/documents/WORKSmart2013.pdf>). The Kentucky Workforce Innovation Board is a policy advisory Board to Kentucky's Governor and bases its foundational work on integrity, accountability, data driven performance, decision making, and industry led practices. The Kentucky Workforce Innovation Board is a 50 member Board of Directors, and has one full-time Director and an Assistant to the Director. Additionally, a team of dedicated volunteers is consistently recruited as well as engaging a number of partners at the state, regional and local levels to carry out visionary tasks and initiatives. Even though the current Kentucky Workforce Innovation Board was created pursuant to the federal Workforce Innovation and Opportunity Act it has been empowered by the Governor to look beyond those WIOA programs and has a mandate to review and make recommendations across the entire workforce system including primary, secondary, and post-secondary education, and other related and allied agencies.

It is important to also note the Kentucky Workforce Innovation Board has been tasked to analyze the occupational opportunities and how the state's workforce development system is aligned to meet economic demands. Kentucky is faced with a challenge to re-engineer its infrastructure in order to achieve sustainable economic growth. The strategic plan that emerges must re-align decades of workforce development initiatives with the primary stakeholders. Those stakeholders are the employers, job seekers, and those not participating in the workforce that are capable.

Certainly, board membership recognizes that transformation will force a re-defining of leadership roles, resource allocation, and tangible metrics in order to achieve substantive change. A functional relationship with employers must be established at all levels of the workforce system and specific measures that track this effort will insure that employers' needs are met in the short term and adjustments made for the long term.

In summary, re-alignment is necessary if any expectation of success can be realized. The strategic plan must reflect this and initiatives already in progress must be re-allocated in order to avoid inconsistency perceptions. Leadership is necessary to earn the trust of employers and workforce participants in every region and community to bring these recommendations to fruition.

The Kentucky Workforce Innovation Board's four designated work committees have been working to complete preliminary work in re-shaping the vision of Kentucky's workforce system. These committees are as such:

Data, Performance and Accountability

Description of Committee: Create the vision for implementing a measurable outcome-based system that will hold our workforce system accountable as related to directly controlled program performance and goals.

The committee will focus on the following:

- Establishing outcome-based metrics and regularly reviewing reports on metrics with a focus on outcomes of Kentucky Workforce Innovation Board activity and programs.
- Increasing public transparency in promoting a new focus on measurable outcomes, service quality, and customer satisfaction.
- Providing recommendations to the Kentucky Workforce Innovation Board that will improve decisions made based upon objective outcome-based metrics and information.

Policy and Process

Description of Committee: Provide guidance for the development of policies and processes which govern the workforce system.

The committee will focus on the following:

- Meeting legislative/governance responsibilities.
- Ensuring clarity, consistency, transparency and accountability in decision-making.
- Building policies and processes which are in the best interest of achieving the Kentucky Workforce Innovation Board Kentucky Workforce Innovation Board's vision.
- Providing recommendations for full Kentucky Workforce Innovation Board policy review and direction.

Best Practices and Solutions

Description of Committee: Provide input and guidance in identifying and prioritizing ways to transform Kentucky's workforce system.

The committee will focus on the following:

- Assessing Kentucky's workforce system for areas in which there are opportunities for improvement.
- Learning about and evaluating best practices that may be taking place throughout Kentucky and/or in other states that could be replicated to assist Kentucky in growth, efficiency, and effectiveness.
- Making recommendations on specific best practices and working to provide vision and planning implementation.

Business and Education Alignment

Description of Committee: Identify and implement comprehensive strategies to align education (supply) with industry needs (demand).

The committee will focus on the following:

- Working specifically with Career and Technical Education Leadership Funds.
- Building regional linkages between education and growth/demand industry sectors.
- Creating opportunities for all students to receive nationally-recognized, industry-valued certifications/credentials.
- Expanding work-based education opportunities for all learners.
- Providing recommendations on specific areas where there are opportunities to directly align education with industry.

Additionally, the Kentucky Workforce Innovation Board feels it is very necessary and important to engage the local and regional workforce areas/regions to achieve success in proactively preparing Kentucky's growth and partnerships to create a talent pipeline which meets industry's needs.

The Kentucky Workforce Innovation Board wants to ensure its focus on overall workforce systematic opportunities to bring the organization to a new level of activity, accountability and performance standards in keeping with its mission and vision. The current leadership feels that the time is right to reappraise the organization's goals and objectives in mission and vision and based on the changes of the federal legislation as related to the Workforce Innovation and Opportunity Act and the new gubernatorial administration.

2.00 Scope of Work

Key areas of work with approximate timelines are as follows:

- ✓ Review and understand the past, current, and future driving forces for the Kentucky Workforce Innovation Board and conduct a strategic assessment of all initiative areas, including a review of existing materials and facilitated strategic planning meeting(s) with key stakeholders (staff, board members, partners, program participants, volunteers, and beneficiaries) (January 2017 – February 2017).
- ✓ Create a summary of the strategic review items for discussion by the Board of Directors that identifies and outlines key questions/actions to be addressed by the organization (March 2017).
- ✓ In collaboration with staff, synthesize the discussions into a three-year strategic plan which also connects to Kentucky's operational WIOA plan for the Kentucky Workforce Innovation Board for review and approval by the Board of Directors (April 2017).
- ✓ Convene public strategy meetings throughout Kentucky with Kentucky Workforce Innovation Board members and partners as well as facilitate plans for regional coordination of implementing the vision and strategic plan (May - July 2017)

The objective of this project is to assist the Kentucky Workforce Innovation Board in producing a comprehensive three-year strategic plan that will:

- ✓ Describe the Kentucky Workforce Innovation Board's current conditions and operating environment (assessment of current program offerings and business model, stakeholder feedback, analysis of initiatives, trend assessment, organizational strengths and challenges);

- ✓ Clearly identify the Kentucky Workforce Innovation Board's desired impact for the next three years;
- ✓ Clearly outline organizational objectives in all key initiative areas that will help to achieve the desired impact;
- ✓ Outline indicators of success to track progress on the objectives;
- ✓ Articulate the Kentucky Workforce Innovation Board's strengths and how to strategically apply them to achieve the objectives and desired impact;
- ✓ Identify strategic directions, partnerships and tools that will assist in assessing future opportunities;
- ✓ Identify the organizational capacity (at both the Kentucky Workforce Innovation Board and staff level) that is required to successfully implement the chosen strategies and objectives; and
- ✓ Identify strategic ways to generate the revenue needed to meet the objectives.

3.00 Evaluation Criteria

The Education and Workforce Development Cabinet will evaluate the proposals based on the following evaluation factors:

1. Demonstrated experience in local/regional planning, development, understanding and implementation (Up to 30 points Total)

Examples:

- A. Example of boots on the ground relationships and partnerships, strategic planning and embedding other partner's planning into overall goals to set vision and mission for desired outcomes

2. Meeting the established need of strategic planning (Up to 20 Points Total)

Examples:

- A. Previous applications with other workforce groups, strategic planning activities, working with multiple partners and entities in different demographic areas

3. Understanding of needed and focused connection between industry, education and economic development (Up to 20 Points Total)

- A. Skills, strategies and connections to help the KWIB connect all stakeholders
- B. Adaptability and potential for establishing partnerships and connecting resources

4. Capacity of the planning entity (up to 15 Points Total)

- A. Strength of internal management and operations
- B. Working relationship with US Department of Labor and/or other federal /state programs
- C. Strength of organization's technology to help communicate, track and measure the decisions and input of local / regional field operations

5. Price Comparison Relative to Quality of Proposal (Up to 15 Points Total)

- A. Size and Scope of Provider
- B. Financial Soundness
- C. Control of internal management and operations
- D. Budget and related details

4.00 Schedule of RFP Activities

The following schedule presents the major activities associated with the RFP distribution, written questions and proposal submission. The Commonwealth reserves the right at its sole discretion to change the Schedule of Activities, including the associated dates and times.

Written questions and Offeror Conference are optional. Agency may choose to do either, both or none. Revise the schedule accordingly.

Release of RFP	11/17/2016
Written Questions due by: TIME	11/25/2016
Anticipated Commonwealth Response to Written Questions	11/30/2016
Proposals Due by: TIME	12/8/2016 at 2:00 P.M.
All bidders are cautioned to be aware of the security in the Sower Building located at 300 Sower Blvd. Frankfort, Kentucky. All bids shall be time stamped in the Education and Workforce Development Cabinet, Division of Administrative Services no later than the due date and time defined in this Solicitation. In person or courier delivered bids in response to this Solicitation shall be delivered to Lori Miller, 4 TH Floor, CSE 14. Delays due to building security checks shall not be justification for acceptance of a late bid.	
*NOTE: ALL TIME REFERENCES ARE TO THE EASTERN TIME ZONE.	

6.00 Point of Contact

The Agency Contact named below shall be the sole point of contact throughout the procurement process. All communications, oral and written (regular mail, express mail, electronic mail or fax), concerning this procurement shall be addressed to:

Lori Miller

300 Sower Blvd. Frankfort, KY. 40601 4th Floor, CSE 14

502-564-2663

lorib.miller@ky.gov

From the issue date of this RFP until a Contractor(s) is selected and the selection is announced, Offerors shall not communicate with any other Commonwealth staff concerning this RFP.

7.00 Questions Regarding this RFP

Questions must be submitted in writing to the Agency Contact. The Commonwealth will respond to salient questions in writing by issuing an Addendum to the Solicitation. The Addendum shall be posted to the Commonwealth's eProcurement page.

8.00 Proposal Submission

Each qualified Offeror shall submit only one (1) proposal. Alternate proposals shall not be accepted.

All submitted technical and cost proposals shall remain valid for a minimum of six (6) months after the proposal due date.

Proposals shall be submitted in two (2) parts: the technical proposal and the cost proposal. The RFP technical response shall include one (1) marked original and 3 copies under sealed cover and one (1) cost proposal marked original under separate sealed cover. All proposals must be received no later than **December 8, 2016 at 2:00 P.M. EST.**

Proposal shall be submitted to the Agency Contact. The outside cover of the package containing the technical proposal shall be marked:

Strategic Planning Process and Facilitation

RFP 531 1700000118

TECHNICAL PROPOSAL

Name of Offeror

The outside cover of the package containing the cost proposal shall be marked:

Strategic Planning Process and Facilitation

RFP 531 1700000118

COST PROPOSAL

Name of Offeror

ELECTRONIC OR FACSIMILE PROPOSALS SHALL NOT BE CONSIDERED.

8.10 Format of Technical Proposal

The Technical Proposal must be arranged and labeled in the manner set forth below.

Transmittal Letter – a Transmittal letter shall be submitted on Offeror's letterhead, and signed by an agent authorized to bind the Offeror. The Transmittal letter shall include the following:

- a. A statement that deviations are included, if applicable.
- b. A statement that proprietary information is included, if applicable.
- c. A statement that, if awarded a contract as a result of this Solicitation, the Offeror shall comply in full with all the requirements of the Kentucky Civil Rights Act, and shall submit all data required by KRS 45.560 to 45.640.
- d. A sworn statement that, pursuant to KRS 11A.040, that Offeror has not knowingly violated any provisions of the Executive Branch Code of Ethics.
- e. A statement certifying that the price in this proposal was arrived at independently without collusion, consultation, communication, or agreement as to any matter relating to such prices with any other Offeror or with any competitor.
- f. A statement affirming that the Offeror is properly authorized under the laws of the Commonwealth of Kentucky to conduct business in this state and will remain in good standing with the Office of the Kentucky Secretary of State for the duration of any awarded contract resulting from this Solicitation.
- g. The name, address, telephone number, fax number and email address and website address, if available, of the contract person to serve as a point of contact for day-to-day operations.
- h. Subcontractor information to include the name of the company, address, telephone number and contact name, if applicable.
- i. Foreign entity's organization number issued by the Secretary of State in a certificate of authority or a statement of foreign qualification, if applicable.

Completed and Signed Solicitation and Addenda – An authorized representative **MUST** complete and sign the Solicitation form and include the following:

- a. "Vendor" box and "Remit To" box must be completed.
- b. Vendor shall indicate ownership type.
- c. Vendor shall provide "FEIN" if applicable.
- d. Vendor shall provide date the form is completed and signed.
- e. Signed face of the most recent Addenda, if applicable.

Signed and Notarized Required Affidavit for Bidders or Offerors - available at the following link:

<http://finance.ky.gov/services/forms/Pages/default.aspx>

Signed and Notarized Required Affidavit for Bidders, Offerors and Contractors Claiming Resident Bidder Status – if applicable. Available at the following link:

<http://finance.ky.gov/services/forms/Pages/default.aspx>

*Offerors not claiming Resident Bidder Status need not submit this affidavit.

Signed and Notarized Required Affidavit for Bidders, Offerors and Contractors Claiming Qualified Bidder Status – if applicable. Available at the following link:

<http://finance.ky.gov/services/forms/Pages/default.aspx>

*Offerors not claiming Qualified Bidder Status need not submit this affidavit.

Response to the Technical Portion of the RFP – Please provide a detailed response to the technical requirements outlined in the Evaluation Criteria. No cost information shall be provided in the technical portion.

8.20 Format of Cost Proposal

The Cost Proposal must be submitted under separate cover from the Technical Proposal and must be arranged and labeled in the manner specified. The proposal with the lowest price receives the maximum score. The remaining proposals with the next lowest price receives points by dividing the lowest price by the next lowest price and multiplying that percentage by the available points.

8.30 Certification Regarding Debarment and Suspension

In accordance with Federal Acquisition Regulation 52.209-5, the Offeror shall certify, by signing the Solicitation, that to the best of its knowledge and belief, the Offeror and/or its Principals is (are) not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency.

For the purposes of this certification, "Principals", means officers, directors, owners, partners, and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager, plant manager, head of subsidiary, division, or business segment, and similar positions.

9.00 Rules of Procurement

To facilitate this procurement, various rules have been established. These are described in the following paragraphs.

Offerors should review and comply with the General Conditions and Instructions for Solicitation/Contract listed under "Response to Solicitation" located on the eProcurement web page at

<http://finance.ky.gov/services/policies/Documents/FAP%20110-10-00.pdf>

The procurement process will provide for the evaluation of proposals and selection of the winning proposal in accordance with state law and regulations. KRS Chapter 45A of the Kentucky Model Procurement Code provides the regulatory framework for the procurement of services by state agencies.

9.10 Technical Proposal Evaluation

The Education and Workforce Development Cabinet will evaluate the proposal based on the technical portion of the Evaluation Criteria. Each Offeror is responsible for submitting all relevant, factual and correct information with their offer to enable the evaluator(s) to afford each vendor the maximum score based on the available data submitted by the Offeror. Past Offeror Performance may be considered in the award of this Contract. Offerors with a record of poor performance in the last twelve (12) months may be found non-responsible and ineligible for award.

9.20 Cost Proposal Evaluation

The Education and Workforce Development Cabinet will evaluate the proposal based on the cost portion of the Evaluation Criteria.

Offeror shall only provide cost on the attached Cost Proposal Form; otherwise, the proposal may be deemed non-responsive.

9.30 Right to Reject/Waiver of Minor Irregularities

The Commonwealth reserves the right at its discretion to reject any and all offers. The Commonwealth also reserves the right at its discretion to waive informalities and minor irregularities in offers received.

9.40 Clarification of Proposals

The Commonwealth reserves the right at its discretion to request additional information as may reasonably be required for selection and to reject any proposals for failure to provide additional information on a timely basis.

The Commonwealth reserves the right to conduct discussions with any Offeror who has submitted a proposal to determine the Offeror's qualifications for further consideration. Such discussions shall not disclose any information derived from proposals submitted by other Offerors.

9.50 Best and Final Offers

The Commonwealth reserves the right at its discretion to request a Best and Final Offer (BAFO) for technical and/or cost proposals. Offerors are cautioned to propose their best possible offers at the outset of the process, as there is no guarantee that any Offeror will be allowed an opportunity to submit a Best and Final technical and/or cost offer.

9.60 Vendor Response and Public Inspection

This RFP specifies the format, required information and general content of proposals to be submitted in response to the RFP. The Education and Workforce Development Cabinet shall not disclose any portions of the proposals prior to contract award to anyone outside the Education and Workforce Development Cabinet, representatives of the agency for whose benefit the contract is proposed, representatives of the federal government, if required, and the members of the evaluation committee. After a contract is awarded in whole or in part, the Commonwealth shall have the right to duplicate, use, or disclose all proposal data submitted by Offerors in response to this RFP as a matter of public record.

Any and all documents submitted by an Offeror in response to the RP shall be available for public inspection after contract award pursuant to the Kentucky Open Records Act, KRS 61.870 to 61.884 ("the Act"). When responding to a request to inspect records submitted in response to this RFP, the Commonwealth will not redact or withhold any information or documents unless the records sought are exempt from disclosure pursuant to KRS 61.878 or other applicable law. Similarly, no such documents shall be exempt from public disclosure, regardless of the Offeror's designation of the information contained therein as "proprietary," "confidential," or otherwise, except in cases where the requested documents (or information contained therein) would be excluded from application of the Act under KRS 61.878(1)(c).

The Commonwealth of Kentucky shall have the right to use all system ideas, or adaptations of those ideas, contained in any proposal received in response to this RFP. Selection or rejections of the proposal will not affect this right.

9.70 Reciprocal Preference for Kentucky Resident Bidders and Preferences for a Qualified Bidder

The scoring of bids/proposals is subject to the reciprocal preference for Kentucky resident bidders and preferences for a Qualified Bidder or the Department of Corrections, Division of Prison Industries (See KRS 45A.490(1), (2), 45A.492, 45A.494 and KAR 200 5:410).

Vendors not claiming resident bidder or qualified bidder status need not submit the corresponding affidavit.

Determining the residency of a bidder for purposes of applying a reciprocal preference

Any individual, partnership, association, corporation, or other business entity claiming resident bidder status shall submit the attached Required Affidavit for Bidders, Offerors and Contractors Claiming Resident Bidder Status as part of its response. The Education and Workforce Development Cabinet reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

As part of its response, a nonresident bidder shall submit its certificate of authority to transact business in the Commonwealth of Kentucky, Secretary of State. The location of the principal office identified therein shall be deemed the state of residency for that bidder. If the bidder is not required by law to obtain said certificate, the state of residency for that bidder shall be deemed to be that which is identified in its mailing address as provided in its bid.

Preferences for Qualified Bidder or the Department of Corrections, Division of Prison Industries (200 KAR 5:410)

Pursuant to KRS 45A.470 and 200 KAR 5:410, Kentucky Correctional Industries will receive a preference equal to twenty (20) percent of the maximum points awarded to a bidder in a solicitation. In addition, the following "qualified bidders" will receive a preference equal to fifteen (15) percent of the maximum points awarded to a bidder in a solicitation. New Vision Industries, Inc., any nonprofit corporation that furthers the purposes of KRS Chapter 163 and any qualified nonprofit agencies for individuals with severe disabilities as defined in KRS 45A.465(3). Any bidder claiming "qualified bidder" status, other than New Vision Industries, Inc., shall submit a notarized affidavit affirming that it meets the requirements to be considered a qualified bidder as part of its response to the solicitation (affidavit form included as part of this RFP). If requested, failure to provide documentation proving qualified bidder status to a public agency, if requested, may result in disqualification of the bidder or contract termination.

9.80 Right to Use Oral Presentations to Verify/Expand on Proposal

The Commonwealth reserves the right at its discretion to require Oral Presentations by some or all of the Offerors to verify or expand on the Technical or Cost Proposals.

9.85 Oral Presentation Evaluation Criteria

The highest ranking vendors may be requested to provide oral presentations/demonstrations to answer questions or to clarify the understanding of the evaluators in accordance with the requirements of this RFP. The oral presentation shall be scheduled at the discretion of the Commonwealth. The Commonwealth reserves the right not to require oral presentations/demonstrations at its discretion or in the event that they would not affect the final rankings.

9.90 Negotiation

After conducting the evaluation to determine the best proposal received, the Education and Workforce Development reserves the right to negotiate a fair and reasonable compensation based on the pricing submitted in the offeror's proposal. If the negotiations fail to reach an agreement on a fair and reasonable compensation rate, the Education and Workforce Development Cabinet reserves the right to proceed to the next highest ranked proposal. Other terms and conditions relating to the technical and/or cost proposals may be negotiated at the sole discretion of the Commonwealth.

9.95 Best Interests of the Commonwealth

The Commonwealth will rank all proposals in the manner set forth in the Evaluation Criteria. However, the Commonwealth reserves the right to reject any or all proposals in whole or in part before, during, or after negotiation based on the best interests of the Commonwealth.

CONTRACT AWARD, TERMS, AND CONDITIONS

10.00 Notification of Award

To view the award of contract(s), including the contractor(s) receiving the award(s) for this solicitation, access the Kentucky Vendor Self Service Site at <https://emars.ky.gov/webapp/vssonline/AltSelfService>.

Offerors can search for the solicitation title or number in the keyword search field or filter their search for only awarded solicitations by clicking on "Advanced Search" and changing the status to "awarded." The award(s) information can be accessed by clicking on the details button of the solicitation and clicking the "Notice of Award" tab. It is the Offeror's responsibility to review this information in a timely fashion. No other notification of the results of an Award of Contract will be provided to unsuccessful Offerors.

10.10 Beginning of Work

This Contract is not effective and binding until approved by the Secretary of the Finance and Administration Cabinet and filed with the Legislative Research Commission's Government Contract Review Committee. The Contractor shall not commence any billable work until a valid Contract has been fully executed. This Contract, including the components referenced in Section 10.20, shall represent the entire agreement between the parties. Prior negotiations, representations, or agreements, either written or oral, between the parties hereto relating to the subject matter hereof shall be of no effect upon this Contract.

10.20 Contract Components and Order of Precedence

The Commonwealth's acceptance of the Contractor's offer in response to the Solicitation, indicated by the issuance of a Contract Award, shall create a valid contract between the Parties consisting of the following:

1. Any written Agreement between the Parties.
2. Any Addenda to the Solicitation.
3. The Solicitation and all attachments hereto.
4. Any Best and Final Offer.
5. Any clarifications concerning the Contractor's proposal in response to the Solicitation.
6. The Contractor's proposal in response to the Solicitation.

In the event of any conflict between or among the provisions contained in the Contract, the order of precedence shall be as enumerated above.

10.30 Contract Term and Renewal Option

If no renewal option is provided, delete all renewal information and references that are in red font in this section. If a renewal option is provided, the number of renewals and renewal periods must be clearly stated. Typically no more than 2 renewals are allowed except for contracts for legal services for representation in ongoing litigation or other lengthy legal engagements.

The initial term of the Contract is anticipated to be from January 1, 2017 through August. Expiration date must be no later than the end of the biennium in which the contract is entered into.

This agreement is not effective until the Secretary of the Finance and Administration Cabinet or his authorized designee has approved the Contract and until the Contract has been filed with the Legislative Research Commission, Government Contract Review Committee.

The Commonwealth reserves the right to renew this contract for up to two (2) additional two (2) year periods.

Renewal shall be subject to prior approval from the Secretary of the Finance and Administration Cabinet, or this authorized designee, and the LRC Government Contract Review Committee in accordance with KRS 45A.695 and KRS 45A.705.

10.40 Changes and Modifications to the Contract

Pursuant to 200 KAR 5:311, no modification or change of any provision in the Contract shall be made, or construed to have been made, unless such modification is mutually agreed to in writing by the Contractor and the Commonwealth, and incorporated as a written amendment by the Education and Workforce Development Cabinet prior to the effective date of such modification or change. Modification shall be subject to prior approval from the Secretary of the Finance and Administration Cabinet, or this authorized designee, and the LRC Government Contract Review Committee. Memoranda of Understanding, written clarification, and/or other correspondence shall not be construed as amendments to the Contract.

10.50 Notices

Unless otherwise instructed, all notices, consents, and other communications required and/or permitted by the Contract shall be in writing. After the award of the Contract, all communications of a contractual or legal nature are to be made to the Agency Contact.

11.00 Personal Service Contract (PSC) Standard Terms and Conditions

Whereas, the first party, the state agency, has concluded that either state personnel are not available to perform said function, or it would not be feasible to utilize state personnel to perform said function; and

Whereas, the second party, the Contractor, is available and qualified to perform such function; and

Whereas, for the abovementioned reasons, the state agency desires to avail itself of the services of the second party;

NOW THEREFORE, the following terms and conditions are applicable to this contract:

Effective Date:

This contract is not effective until the Secretary of the Finance and Administration Cabinet or his authorized designee has approved the contract and until the contract has been submitted to the Legislative Research Commission "LRC", Government Contract Review Committee. However, in accordance with KRS 45A.700, contracts in aggregate amounts of \$10,000 or less are exempt from review by the committee and need only be filed with the committee within 30 days of their effective date for informational purposes.

KRS 45A.695(7) provides that payments on personal service contracts and memoranda of agreement shall not be authorized for services rendered after Government Contract Review Committee disapproval, unless the decision of the committee is overridden by the Secretary of the Finance and Administration Cabinet or agency head, if the agency has been granted delegation authority by the Secretary.

Renewals:

Upon expiration of the initial term, the contract may be renewed in accordance with the terms and conditions in the original solicitation. Renewal shall be subject to prior approval from the Secretary of the Finance and Administration Cabinet or his authorized designee and the LRC Government Contract Review Committee in accordance with KRS 45A.695 and KRS 45A.705, and contingent upon available funding.

LRC Policies:

Pursuant to KRS 45A.725, LRC has established policies which govern rates payable for certain professional services. These are located on the LRC webpage <http://www.lrc.ky.gov/Statcomm/Contracts/homepage.htm> and would impact any contract established under KRS 45A.690 et seq., where applicable.

Choice of Law and Forum:

All questions as to the execution, validity, interpretation, construction, and performance of this contract shall be governed by the laws of the Commonwealth of Kentucky. Furthermore, the parties hereto agree that any legal action which is brought on the basis of this contract shall be filed in the Franklin County Circuit Court of the Commonwealth of Kentucky.

Cancellation:

The state agency shall have the right to terminate and cancel this contract at any time not to exceed thirty (30) days written notice served on the Contractor by registered or certified mail. (See KRS 45A.695(1); see also 200 KAR 5:312).

Funding Out Provision:

The state agency may terminate this contract if funds are not appropriated to the contracting agency or are not otherwise available for the purpose of making payments without incurring any obligation for payment after the date of termination, regardless of the terms of the contract. The state agency shall provide the Contractor thirty (30) calendar days' written notice of termination of the contract due to lack of available funding.

Reduction in Contract Worker Hours:

The Kentucky General Assembly may allow for a reduction in contract worker hours in conjunction with a budget balancing measure for some professional and non-professional service contracts. If under such authority the agency is required by Executive Order or otherwise to reduce contract hours, this contract will be reduced by the amount specified in that document.

Authorized to do Business in Kentucky:

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

The Contractor affirms that it is properly authorized under the laws of the Commonwealth of Kentucky to conduct business in this state and will remain in good standing to do business in the Commonwealth of Kentucky for the duration of any contract awarded.

If a foreign entity, the Contractor shall maintain a certification of authority to conduct business in the Commonwealth of Kentucky during the term of this contract. Such registration is obtained from the Secretary of State pursuant to the process outlined below.

Registration with the Secretary of State by a Foreign Entity:

Pursuant to KRS 45A.480(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth

("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. Therefore, foreign entities should submit a copy of their certificate with their solicitation response. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception in its solicitation response. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Invoices for fees:

The Contractor shall maintain supporting documents to substantiate invoices and shall furnish same if required by state government. The invoice must conform to the method described in this contract.

Pursuant to KRS 45A.695, no payment shall be made on any personal service contract unless the individual, firm, partnership, or corporation awarded the personal service contract submits its invoice for payment on a form established by the committee.

*Invoice form is available on the Legislative Research Commission, Government Contract Review Committee website: <http://www.lrc.ky.gov/Statcomm/Contracts/homepage.htm>

Travel expenses, if authorized:

The Contractor shall be paid for no travel expenses, unless and except as specifically authorized by the specifications of this contract, or authorized in advance and in writing by the Commonwealth. Either original or certified copies of receipts must be submitted for airline tickets, hotel bills, restaurant charges, rental car charges, and any other miscellaneous expenses.

Other expenses, if authorized herein:

The Contractor shall be reimbursed for no other expenses of any kind, unless and except as specifically authorized within the specifications of this contract, or authorized in advance and in writing by the Commonwealth.

If the reimbursement of such expenses is authorized, the reimbursement shall be only on an out-of-pocket basis. Request for payment of same shall be processed upon receipt from the Contractor of valid, itemized statements submitted periodically for payment at the time any fees are due. The Contractor shall maintain supporting documents that substantiate every claim for expenses and shall furnish copies of same in support of requests for payment submitted to the Commonwealth.

Purchasing and specifications:

The Contractor certifies that he/she will not attempt in any manner to influence any specifications to be restrictive in any way or respect nor will he/she attempt in any way to influence any purchasing of services, commodities or equipment by the Commonwealth of Kentucky. For the purpose of this paragraph and the following paragraph that pertains to conflict-of-interest laws and principles, "he/she" is construed to mean "they" if more than one person is involved. If a firm, partnership, corporation, or other organization is involved, then "he/she" is construed to mean any person with an interest therein.

Conflict-of-interest laws and principles:

The Contractor certifies that he/she is legally entitled to enter into this contract with the Commonwealth of Kentucky, and by holding and performing this contract, he/she will not be violating any conflict-of-interest statute (KRS 45A.330-45A.340, 45A.990, 164.390), nor KRS 11A.040 of the executive branch code of ethics relating to the employment of former public servants.

Campaign finance:

The Contractor certifies that neither he/she nor any member of his/her immediate family having an interest of 10% or more in any business entity involved in the performance of this contract has contributed more than the amount specified in KRS 121.056(2) to the campaign of the gubernatorial candidate elected at the election last preceding the date of this contract. The Contractor further swears under the penalty of perjury, as provided by KRS 523.020, (i) that neither he/she nor the company which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth, and (ii) that the award of a contract to him/her or the company which he/she represents will not violate any provisions of the campaign finance laws of the Commonwealth.

Access to Records:

The Contractor, as defined in KRS 45A.030(8) and (10), agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of a financial audit or program review. The Contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

Protest:

Pursuant to KRS 45A.285, the Secretary of the Finance and Administration Cabinet, or his designee, shall have authority to determine protests and other controversies of actual or prospective vendors in connection with the solicitation or selection for award of a contract.

Any actual or prospective vendor, who is aggrieved in connection with the solicitation or selection for award of a contract, may file protest with the Secretary of the Finance and Administration Cabinet. A protest or notice of other controversy must be filed promptly and, in any event, within two (2) calendar weeks after such aggrieved person knows or should have known of the facts giving rise thereto. All protests or notices of other controversies must be in writing and shall be addressed to:

William M. Landrum III, Secretary
Commonwealth of Kentucky
Finance and Administration Cabinet
Room 383, New Capitol Annex
702 Capitol Avenue
Frankfort, KY 40601

The Secretary of the Finance and Administration Cabinet, or his designee, shall promptly issue a decision in writing. A copy of that decision shall be mailed or otherwise furnished to the aggrieved party and shall state the reasons for the action taken.

The decision by the Secretary of the Finance and Administration Cabinet shall be final and conclusive.

Social security: (check one)

_____ The parties are cognizant that, pursuant to 42 U.S. Code, section 418, the state is not liable for social security contributions relative to the compensation of the second party for this contract.

_____ The parties are cognizant that, pursuant to 42 U.S. Code, section 418, the state is liable for social security contributions relative to the compensation of the second party for this contract.

Violation of tax and employment laws:

KRS 45A.485 requires the Contractor and all subcontractors performing work under the contract to reveal to the Commonwealth, prior to the award of a contract, any final determination of a violation by the Contractor within the previous five (5) year period of the provisions of KRS chapters 136, 139, 141, 337, 338, 341, and 342. These statutes relate to the state sales and use tax, corporate and utility tax, income tax, wages and hours laws, occupational safety and health laws, unemployment insurance laws, and workers compensation insurance laws, respectively.

To comply with the provisions of KRS 45A.485, the Contractor and all subcontractors performing work under the contract shall report any such final determination(s) of violation(s) to the Commonwealth by providing the following information regarding the final determination(s): the KRS violated, the date of the final determination, and the state agency which issued the final determination.

KRS 45A.485 also provides that, for the duration of any contract, the Contractor and all subcontractors performing work under the contract shall be in continuous compliance with the provisions of those statutes, which apply to their operations, and that their failure to reveal a final determination, as described above, or failure to comply with the above statutes for the duration of the contract, shall be grounds for the Commonwealth's cancellation of the contract and their disqualification from eligibility for future state contracts for a period of two (2) years.

Discrimination:

This section applies only to contracts disbursing federal funds, in whole or part, when the terms and conditions for receiving those funds mandate its inclusion. Discrimination (because of race, religion, color, national origin, sex, sexual orientation, gender identity, age, or disability) is prohibited. During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, sex, sexual orientation, gender identity or age. The Contractor further agrees to comply with the provisions of the Americans with Disabilities Act (ADA), Public Law 101-336, and applicable federal regulations relating thereto prohibiting discrimination against otherwise qualified disabled individuals under any program or activity. The Contractor agrees to provide, upon request, needed reasonable accommodations. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

2. In all solicitations or advertisements for employees placed by or on behalf of the Contractor, the Contractor will state that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability.

3. The Contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding a notice advising the said labor union or workers' representative of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

4. The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations and relevant orders of the Secretary of Labor.

5. The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended, and such other sanctions that may be imposed and remedies invoked as provided in or as otherwise provided by law.

7. The Contractor will include the provisions of paragraphs (1) through (7) of section 202 of Executive Order 11246 in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor, issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.



TO: KWIB

FROM: Rob Southard, Chair of the Data and Performance Committee

DATE: November 17, 2016

SUBJECT: Committee Report

The Data, Performance, and Accountability Committee has met with the Kentucky Chamber of Commerce to listen to their ideas concerning measures and accountability. The committee also was invited to a demonstration of the KCEWS new platform for the Department of Adult Education. The platform provided committee members with a visual of what kind of dashboard potential they can provide.











Next steps are to:

- Allow **all** committee members to view the link to see its value.
- Preview **the current KCEWS** data sources that could be converted to the new platform.
- Review some other states' dashboards for data consideration.
- Compile a summary of this exercise and utilize as a resource for strategic planning activities.

Additional direct ideas shared with the other committees are:

- A **single point of contact** in each workforce area is essential to coordinating a successful effort.
- Employers **must** be more formally embedded into the planning and decision making process of the education process.
- Direct accountability at each entry and exit point of the supply/demand paths created.
 - **Accountability** defined in terms of investment dollars and outcomes realized. Outcomes defined relative to the demand targeted in each business sector and occupational role. This return on investment philosophy will better persuade employers that the state is serious in its intentions to fill their needs.
- Short term strategies will be necessary to meet the immediate needs of the employer demand.
- **Leadership** that holds the service providers accountable at each point in the workforce pipeline.
- **Marketing** and communication methods will require all conduits if we are to be successful. Early successes should be celebrated widely with as much publicity as possible to create awareness and fuel expectations.




Barriers Needing Best Practice Reviews

	Business	Education	Government	Social
1	Lack of Skilled of Workers 	Unprepared Students and /or Limited Access for Career and College 	Silos of Resources and Constraints of How to Spend Resources	Unwilling but Able to Work 
2	Lack of Awareness of Resources	Misunderstanding Conceptually of How Curriculum is Applied via Real World Industry Examples 	Redundancy and Duplication of Efforts and Resources	Lack of Education / Skills 
3	Lack of Alignment of Training with Job Demand 	Economic and Social Barriers of Student's Environments 	Power Struck - Control / Regional and Local Constraints	Individuals with Disabilities or Barriers Not Being Given Chances 
4	Differing Perspective on Education	Uneven Access to Opportunity for Students	Spread Thin in Capacity in Many Cases with Decreases in Funding and Greater Need	Supportive Services (Childcare / Dependent Care / Transportation)
5	Lack of Participation in Educational Change 	Overwhelmed with Daunting Task 	Ineffective Policies / Red Tape	Access to Transportation / Lack of Transportation Infrastructure

FOCUS ON EMPLOYMENT RATHER THAN UNEMPLOYMENT

BE PROACTIVE RATHER THAN REACTIVE

Possible Solutions to Review

	Employer Led Work Based Learning Models (TRACK, KY FAME, LIFT, etc)
	Self Accountability Modeled Programs (Essential Skill Programs, Career Coaching, Etc,)
	Entrepreneurial Programs (SBDC, KIN, FastTrack, etc)



TO: KWIB

FROM: Pat Murphy, Chair of the Policy and Process Committee

DATE: November 17, 2016

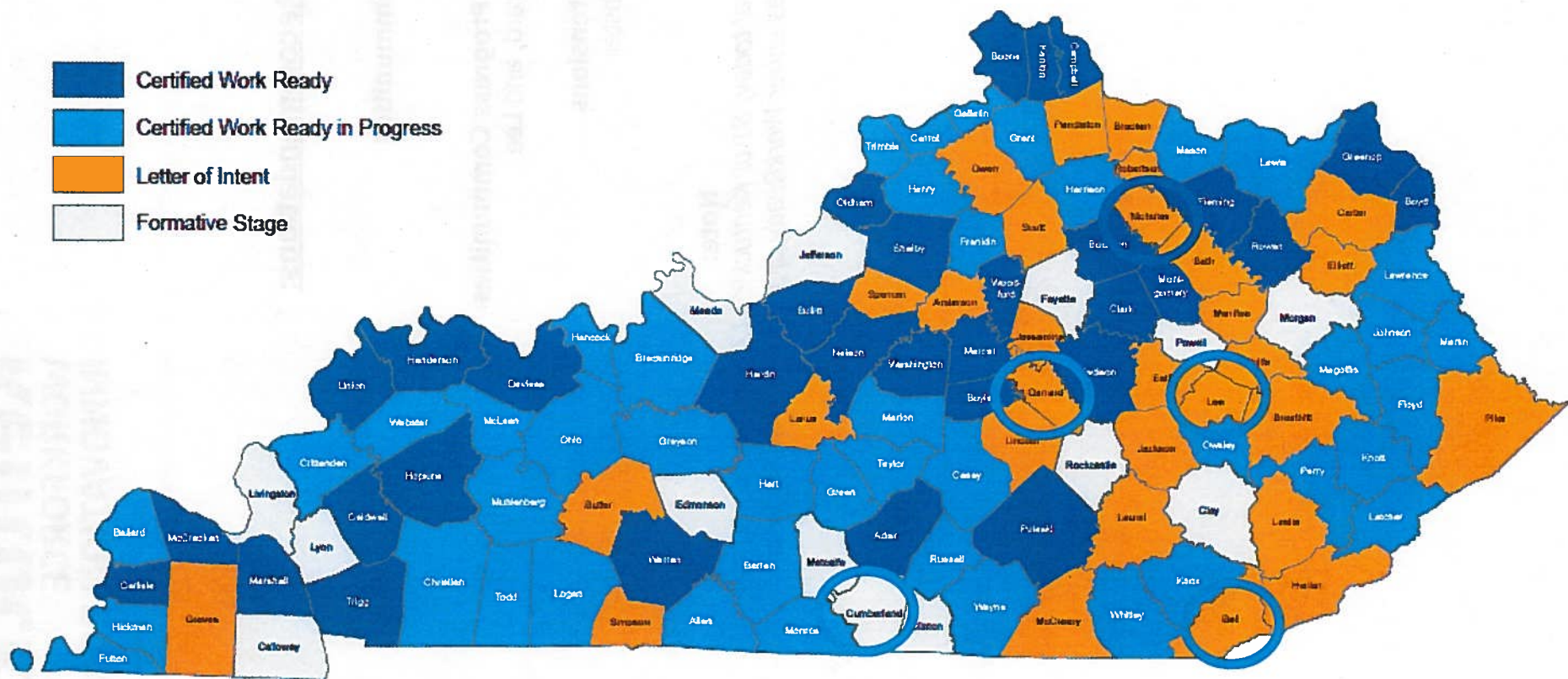
SUBJECT: Committee Report

Our committee has taken a short break until the final WIOA regulations were released. The WIOA regs were released in August and an internal team has begun to meet to determine how the regulations will be applied to the Commonwealth. The role of the KWIB Policy and Process committee, as it relates to the regulations, is in the process of being identified.

While this portion of our Committee's work is being formulated, we will most likely be asked to provide assistance / guidance, from a policy and process perspective to the other KWIB committees on recommendations made to the KWIB by the other committees.

However, at this time our committee will make No Recommendations to the KWIB. We anticipate our committee meeting to be scheduled in the next month or so to begin understanding our role in moving forward and in reviewing recommendations made by other committees.

KENTUCKY
Work Ready
COMMUNITIES



Nov. 17, 2016

November 17, 2016 Recommendations:

Kentucky Work Ready Communities

Nicholas

Kentucky Work Ready in Progress Communities

Bell, Cumberland, Garrard, and Lee

Kentucky Work Ready Extensions

Logan, Taylor and Webster

Note:

With approval today, 81 of Kentucky's 120 counties have been certified as either WorkReady or WorkReady in Progress.

Business Education Committee Work

Jason Luring, Chair

Catalent Pharma Solutions

Feb 2016:	Committee formed
March 2016:	Intro to Career Tech Education and certification information
April–May 2016:	Employer survey of certification awareness and acceptance
May 2016:	Initial data completed and presented to KWIB on high demand sectors
June 2016:	Summarize results of survey and begin review of demand data per industry sector analysis
July 2016:	Present findings of survey and review New Skills for Youth grant (JPMorgan CHASE)
August 2016:	Make short term recommendation to KWIB for 2016-2017 to leave certifications AS IS until further data and research can be done and; Present demand data to KWIB via initial efforts of Economic Development Cabinet
Sept –Oct 2016:	Finalize demand data with KCEWS assistance to establish top sector occupational demand
Nov 2016:	Make 6 initial recommendations based upon findings throughout this process

VALID KOSSA AND INDUSTRY CERTIFICATIONS 2016-17

Schools, groups, or persons wishing to have a new Industry Certification added to this list must complete the Industry Certification Additions form by October 1st. The form is located at <http://education.ky.gov/CTE/kossa/Pages/ValidKOSSAList.aspx>

A certification must meet the criteria identified below to be considered for federal Perkins Accountability and the Career Readiness component for Kentucky Department of Education College/Career Readiness Accountability.

1. Recognized, endorsed, or required by industry
2. Written and verified by national or state industries
3. Curriculum and certification aligned with state and/or national standards
4. Certification must be an end of program assessment related to the student's identified career pathway achieved through a sequence of courses.

A student must be preparatory in a career pathway, receive a related industry certification/KOSSA and meet the benchmarks on ASVAB/WorkKeys to be considered Career Ready.

Career Ready – the level of preparation a high school graduate needs in order to proceed to the next step in a chosen career, whether that is postsecondary coursework, industry certification, or entry into the workforce.

Preparatory – A Student who has completed two CTE credits in a preparatory program and is enrolled in and completes the third credit by the end of the school year.

Sequence of Courses – A sequence of progressive, non-duplicative courses that result in earning four credits in a CTE Pathway.

Cluster	Career Pathway	Industry Certifications
Agricultural Education	Agribiotechnology Systems	
Agricultural Education	Agribusiness Systems	
Agricultural Education	Agricultural Power, Structural, Technical Systems	Equipment & Engine Training Council Two Stroke
Agricultural Education	Agricultural Power, Structural, Technical Systems	2 Exams Required - AWS-SENSE Certification (Level 1) and Briggs and Stratton Master Service Technician
Agricultural Education	Agricultural Power, Structural, Technical Systems	Equipment & Engine Training Council Four Stroke
Agricultural Education	Animal Science Systems	NAVTA - Veterinary Assisting Certification
Agricultural Education	Animal Science Systems	iCEV - Elanco Fundamentals of Animal Science
Agricultural Education	Environmental Science/Natural Resources Systems	Underground & Surface Mining
Agricultural Education	Food Science and Processing Systems	iCEV - American Meat Science Association Food Safety and Science
Agricultural Education	Horticulture and Plant Science Systems	iCEV - Bayer Crop Science Plant Science
Business & Marketing Education Business	Accounting	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Finance (#ME23)
Business & Marketing Education Business	Accounting	Microsoft Office Specialist (MOS) - 3 of 4 - Excel (Required), Access, PowerPoint, Word
Business & Marketing Education Business	Administrative Support	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Business	Business & Marketing Education	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Business	Business & Marketing Education	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)

Cluster	Career Pathway	Industry Certifications
Business & Marketing Education Business	Business & Marketing Education	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Business	Business Management	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)
Business & Marketing Education Business	Business Management	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Entrepreneurship/Management (#ME22)
Business & Marketing Education Business	Business Management - High School of Business	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)
Business & Marketing Education Business	Business Management - High School of Business	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Entrepreneurship/Management (#ME22)
Business & Marketing Education Business	Business Multimedia	Adobe Certified Associate - Dreamweaver
Business & Marketing Education Business	Business Multimedia	Adobe Certified Associate - Flash
Business & Marketing Education Business	Business Multimedia	Adobe Certified Associate - Photoshop
Business & Marketing Education Business	Business Multimedia	Adobe Certified Associate - InDesign
Business & Marketing Education Business	Business Multimedia	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Business	Business Multimedia	Apple Certified Professional - 3 Exams Required - Pages, Numbers, Keynote

Cluster	Career Pathway	Industry Certifications
Business & Marketing Education Business	Business Technology	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)
Business & Marketing Education Business	Database Management	Microsoft Office Specialist (MOS) - 3 of 4 - Access (Required), Excel, PowerPoint, Word
Business & Marketing Education Business	Finance	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Finance (#ME23)
Business & Marketing Education Business	Finance - NAF	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Finance (#ME23)
Business & Marketing Education Business	Finance - NAF	NAF Track Certification
Business & Marketing Education Business	Information Processing	Adobe Certified Associate - Dreamweaver
Business & Marketing Education Business	Information Processing	Adobe Certified Associate - Flash
Business & Marketing Education Business	Information Processing	Adobe Certified Associate - Photoshop
Business & Marketing Education Business	Information Processing	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Business	Legal Office	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Business	Medical Business Office	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word

Cluster	Career Pathway	Industry Certifications
Business & Marketing Education Business	Web Design for Business	Adobe Certified Associate - Dreamweaver
Business & Marketing Education Business	Web Design for Business	Adobe Certified Associate - Flash
Business & Marketing Education Business	Web Design for Business	Adobe Certified Associate - Photoshop
Business & Marketing Education Business	Web Design for Business	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Marketing	Advertising	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Business & Marketing Education	Microsoft Office Specialist (MOS) - 3 of 4 - Access, Excel, PowerPoint, Word
Business & Marketing Education Marketing	Business & Marketing Education	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)
Business & Marketing Education Marketing	Business & Marketing Education	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	E-Commerce	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	E-Commerce	CIW E-Commerce Specialist

Cluster	Career Pathway	Industry Certifications
Business & Marketing Education Marketing	Fashion Marketing	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Financial Services (Marketing)	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Finance (#ME23)
Business & Marketing Education Marketing	Financial Services (Marketing)	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Hospitality, Travel, Tourism & Recreation	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Hospitality, Travel, Tourism & Recreation - NAF	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Hospitality, Travel, Tourism & Recreation - NAF	NAF Track Certification
Business & Marketing Education Marketing	Management Entrepreneurship	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Business Concepts (#ME05)
Business & Marketing Education Marketing	Management Entrepreneurship	Assessment of Skills and Knowledge for Business (ASK) - Concepts of Entrepreneurship/Management (#ME22)
Business & Marketing Education Marketing	Marketing	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Retail/Wholesaling	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)
Business & Marketing Education Marketing	Sports Marketing	Assessment of Skills and Knowledge for Business (ASK) - Fundamental Marketing Concepts (#ME06)

Cluster	Career Pathway	Industry Certifications
Construction Technology	Heavy Equipment Sciences	NCCER - Heavy Equipment Operations (Level 1)
Construction Technology	Construction Trades-TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Construction Technology	Heavy Equipment Sciences-TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Construction Air Conditioning Technology	Domestic Air Conditioner and Furnace Installer	NCCER - 2 Exams Required - Core Curriculum and HVAC (Level 1)
Construction Air Conditioning Technology	Environmental Control System Servicer Assistant	EPA Section 608 Certification
Construction Air Conditioning Technology	Environmental Control System Servicer Assistant	NCCER - 2 Exams Required - Core Curriculum and HVAC (Level 1)
Construction Air Conditioning Technology	Refrigeration Mechanic	NCCER - 2 Exams Required - Core Curriculum and HVAC (Level 1)
Construction Building and Apartment Repair	Bricklayer Assistant	NCCER - 2 Exams Required - Core Curriculum and Masonry (Level 1)
Construction Building and Apartment Repair	Environmental Control System Servicer Assistant	NCCER - 2 Exams Required - Core Curriculum and HVAC (Level 1)
Construction Building and Apartment Repair	Environmental Control System Servicer Assistant	EPA Section 608 Certification
Construction Building and Apartment Repair	Residential Maintenance Carpenter Assistant	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Construction Construction Carpentry Technology	Carpenter Assistant	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)

Cluster	Career Pathway	Industry Certifications
Construction Construction Carpentry Technology	Construction Forms Assistant	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Construction Construction Carpentry Technology	Finish Carpenters Assistant	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Construction Construction Carpentry Technology	Residential Carpenter Assistant	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Construction Construction Carpentry Technology	Carpentry-TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Construction Electrical Technology	Electrician Assistant	NCCER - 2 Exams Required - Core Curriculum and Electrical Technician (Level 1)
Construction Electrical Technology	Industrial Electrician Assistant	NCCER - 2 Exams Required - Core Curriculum and Electrical Technician (Level 1)
Construction Electrical Technology	Residential Electrician	NCCER - 2 Exams Required - Core Curriculum and Electrical Technician (Level 1)
Construction Electrical Technology	Construction-Electrical-TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Construction Masonry	Bricklayer Assistant	NCCER - 2 Exams Required - Core Curriculum and Masonry (Level 1)
Construction Masonry	Mason Apprentice	NCCER - 2 Exams Required - Core Curriculum and Masonry (Level 1)
Construction Technology Masonry	Masonry-TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Construction Plumbing	Plumber Assistant	NCCER - 2 Exams Required - Core Curriculum and Plumbing (Level 1)
Energy Creation/Transmission	Mining Technology	Underground & Surface Mining

Cluster	Career Pathway	Industry Certifications
Energy Creation/Transmission	Natural Gas Pipeline	NGT-CM11 Certification and NGT-CM7 Certification - Both Required
Energy Creation/Transmission	Sustainability & Energy Application Technician	Outdoor Power Equipment Technician Certifications
Engineering & Technology Education	Civil Architecture & Construction Technology	Autodesk AutoCAD Certified User
Engineering & Technology Education	Civil Architecture & Construction Technology	Autodesk Inventor Certified User
Engineering & Technology Education	Civil Architecture & Construction Technology	Autodesk Revit Architecture Certified User
Engineering & Technology Education	Civil Architecture & Construction Technology	Certified Solid Works Associate (CSWA)
Engineering & Technology Education	Civil Architecture & Construction Technology	Autodesk AutoCAD Civil 3D
Engineering & Technology Education	Engineering & Technology Design	Autodesk AutoCAD Certified User
Engineering & Technology Education	Engineering & Technology Design	Autodesk Inventor Certified User
Engineering & Technology Education	Engineering & Technology Design	Autodesk Revit Architecture Certified User
Engineering & Technology Education	Graphic & Digital Communications	Autodesk AutoCAD Certified User
Engineering & Technology Education	Graphic & Digital Communications	Autodesk Inventor Certified User
Engineering & Technology Education	Graphic & Digital Communications	Adobe Certified Associate - Flash
Engineering & Technology Education	Graphic & Digital Communications	Adobe Certified Associate - Dreamweaver
Engineering & Technology Education	Graphic & Digital Communications	Adobe Certified Associate - Photoshop
Engineering & Technology Education	Graphic & Digital Communications	Certified Solid Works Associate (CSWA)

Cluster	Career Pathway	Industry Certifications
Engineering & Technology Education	Manufacturing Engineering Technology Technician	MasterCam CNC Certification
Engineering & Technology Education	Manufacturing Engineering Technology Technician	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Engineering & Technology Education	Project Lead the Way (PLTW) - Engineering	Autodesk Inventor Certified User
Engineering & Technology Education	Project Lead the Way (PLTW) - Engineering	Autodesk Revit Architecture Certified User
Engineering & Technology Education	Project Lead the Way (PLTW) - Engineering - NAF	NAF Track Certification
Engineering & Technology Education	Robotics & Automation	Autodesk Inventor Certified User
Engineering & Technology Education		
Aeronautics & Aerospace	Aeronautical Engineering	FAA - Private Pilot Written Exam
Engineering & Technology Education		
Aeronautics & Aerospace	Aeronautical Engineering	FAA - Recreational Pilot Certificate
Engineering & Technology Education		
Aeronautics & Aerospace	Aircraft Maintenance Technician	FAA - Airframe and Power Plant General Written Exam
Engineering & Technology Education		
Aeronautics & Aerospace	Flight & Aeronautics	FAA - Private Pilot Written Exam
Family and Consumer Sciences	Consumer & Family Management	AAFCS Pre-PAC Family and Community Services
Family and Consumer Sciences	Consumer & Family Management	AAFCS Pre-PAC Personal and Family Finance
Family and Consumer Sciences	Cosmetology	State Licensed Nail Technician
Family and Consumer Sciences	Culinary & Food Services	AAFCS Pre-PAC Culinary Arts
Family and Consumer Sciences	Culinary & Food Services	ServSafe Food Managers

Cluster	Career Pathway	Industry Certifications
Family and Consumer Sciences	Culinary & Food Services	Prostart
		2 Exams Required - Kentucky Early Care & Education Orientation Certificate and Commonwealth Child Care Credential (CCCC)
Family and Consumer Sciences	Early Childhood Education	AAFCS Pre-PAC Early Childhood Education
Family and Consumer Sciences	Early Childhood Education	Child Development Associate (CDA)
Family and Consumer Sciences	Fashion and Interior Design	AAFCS Pre-PAC Fashion, Textiles and Apparel
Family and Consumer Sciences	Fashion and Interior Design	AAFCS Pre-PAC Interior Design Fundamentals
Family and Consumer Sciences	Food Science & Dietetics	AAFCS Pre-PAC Food Science Fundamentals
Family and Consumer Sciences	Food Science & Dietetics	AAFCS Pre-PAC Nutrition, Food and Wellness
Family and Consumer Sciences	Fundamentals of Teaching	AAFCS Pre-PAC Education Fundamentals
Family and Consumer Sciences	Hospitality Services	ServSafe Food Managers
Health Science	Allied Health	
Health Science	Dental Assisting	Dental Assisting Credential - 3 Certifications Required -(CPR/First Aid, OSHA, Dental Radiation Certificate
Health Science	EKG Technology/Technician	Certified EKG Technician
Health Science	EKG Technology/Technician	Clinical Medical Assistant
Health Science	Emergency Medical Technician	EMT - Basic National Certification
Health Science	General Biomedical	Certified EKG Technician
Health Science	General Biomedical	Pharmacy Technician
Health Science	Medical Administrative Assisting	NHA Certified Medical Administrative Assistant
Health Science	Pharmacy Technician	Certified Pharmacy Technician
Health Science	Phlebotomy Technician	Certified Phlebotomy Technician
Health Science	Phlebotomy Technician	Clinical Medical Assistant
Health Science	PLTW Biomedical Sciences	Certified EKG Technician
Health Science	PLTW Biomedical Sciences	Pharmacy Technician
Health Science	Pre-Nursing	State Registered Nursing Assistant (SRNA)/Medicaid Nurse Aid (MNA)
Health Science	Pre-Nursing - NAF	State Registered Nursing Assistant (SRNA)/Medicaid Nurse Aid (MNA)
Health Science	Pre-Nursing - NAF	NAF Track Certification
Health Science	Sports Medicine	
Health Science	Veterinary Assistant	NAVTA - Veterinary Assisting Certification

Cluster	Career Pathway	Industry Certifications
Information Technology	Computer Programming	CompTia IT Fundamentals
Information Technology	Computer Programming	Microsoft Technology Associate (MTA Development Track) - Exam 98-361: Software Development Fundamentals
Information Technology	Computer Programming	Microsoft Technology Associate (MTA Database Track) - Exam 98-364: Database Fundamentals
Information Technology	Computer Programming	Microsoft Technology Associate (MTA Development Track) - Exam 98-375: HTML5 App Development Fundamentals
Information Technology	Computer Programming	Sun Certified Java Associate
Information Technology	Computer Programming	Sun Certified Java Professional
Information Technology	Computer Programming - NAF	NAF Track Certification
Information Technology	Computer Science	CompTia IT Fundamentals
Information Technology	Computer Science	Microsoft Technology Associate (MTA Database Track) - Exam 98-364: Database Fundamentals
Information Technology	Computer Science	Microsoft Technology Associate (MTA Development Track) - Exam 98-361: Software Development Fundamentals
Information Technology	Computer Science	Sun Certified Java Associate
Information Technology	Computer Science	Sun Certified Java Professional
Information Technology	Digital Design and Game Development	Microsoft Technology Associate (MTA Development Track) - Exam 98-375: HTML5 App Development Fundamentals
Information Technology	Digital Design and Game Development	CompTia IT Fundamentals
Information Technology	Digital Design and Game Development	Adobe Certified Associate - Photoshop
Information Technology	Digital Design and Game Development	Adobe Certified Associate - Flash
Information Technology	Geographic Information Systems	CompTia IT Fundamentals
Information Technology	Informatics	Microsoft Office Specialist (MOS) - 3 Exams Required - Access, Excel, PowerPoint
Information Technology	Information Support and Services	CompTia IT Fundamentals
Information Technology	Information Support and Services	CompTIA - A+ (901 and 902)

Cluster	Career Pathway	Industry Certifications
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Customer Service Representative
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Support Center Analyst
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Desktop Support Technician
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Support Center Team Lead
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Support Center Manager
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Support Center Director
Information Technology	Information Support and Services	Help Desk Institute (HDI) - Knowledge Center Support Principles
Information Technology	Information Support and Services	Microsoft Technology Associate (MTA IT Infrastructure Track) - Exam 98-368: Mobility and Device Fundamentals
Information Technology	Information Support and Services	Microsoft Technology Associate (MTA IT Infrastructure Track) - Exam 98-369: Cloud Fundamentals
Information Technology	Information Support and Services - NAF	NAF Track Certification
Information Technology	Network Administration	CompTIA IT Fundamentals
Information Technology	Network Administration	CompTIA - A+ (901 and 902)
Information Technology	Network Administration	CompTIA - Network+
Information Technology	Network Administration - CISCO	Cisco Certified Entry Network Technician (CCENT)
Information Technology	Network Administration - CISCO	Cisco Certified Network Associate (CCNA)
Information Technology	Network Administration - MCSA	Microsoft Technology Associate (MTA IT Infrastructure Track) - Exam 98-366: Networking Fundamentals
Information Technology	Network Administration - MCSA	Microsoft Technology Associate (MTA IT Infrastructure Track) - Exam 98-368: Mobility and Device Fundamentals
Information Technology	Network Administration - MCSA	Microsoft Technology Associate (MTA IT Infrastructure Track) - Exam 98-369: Cloud Fundamentals

Cluster	Career Pathway	Industry Certifications
Information Technology	Network Administration - MCSA	Microsoft Certified Technology Specialist (MCTS)
Information Technology	Network Security	CompTIA - Security+
Information Technology	Web Development/Administration	Adobe Certified Associate - Dreamweaver
Information Technology	Web Development/Administration	Adobe Certified Associate - Flash
Information Technology	Web Development/Administration	Adobe Certified Associate - Illustrator
Information Technology	Web Development/Administration	Adobe Certified Associate - Photoshop
Information Technology	Web Development/Administration	CIW Site Development Associate
Information Technology	Web Development/Administration	CompTia IT Fundamentals
Information Technology	Web Development/Administration	CompTIA - A+ (901 and 902)
Information Technology	Web Development/Administration	Microsoft Technology Associate (MTA Development Track) - Exam 98-361: Software Development Fundamentals
Information Technology	Web Development/Administration	Microsoft Technology Associate (MTA Development Track) - Exam 98-375: HTML5 App Development Fundamentals
Information Technology	Web Development/Administration - NAF	NAF Track Certification
Junior Reserve Officer Training Corps JROTC	Air Force JROTC	JROTC Certificate of Training (3 or 4 Year)
Junior Reserve Officer Training Corps JROTC	Army JROTC	JROTC Certificate of Training (3 or 4 Year)

Cluster	Career Pathway	Industry Certifications
Junior Reserve Officer Training Corps JROTC	Marine Corps JROTC	JROTC Certificate of Training (3 or 4 Year)
Junior Reserve Officer Training Corps JROTC	Navy JROTC	JROTC Certificate of Training (3 or 4 Year)
Junior Reserve Officer Training Corps JROTC	Kentucky Junior Guard	Junior Guard Certificate of Training (3 or 4 Year)
Law, Public Safety, Corrections & Security	Corrections	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	EMT - Basic National Certification
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	First Responder State Certification
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	Candidate Physical Ability Test (CPAT)
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	National Academies of Emergency Dispatch (NAED)
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	Kentucky Certified Firefighter
Law, Public Safety, Corrections & Security	Emergency Fire Management Services	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	EMT Fire Rescue	EMT - Basic National Certification
Law, Public Safety, Corrections & Security	EMT Fire Rescue	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	Fire Protection and Safety Technology	EMT - Basic National Certification
Law, Public Safety, Corrections & Security	Fire Protection and Safety Technology	National Academies of Emergency Dispatch (NAED)

Cluster	Career Pathway	Industry Certifications
Law, Public Safety, Corrections & Security	Fire Protection and Safety Technology	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	Fire Protection and Safety Technology	First Responder State Certification
Law, Public Safety, Corrections & Security	Homeland Security	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	Homeland Security	First Responder State Certification
Law, Public Safety, Corrections & Security	Law Enforcement Services	National Academies of Emergency Dispatch (NAED)
Law, Public Safety, Corrections & Security	Law Enforcement Services	NOCTI--Criminal Justice--Advanced
Law, Public Safety, Corrections & Security	Law Enforcement Services	FEMA certification series through NIMS (National Incident Management System) IS-700a, IS-100b, IS-200b, and ICS-300
Law, Public Safety, Corrections & Security	Law Enforcement Services	First Responder State Certification
Law, Public Safety, Corrections & Security	Pre-Law Studies	NOCTI--Criminal Justice--Advanced
Manufacturing Technology Education	Electronics Technology	Electronics Systems Technican
Manufacturing Technology Education CAD	Architectural Designer	Autodesk AutoCAD Certified User
Manufacturing Technology Education CAD	Architectural Designer	Autodesk Revit Architecture Certified User
Manufacturing Technology Education CAD	Civil Designer	Autodesk AutoCAD Certified User

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education CAD	Civil Designer	Autodesk Inventor Certified User
Manufacturing Technology Education CAD	Civil Designer	Autodesk Revit Architecture Certified User
Manufacturing Technology Education CAD	Civil Designer	Certified Solid Works Associate (CSWA)
Manufacturing Technology Education CAD	Civil Designer	Autodesk 3ds MAX Design
Manufacturing Technology Education CAD	Mechanical Designer	Autodesk AutoCAD Certified User
Manufacturing Technology Education CAD	Mechanical Designer	Autodesk Inventor Certified User
Manufacturing Technology Education CAD	Mechanical Designer	Certified Solid Works Associate (CSWA)
Manufacturing Technology Education CAD	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Operator	Certified Solid Works Associate (CSWA)
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Operator	Manufacturing Skill Standards Council (MSSC): Certified Production Technician

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Operator	NIMS - Machine Tool Certification (Level 1)
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Operator	MasterCam CNC Certification
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Programmer	Certified Solid Works Associate (CSWA)
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Programmer	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Programmer	NIMS - Machine Tool Certification (Level 1)
Manufacturing Technology Education CMM	Computer Numerical Control (CNC) Programmer	MasterCam CNC Certification
Manufacturing Technology Education CMM	Machinist Operator	Certified Solid Works Associate (CSWA)
Manufacturing Technology Education CMM	Machinist Operator	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Manufacturing Technology Education CMM	Machinist Operator	NIMS - Machine Tool Certification (Level 1)
Manufacturing Technology Education CMM	Machinist Operator	MasterCam CNC Certification
Manufacturing Technology Education CMM	Machinist Technician	Certified Solid Works Associate (CSWA)

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education CMM	Machinist Technician	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Manufacturing Technology Education CMM	Machinist Technician	NIMS - Machine Tool Certification (Level 1)
Manufacturing Technology Education CMM	Machinist Technician	MasterCam CNC Certification
Manufacturing Technology Education CMM	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education IMT	Fluid Power Mechanic	NCCER - Industrial Maintenance Mechanic
Manufacturing Technology Education IMT	Industrial Maintenance Electrical Technician	NCCER - Electrical Technician (Level 1)
Manufacturing Technology Education IMT	Industrial Maintenance Electrical Technician	NCCER - Industrial Maintenance Electrical & Instrumentation Technician (Level 1)
Manufacturing Technology Education IMT	Welding Maintenance Technician	2-F (AWS) Qualification Certification
Manufacturing Technology Education IMT	Maintenance Machinist	NIMS - Machine Tool Certification (Level 1)
Manufacturing Technology Education IMT	Maintenance Mechanic	NCCER - Electrical Technician (Level 1)

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education IMT	Maintenance Mechanic	NCCER - Industrial Maintenance Electrical & Instrumentation Technician (Level 1)
Manufacturing Technology Education IMT	Maintenance Mechanic	NCCER - Industrial Maintenance Mechanic
Manufacturing Technology Education IMT	Maintenance Mechanic	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Manufacturing Technology Education IMT	Refrigeration Technician	EPA Section 608 Certification
Manufacturing Technology Education IMT	Refrigeration Technician	NCCER - HVAC (Level 1)
Manufacturing Technology Education IMT	IMT Electrical TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education IMT	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education Metal Fabrication	Sheet Metal Technician	NCCER - Sheet Metal (Level 1)
Manufacturing Technology Education Metal Fabrication	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education Welding Technology	Combination Arc Welder	AWS - Sense Certification (Level 1)

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education Welding Technology	Combination Arc Welder	2-F (AWS) Qualification Certification
Manufacturing Technology Education Welding Technology	Combination Arc Welder	Kentucky Department of Transportation 3-G
Manufacturing Technology Education Welding Technology	Gas Metal Arc Welder	AWS - Sense Certification (Level 1)
Manufacturing Technology Education Welding Technology	Gas Metal Arc Welder	2-F (AWS) Qualification Certification
Manufacturing Technology Education Welding Technology	Gas Metal Arc Welder	Kentucky Department of Transportation 3-G
Manufacturing Technology Education Welding Technology	Shielded Metal Arc Welder	AWS - Sense Certification (Level 1)
Manufacturing Technology Education Welding Technology	Shielded Metal Arc Welder	2-F (AWS) Qualification Certification
Manufacturing Technology Education Welding Technology	Shielded Metal Arc Welder	Kentucky Department of Transportation 3-G
Manufacturing Technology Education Welding Technology	Welder - Entry Level	AWS - Sense Certification (Level 1)
Manufacturing Technology Education Welding Technology	Welder - Entry Level	2-F (AWS) Qualification Certification
Manufacturing Technology Education Welding Technology	Welder - Entry Level	Kentucky Department of Transportation 3-G

Cluster	Career Pathway	Industry Certifications
Manufacturing Technology Education Welding Technology	Welding Pipefitters TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education Welding Technology	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Manufacturing Technology Education Wood Manufacturing	Automated Wood Processer	WCA - Woodwork Career Alliance (Green Credential)
Manufacturing Technology Education Wood Manufacturing	Cabinetmaker	WCA - Woodwork Career Alliance (Green Credential)
Manufacturing Technology Education Wood Manufacturing	Furniture Maker	WCA - Woodwork Career Alliance (Green Credential)
Manufacturing Technology Education Wood Manufacturing	Millworker	WCA - Woodwork Career Alliance (Green Credential)
Manufacturing Technology Education Wood Manufacturing	Wood CNC Operator/Programmer	WCA - Woodwork Career Alliance (Green Credential)
Manufacturing Technology Education Wood Manufacturing	Manufacturing TRACK	Kentucky TRACK Pre-Apprenticeship Certification
Media Arts	Cinematography and Video Production	Apple Certified Associate - Final Cut Pro X Level 1
Media Arts	Cinematography and Video Production	Adobe Certified Associate - 1 of 2 - Photoshop, Premiere Pro
Media Arts	Graphic Design	Adobe Certified Associate - 2 of 3 - InDesign, Illustrator, Photoshop
Media Arts	Interactive Media Arts	Adobe Certified Associate - 2 of 3 - Flash, Illustrator, Photoshop

Cluster	Career Pathway	Industry Certifications
Multimedia	Commercial and Advertising Art	Adobe Certified Expert
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - Dreamweaver
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - Flash
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - Photoshop
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - InDesign
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - Illustrator
Multimedia	Commercial and Advertising Art	Adobe Certified Associate - Premiere Pro
Print Technology	Pre-Press	PrintEd/SkillsUSA Connect Assessments - Advertising and Design
Print Technology	Pre-Press	PrintEd/SkillsUSA Connect Assessments - Digital File Preparation/Digital File Output
Print Technology	Pre-Press	PrintEd/SkillsUSA Connect Assessments - Graphic communications
Print Technology	Printing and Finishing	PrintEd/SkillsUSA Connect Assessments - Advertising and Design
Print Technology	Printing and Finishing	PrintEd/SkillsUSA Connect Assessments - Digital File Preparation/Digital File Output
Print Technology	Printing and Finishing	PrintEd/SkillsUSA Connect Assessments - Graphic communications
Print Technology	Printing and Finishing	PrintEd/SkillsUSA Connect Assessments - Offset Press Operations/Binding and Finishing
Print Technology	Printing and Finishing	PrintEd/SkillsUSA Connect Assessments - Screen Printing Technology
Transportation Education	Automobile Service Technician	ASE Student Certification - Automotive Maintenance and Light Repair
Transportation Education	Automobile Service Technician	ASE Student Certification - Automatic Transmissions
Transportation Education	Automobile Service Technician	ASE Student Certification - Brakes
Transportation Education	Automobile Service Technician	ASE Student Certification - Electrical/Electronic Systems

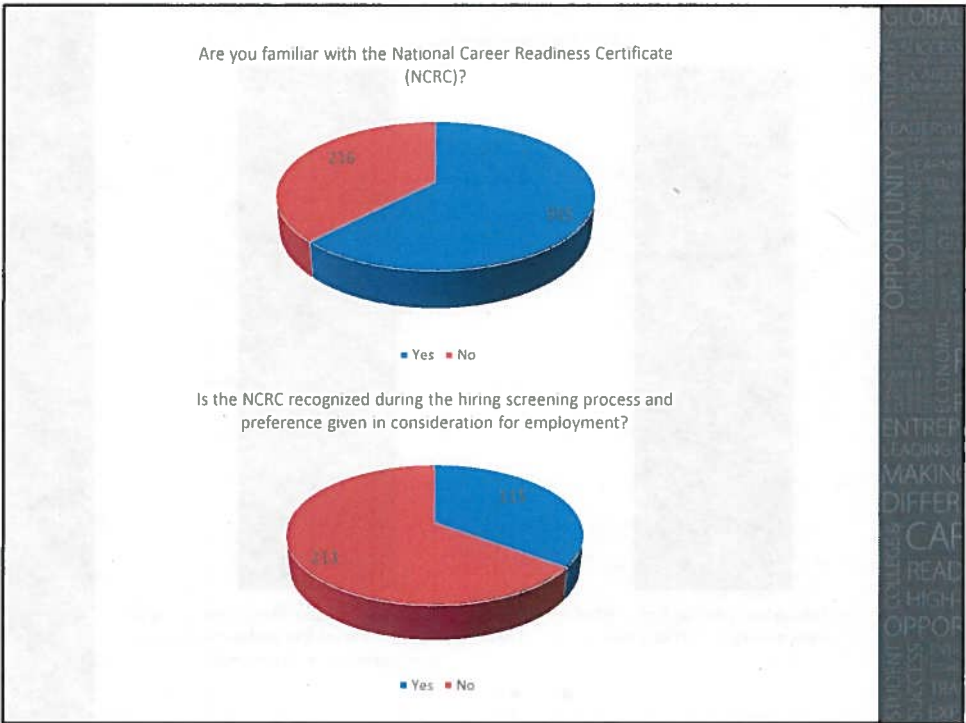
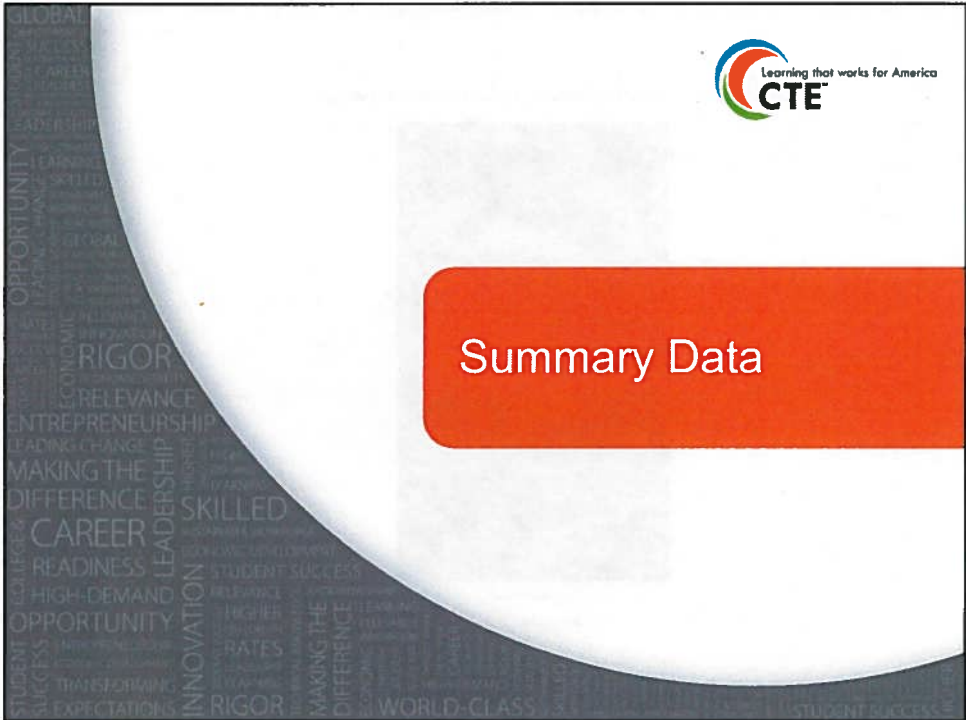
Cluster	Career Pathway	Industry Certifications
Transportation Education	Automobile Service Technician	ASE Student Certification - Engine Performance
Transportation Education	Automobile Service Technician	ASE Student Certification - Engine Repair
Transportation Education	Automobile Service Technician	ASE Student Certification - Heating and Air Conditioning
Transportation Education	Automobile Service Technician	ASE Student Certification - Manual Transmissions and Transaxles
Transportation Education	Automobile Service Technician	ASE Student Certification - Suspension and Steering
Transportation Education	Automobile Service Technician	ASE Student Certification - Automobile Service Technology (AST)
Transportation Education	Automotive Maintenance and Light Repair Technician	ASE Student Certification - Automotive Maintenance and Light Repair
Transportation Education	Automotive Maintenance and Light Repair Technician	ASE Student Certification - Brakes
Transportation Education	Automotive Maintenance and Light Repair Technician	ASE Student Certification - Electrical/Electronic Systems
Transportation Education	Automotive Maintenance and Light Repair Technician	ASE Student Certification - Suspension and Steering
Transportation Education	Diesel Brake Repairer/Basic Automotive Electricity	ASE Student Certification - Brakes (Diesel)
Transportation Education	Diesel Brake Repairer/Basic Automotive Electricity	ASE Student Certification - Electrical/Electronic Systems (Diesel)
Transportation Education	Diesel Brake Repairer/Special Problems Option	ASE Student Certification - Brakes (Diesel)
Transportation Education	Diesel Brake Repairer/Special Problems Option	ASE Student Certification - Electrical/Electronic Systems (Diesel)

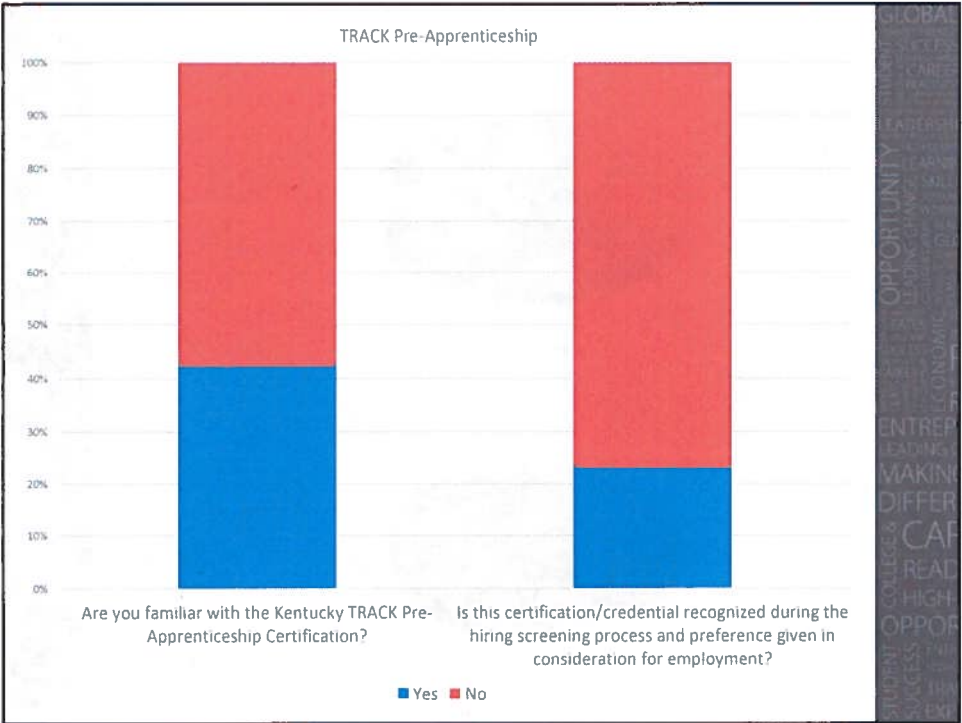
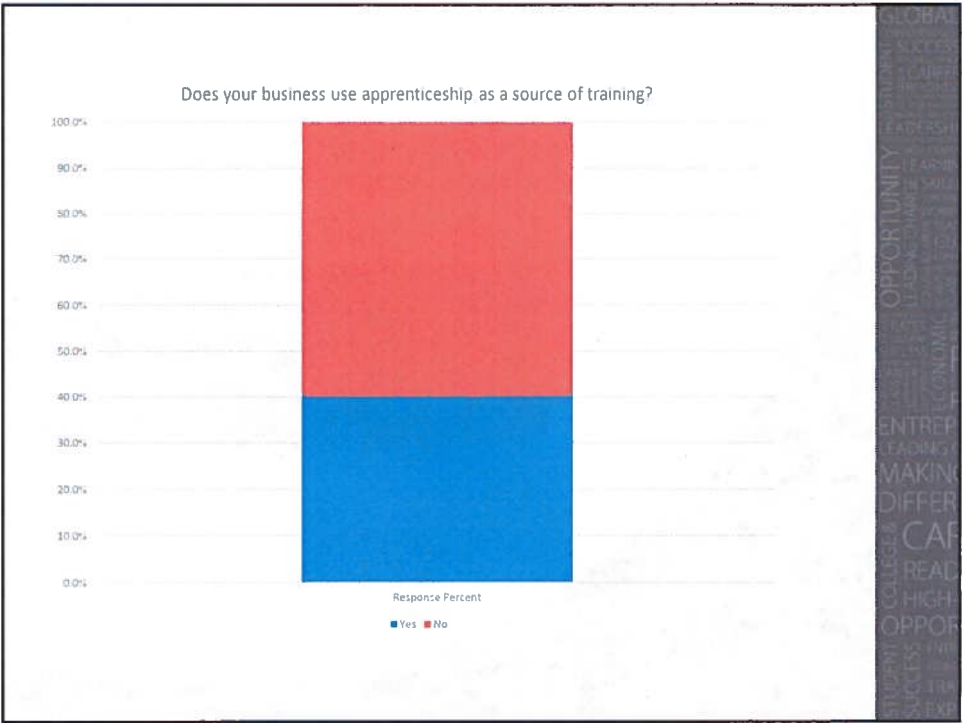
Cluster	Career Pathway	Industry Certifications
Transportation Education	Diesel Engine/Electrician Technician/ Preventative Maintenance Option	ASE Student Certification - Diesel Engines
Transportation Education	Diesel Engine/Electrician Technician/ Preventative Maintenance Option	ASE Student Certification - Electrical/Electronic Systems (Diesel)
Transportation Education	Diesel Engine/Electrician Technician/ Basic Automotive Electricity Option	ASE Student Certification - Diesel Engines
Transportation Education	Diesel Engine/Electrician Technician/ Basic Automotive Electricity Option	ASE Student Certification - Electrical/Electronic Systems (Diesel)
Transportation Education	Diesel Front End Mechanic/Basic Automotive Electricity Option	ASE Student Certification - Electrical/Electronic Systems (Diesel)
Transportation Education	Diesel Front End Mechanic/Basic Automotive Electricity Option	ASE Student Certification - Suspension and Steering (Diesel)
Transportation Education	Diesel Front End Mechanic/Special Problems Option	ASE Student Certification - Electrical/Electronic Systems (Diesel)
Transportation Education	Diesel Front End Mechanic/Special Problems Option	ASE Student Certification - Suspension and Steering (Diesel)
Transportation Education	Entry Level Brakes and Suspension Technician	ASE Student Certification - Brakes
Transportation Education	Entry Level Brakes and Suspension Technician	ASE Student Certification - Electrical/Electronic Systems

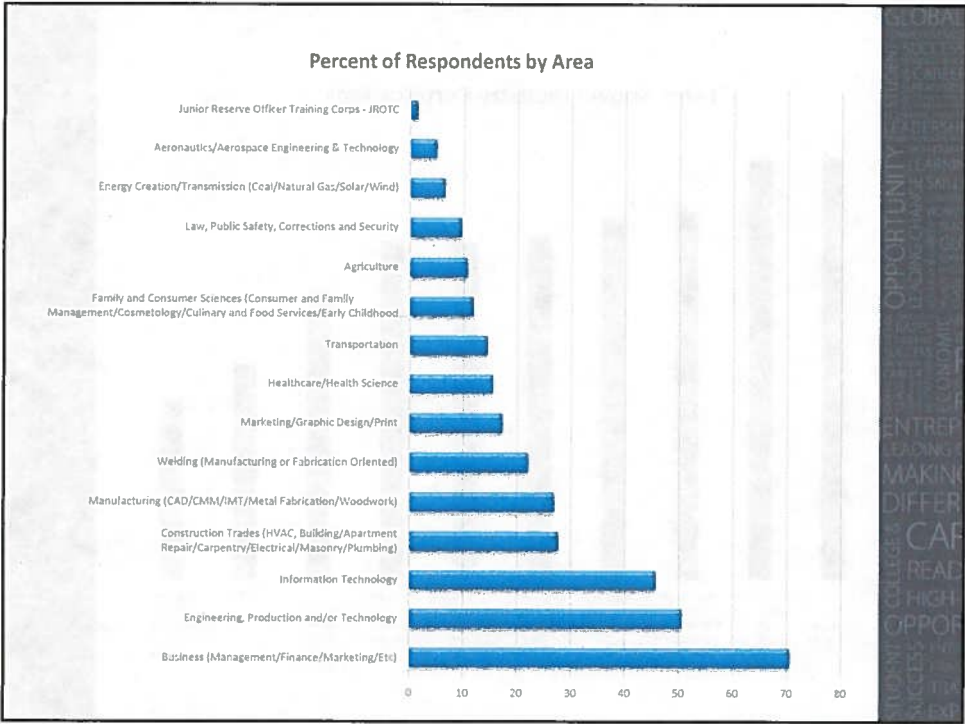
Cluster	Career Pathway	Industry Certifications
Transportation Education	Entry Level Brakes and Suspension Technician	ASE Student Certification - Suspension and Steering
Transportation Education	Entry Level Collision Repair Painter	ASE Student Certification - Painting and Refinishing
Transportation Education	Entry Level Mechanical and Electrical Repair Technician	ASE Student Certification - Mechanical and Electrical
Transportation Education	Entry Level Engine Performance Technician	ASE Student Certification - Electrical/Electronic Systems
Transportation Education	Entry Level Engine Performance Technician	ASE Student Certification - Engine Performance
Transportation Education	Entry Level Non-Structural Damage and Repair Technician	ASE Student Certification - Non-structural Analysis and Damage Repair
Transportation Education	Entry Level Structural Analysis and Damage Repair Technician	ASE Student Certification - Non-structural Analysis and Damage Repair
Transportation Education	Entry Level Structural Analysis and Damage Repair Technician	ASE Student Certification - Structural Analysis and Damage Repair
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Automotive Maintenance and Light Repair
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Automatic Transmissions
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Brakes
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Electrical/Electronic Systems
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Engine Performance
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Engine Repair
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Manual Transmissions and Transaxles

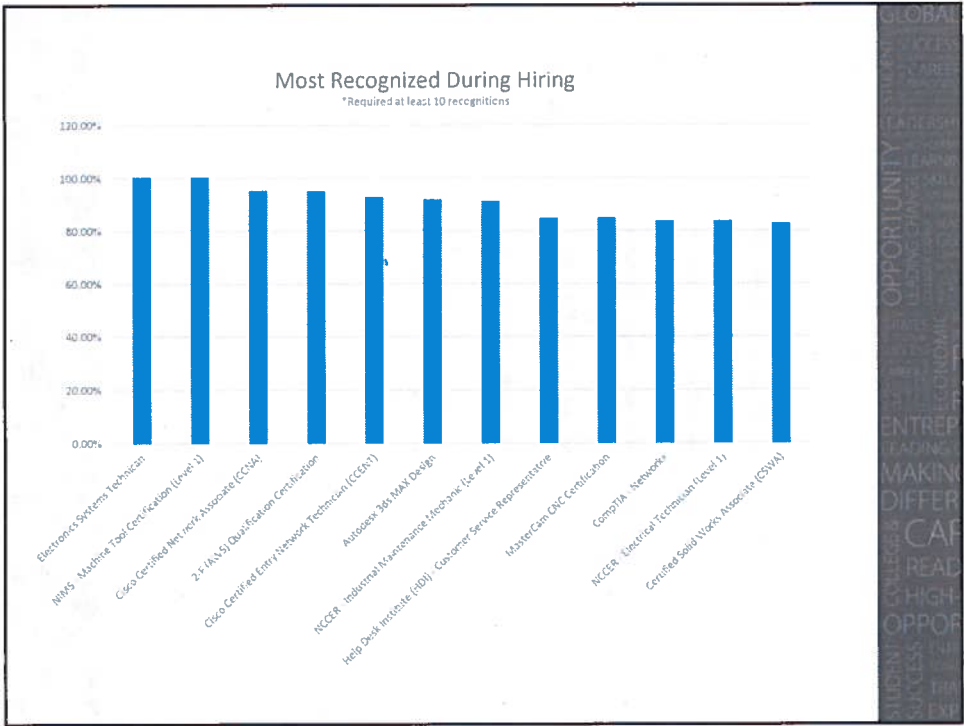
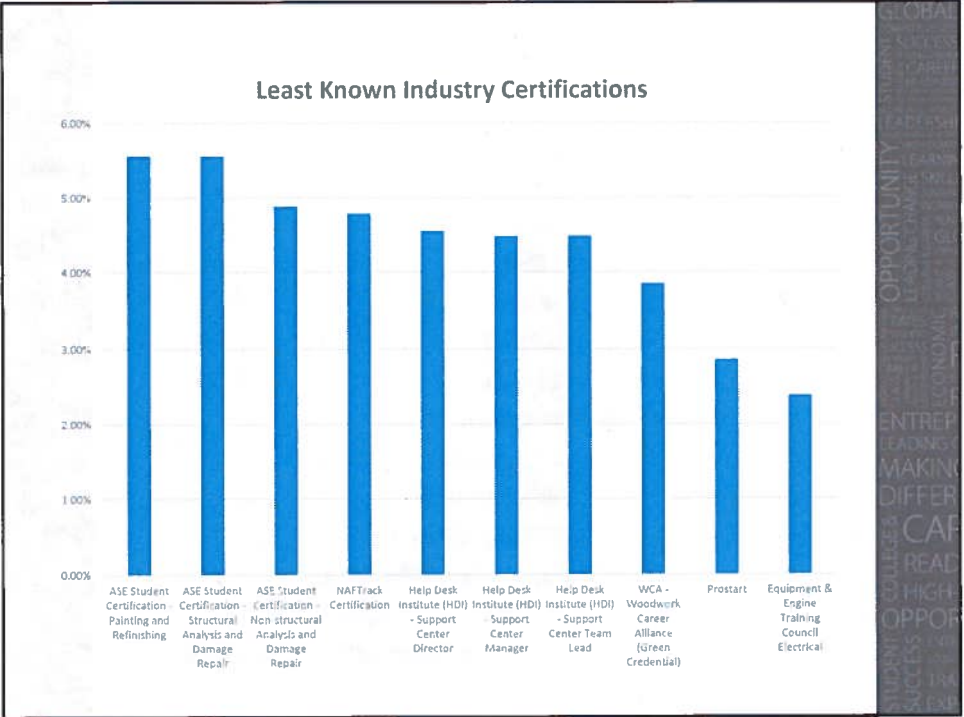
Cluster	Career Pathway	Industry Certifications
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Suspension and Steering
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Heating and Air Conditioning
Transportation Education	Master Automobile Service Technician	ASE Student Certification - Automobile Service Technology (AST)
Transportation Education	Motorcycle Maintenance and Repair	Equipment & Engine Training Council Two Stroke
Transportation Education	Motorcycle Maintenance and Repair	Equipment & Engine Training Council Four Stroke
Transportation Education	Motorcycle Maintenance and Repair	Equipment & Engine Training Council Electrical
Transportation Education	Outdoor Power Equipment and Small Engine Mechanic	Equipment & Engine Training Council Two Stroke
Transportation Education	Outdoor Power Equipment and Small Engine Mechanic	Equipment & Engine Training Council Four Stroke
Transportation Education	Outdoor Power Equipment and Small Engine Mechanic	Equipment & Engine Training Council Electrical
Transportation Education	Small Engine Mechanic	Equipment & Engine Training Council Two Stroke
Transportation Education	Small Engine Mechanic	Equipment & Engine Training Council Four Stroke
Transportation Education	Small Engine Mechanic	Equipment & Engine Training Council Electrical
CTE AND PLTW HYBRID PATHWAYS		
Construction	Construction Architectural Engineering	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Construction	Electrical Construction Engineering	NCCER - 2 Exams Required - Core Curriculum and Electrical Technician (Level 1)
Construction	Structural Engineering	NCCER - 2 Exams Required - Core Curriculum and Construction Carpentry (Level 1)
Manufacturing	Computerized Manufacturing and Machining (CMM) Engineering	Certified Solid Works Associate (CSWA)

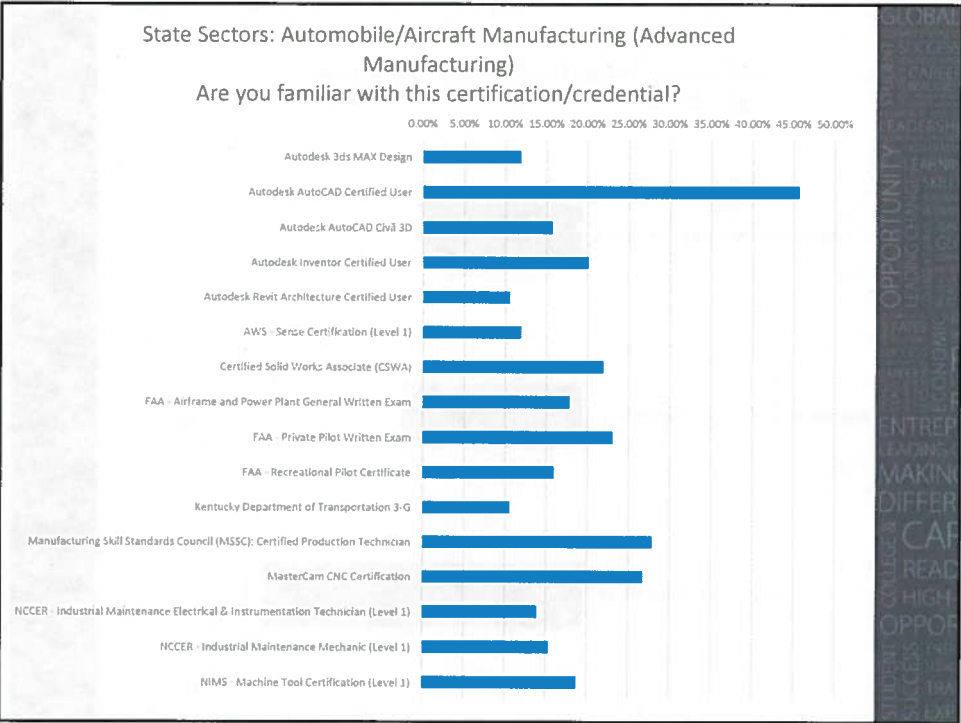
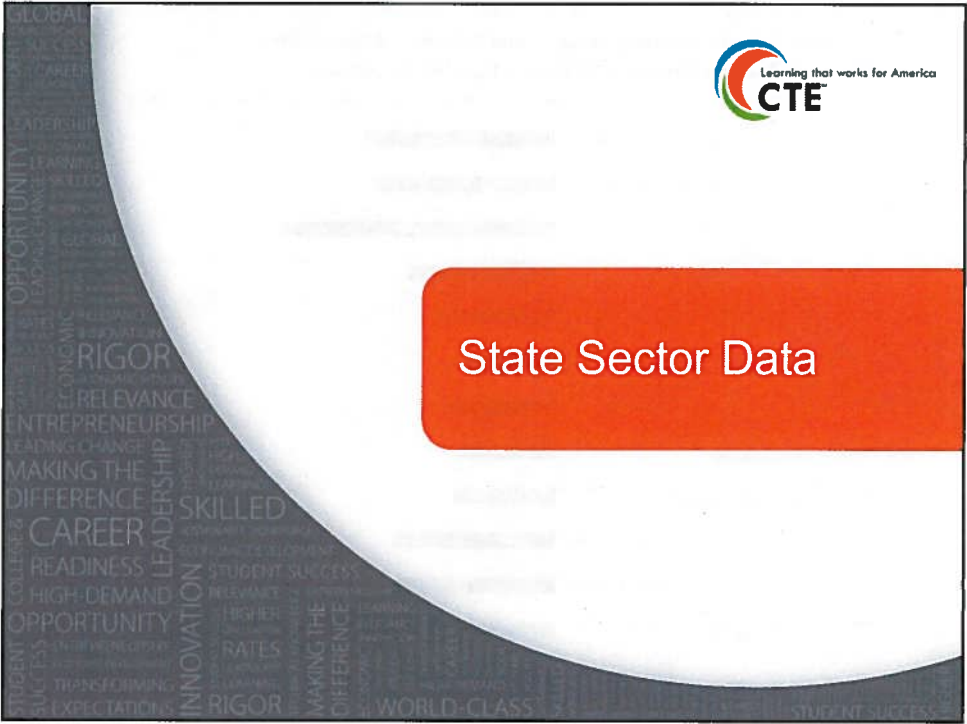
Cluster	Career Pathway	Industry Certifications
Manufacturing	Computerized Manufacturing and Machining (CMM) Engineering	Manufacturing Skill Standards Council (MSSC): Certified Production Technician
Manufacturing	Computerized Manufacturing and Machining (CMM) Engineering	NIMS - Machine Tool Certification
Manufacturing	Computerized Manufacturing and Machining (CMM) Engineering	MasterCam CNC Certification
Manufacturing	Design Engineering	Autodesk AutoCAD Certified User
Manufacturing	Design Engineering	Autodesk Inventor Certified User
Manufacturing	Design Engineering	Autodesk Revit Architecture Certified User
Manufacturing	Design Engineering	Certified Solid Works Associate (CSWA)
Manufacturing	Design Engineering	Autodesk 3ds MAX Designer
Manufacturing	Electrical Engineering	NCCER - Electrical Technician (Level 1)
Manufacturing	Electrical Engineering	NCCER - Industrial Maintenance Electrical & Instrumentation Technician (Level 1)
Manufacturing	Fabrication Engineering	NCCER - Sheet Metal (Level 1)
Manufacturing	Fluid Power Engineering	NCCER - Industrial Maintenance Mechanic
Manufacturing	Welding Engineering	AWS - Sense Certification
Manufacturing	Welding Engineering	2-F (AWS) Qualification Certification
Manufacturing	Welding Engineering	Kentucky Department of Transportation 3-G
Manufacturing	Wood Design Engineering	WCA - Woodwork Career Alliance (Green Credential)
Transportation Education	Automotive Engineering/Automotive Maintenance and Light Repair	ASE Student Certification - Automotive Maintenance and Light Repair

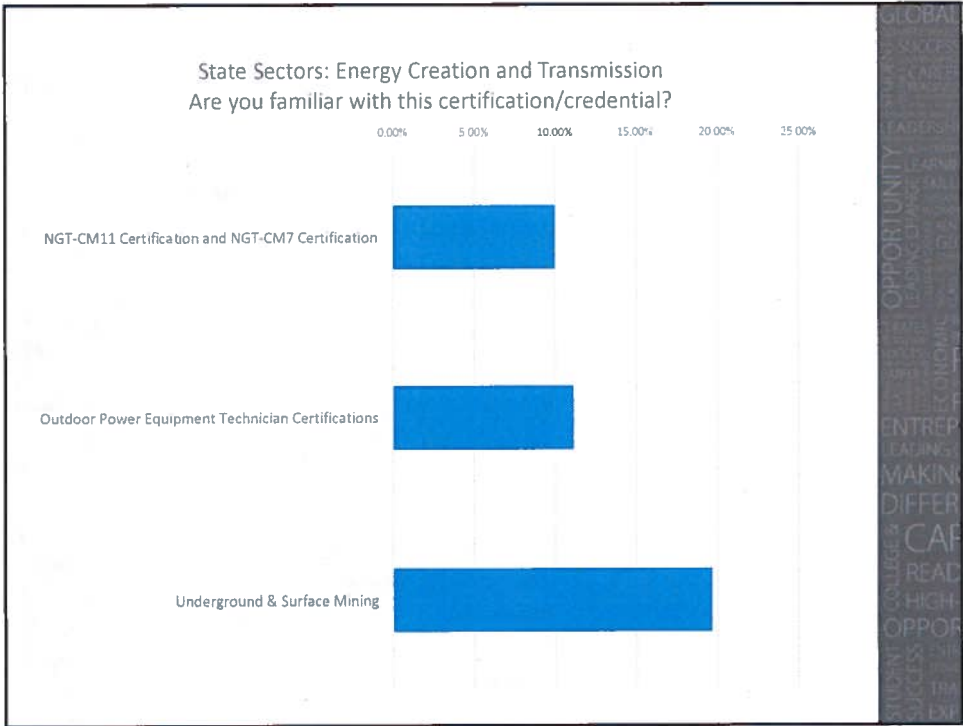
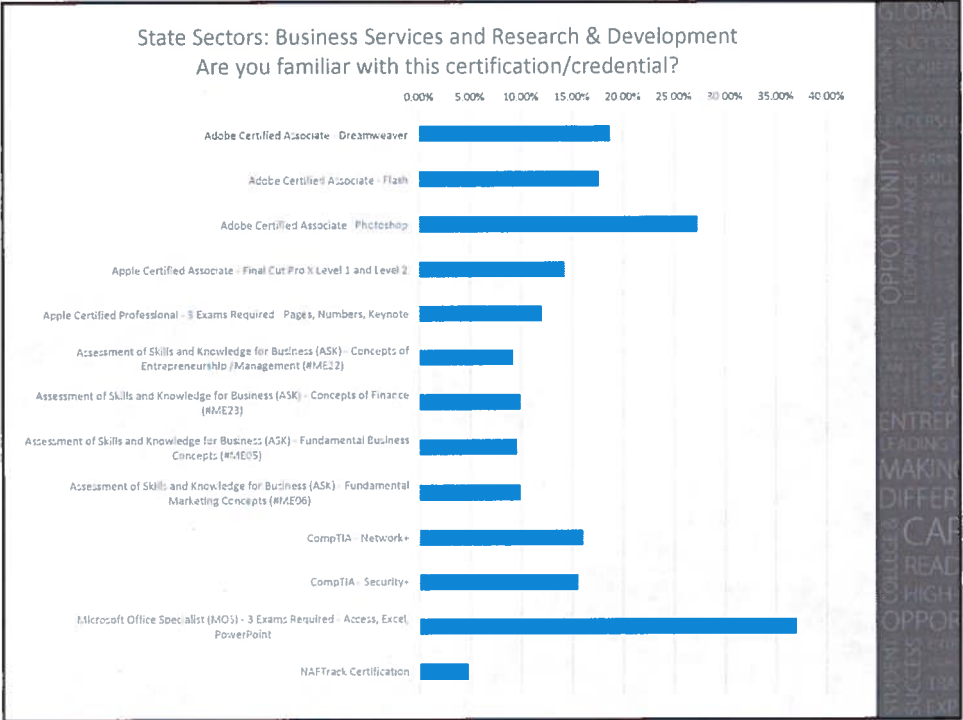


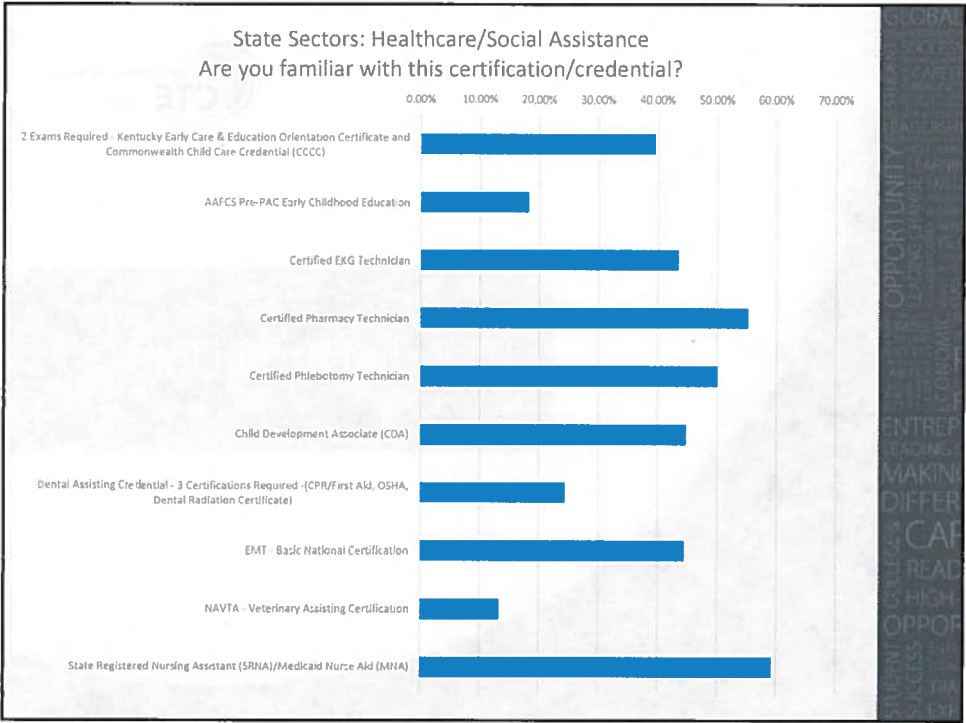
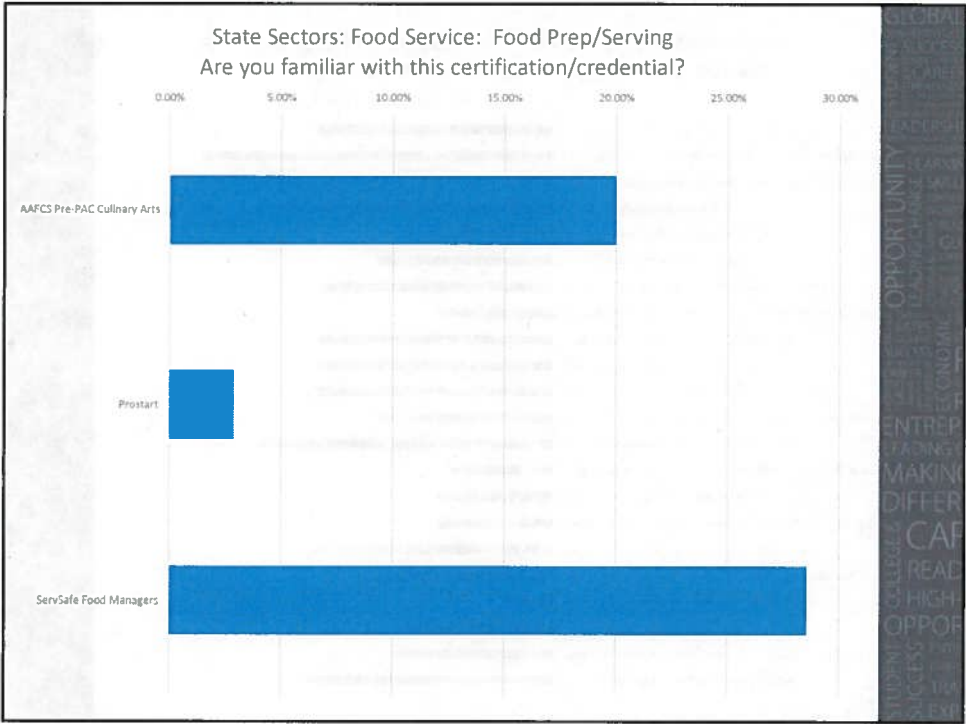


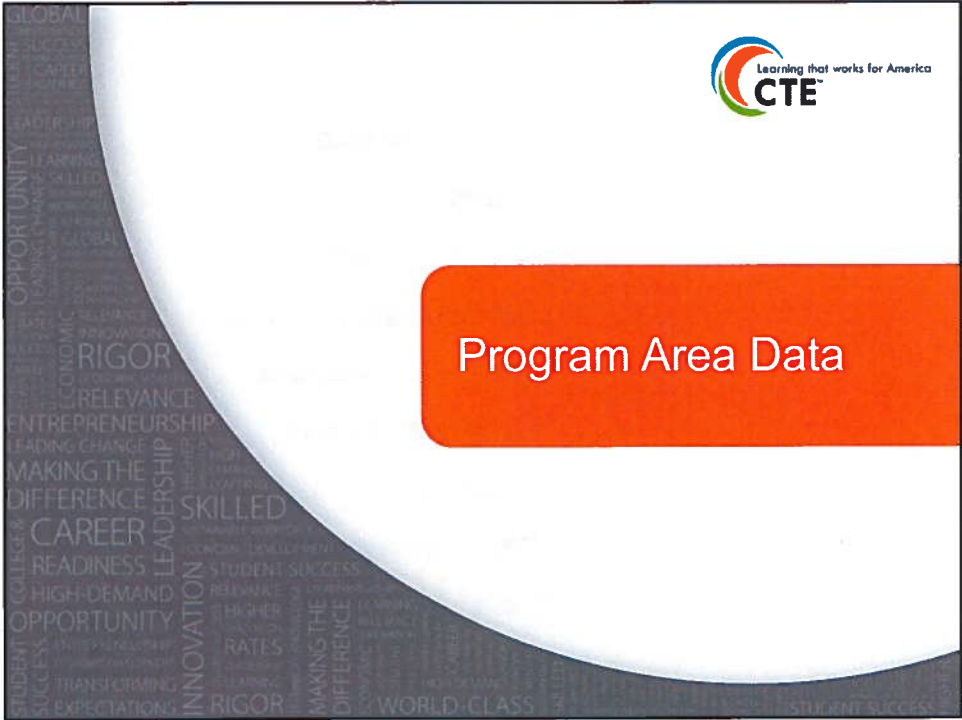
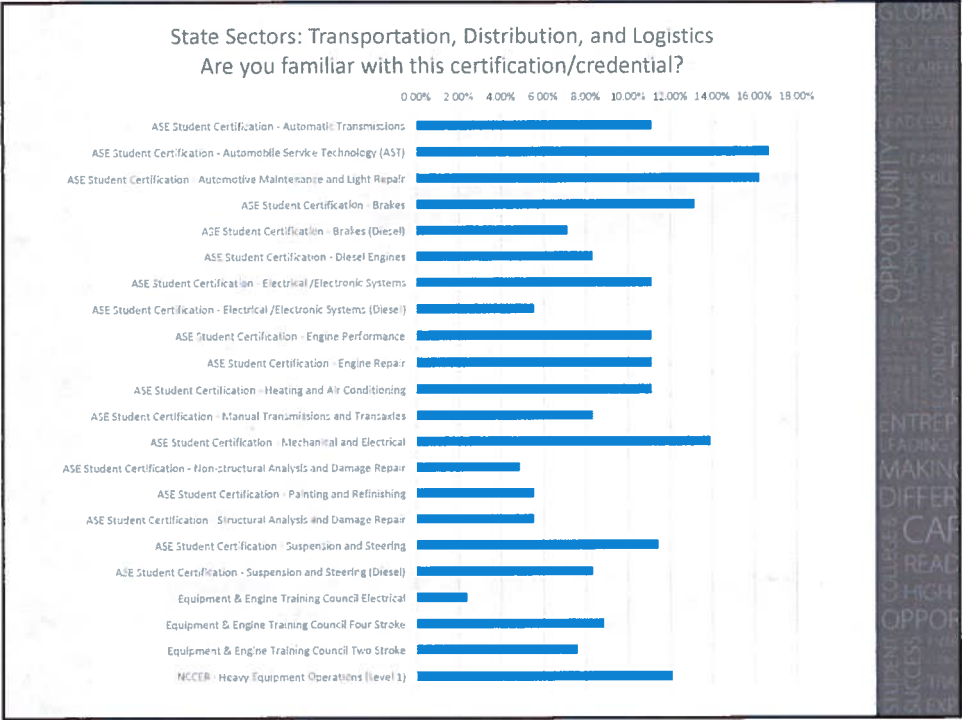


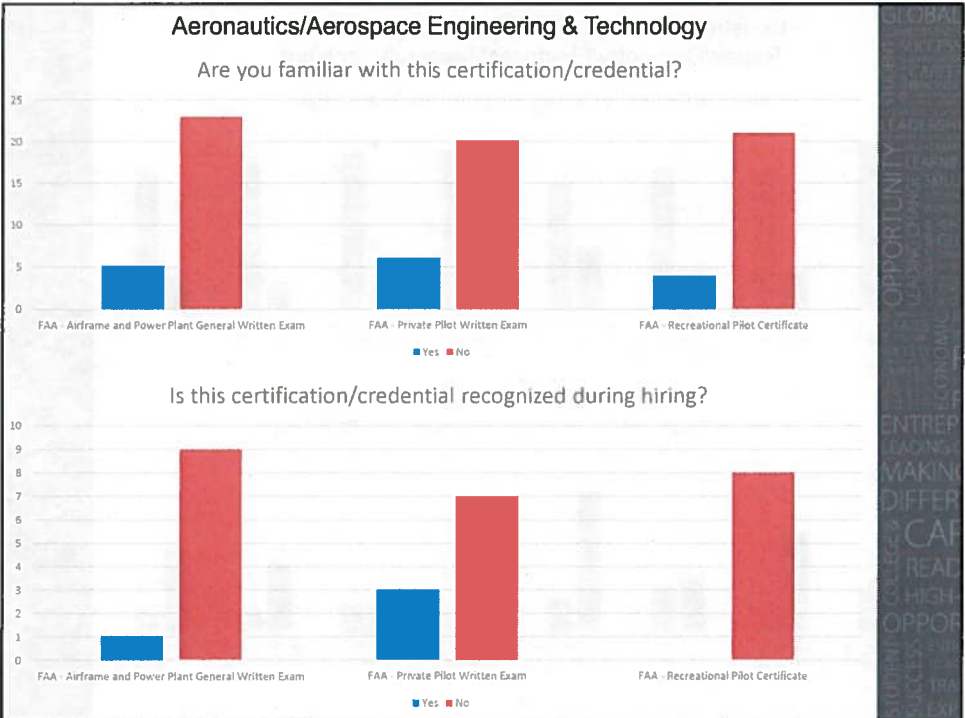
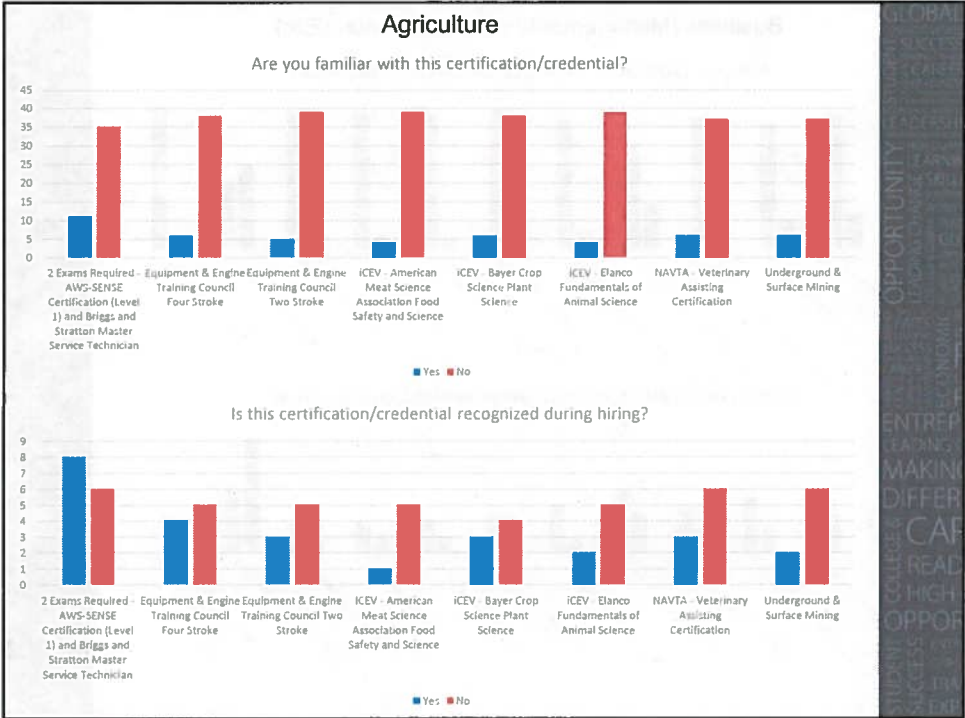


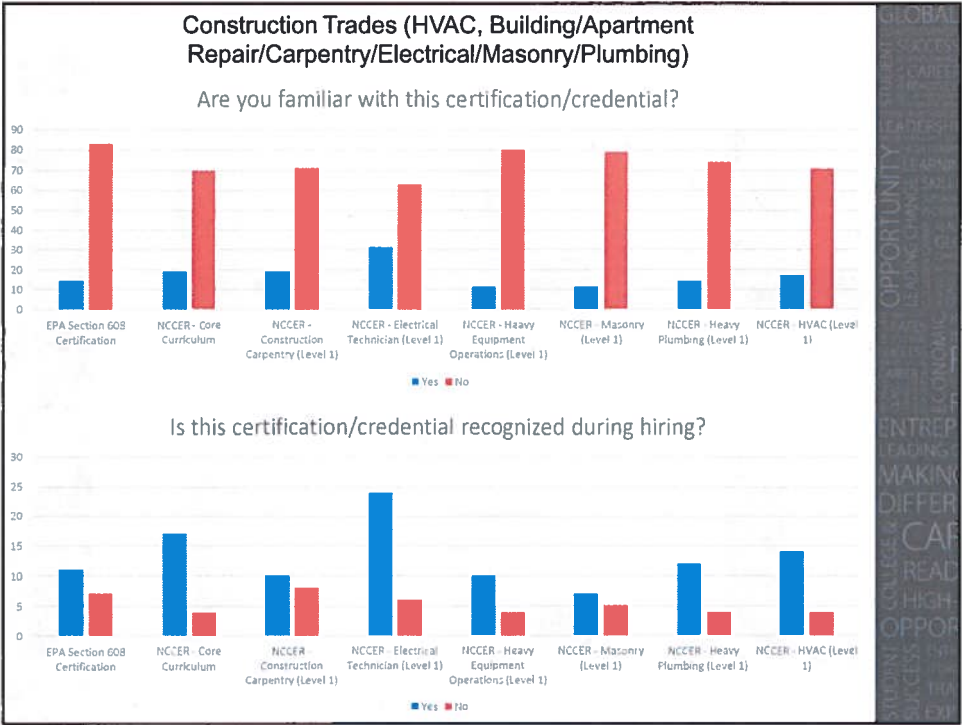
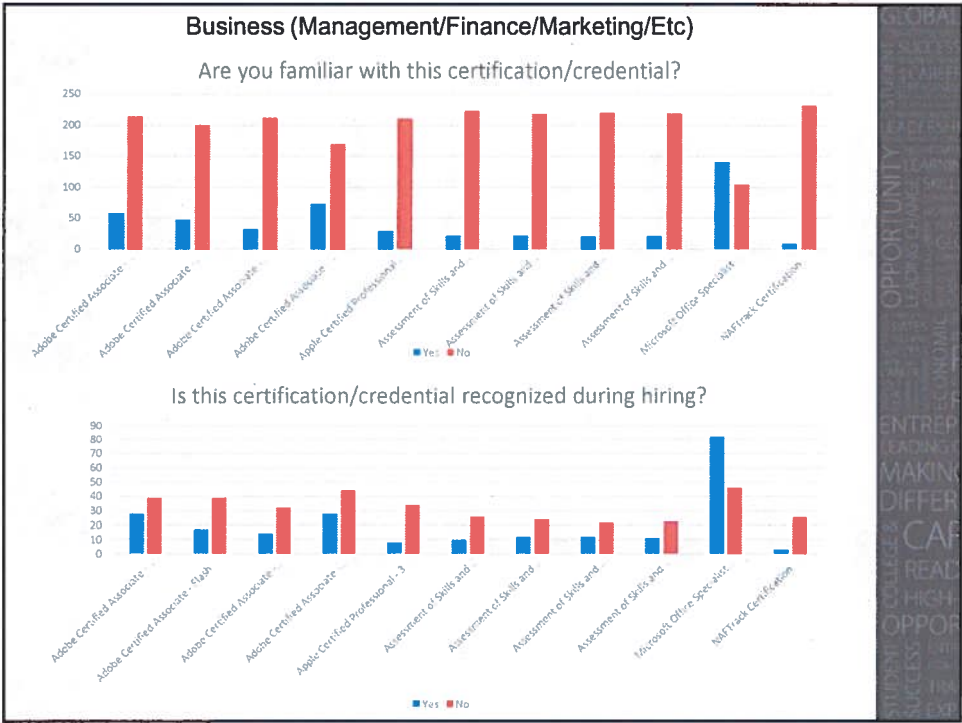


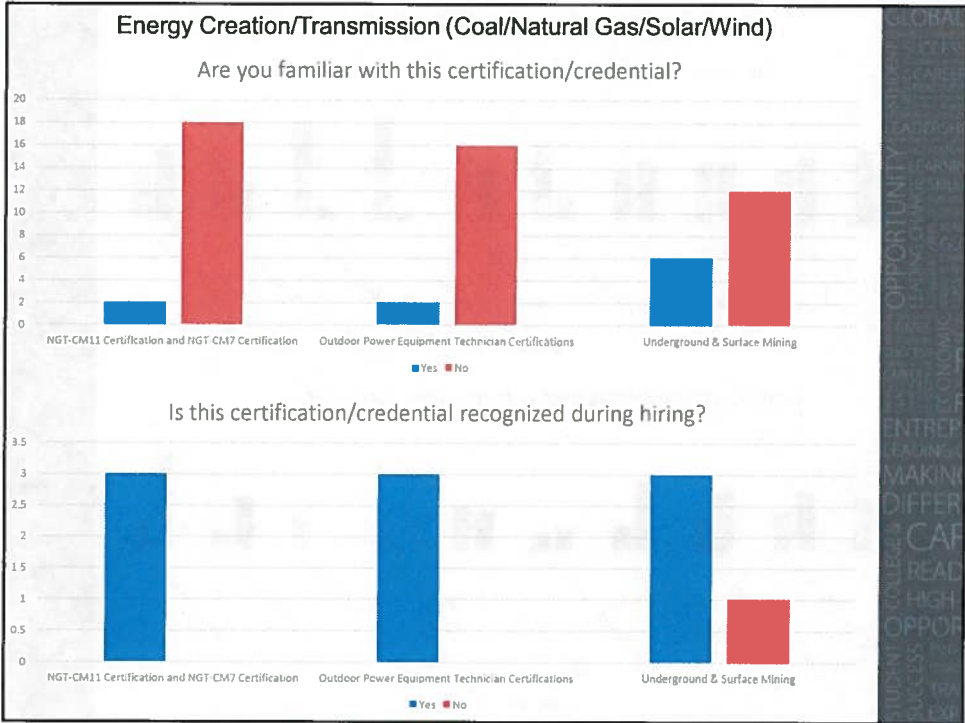
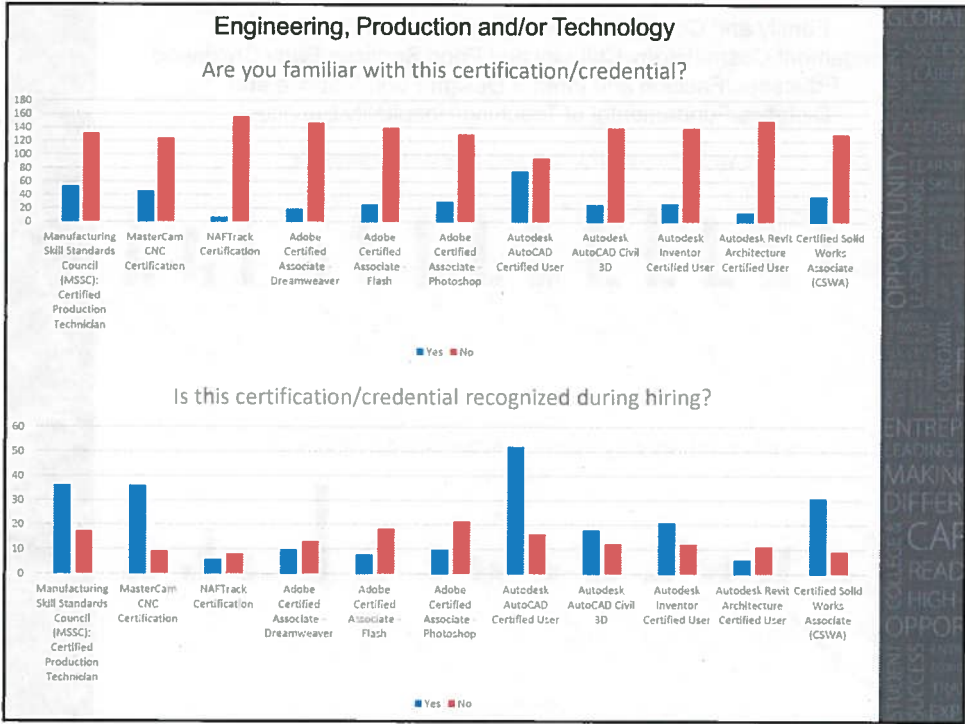


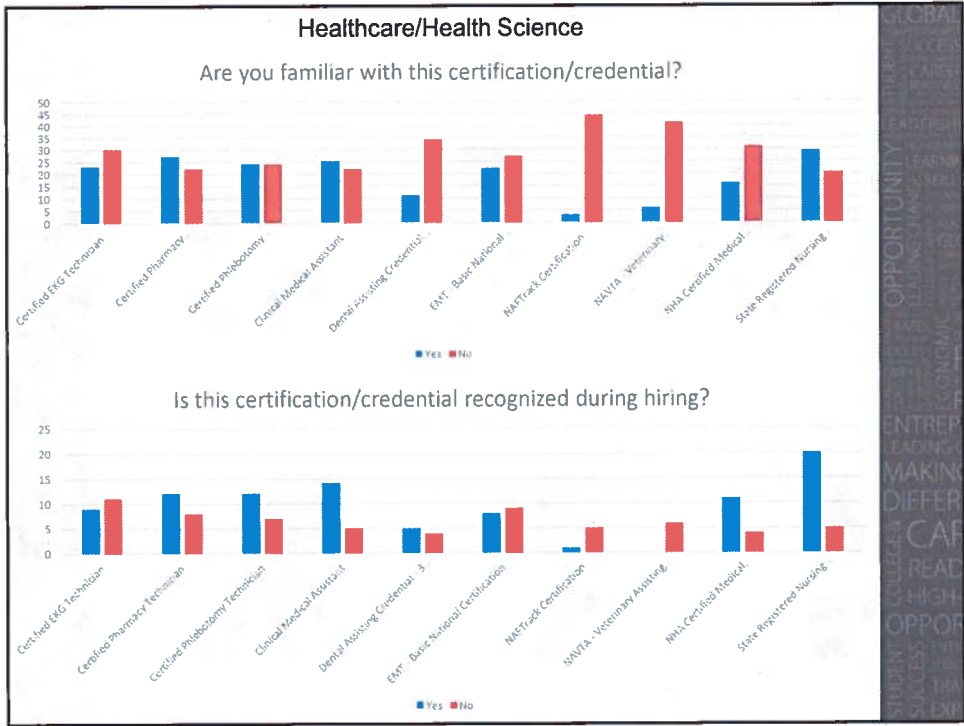
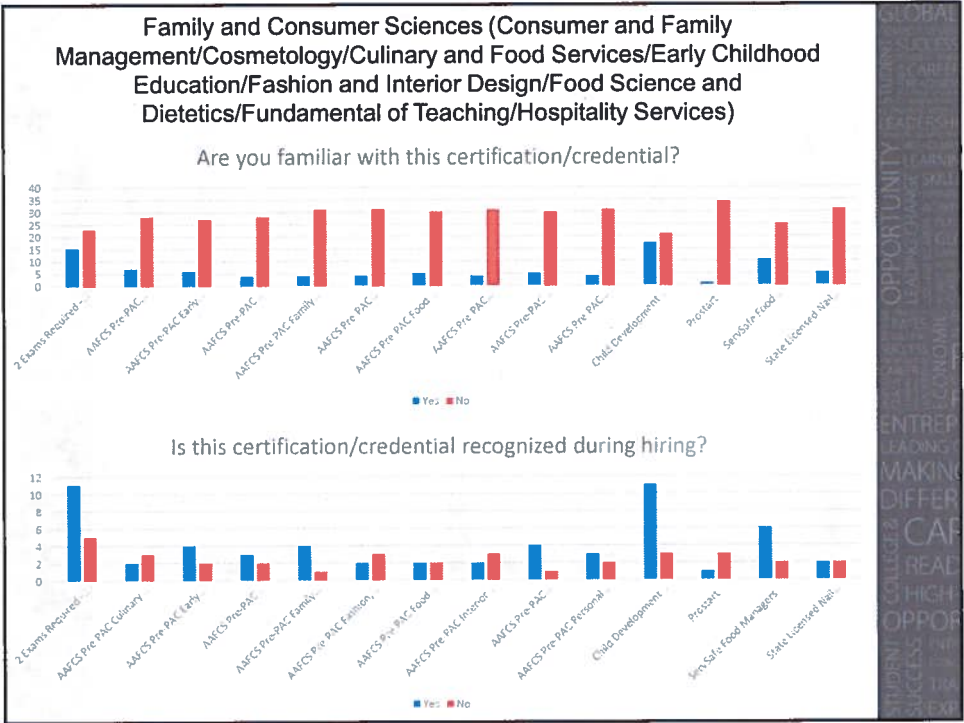


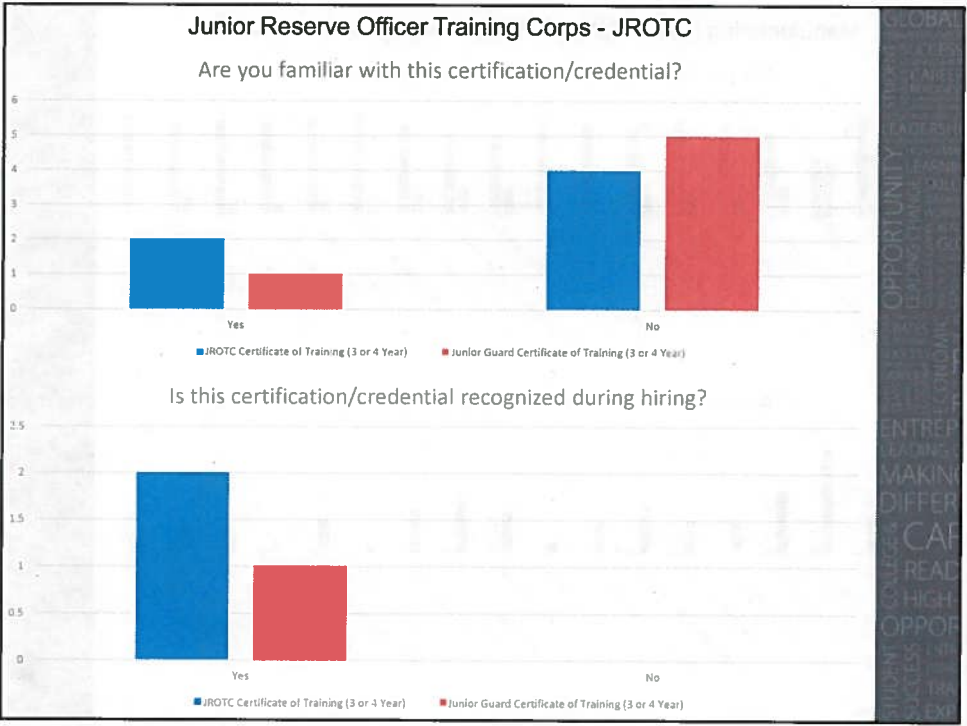
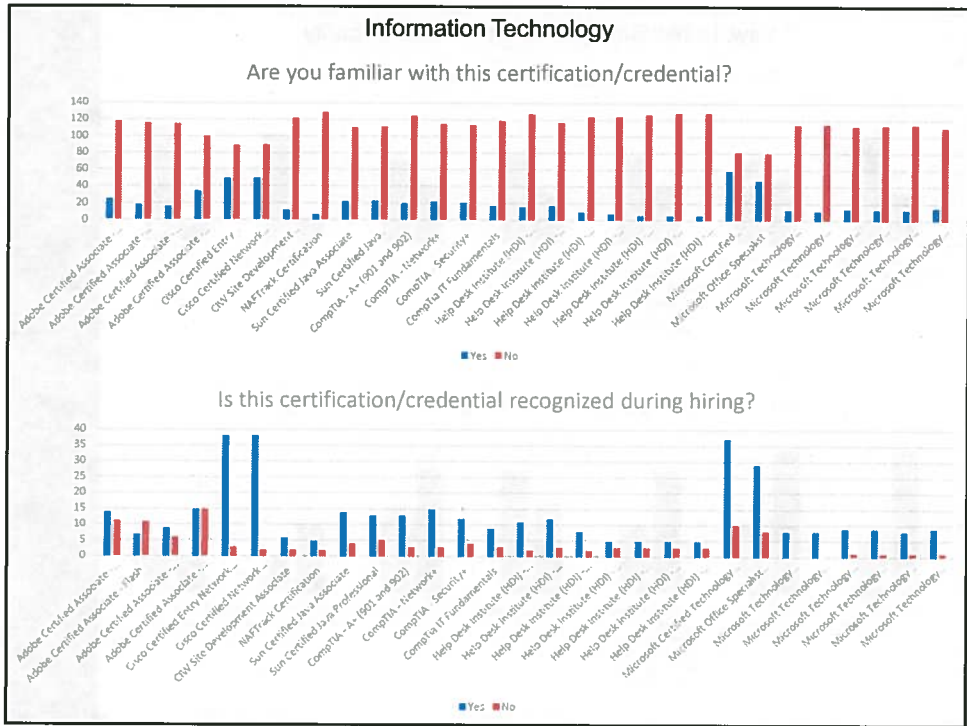


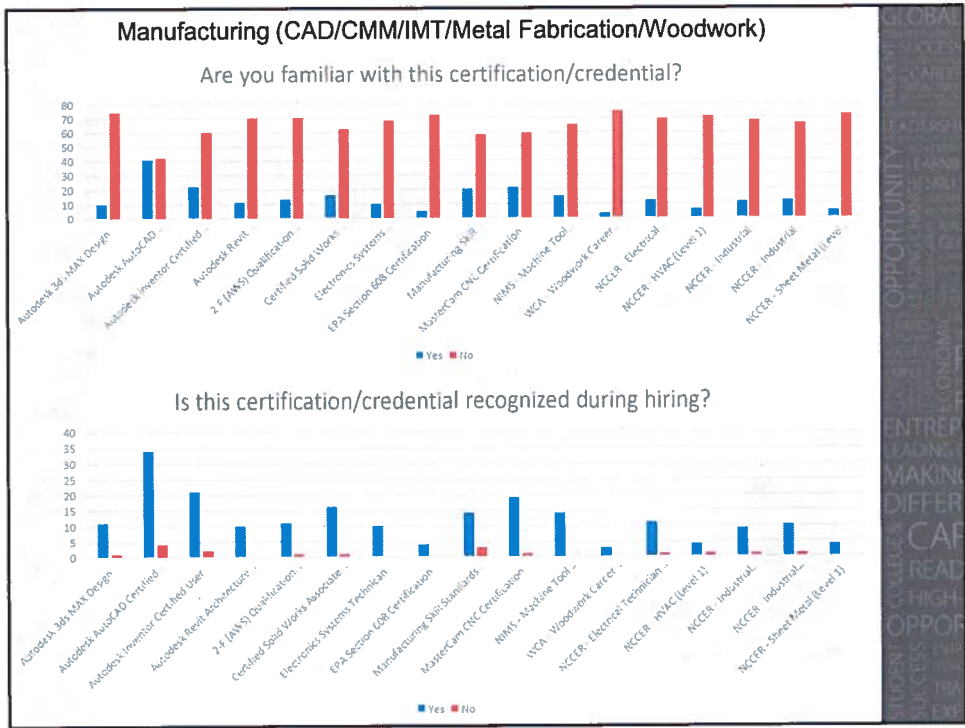
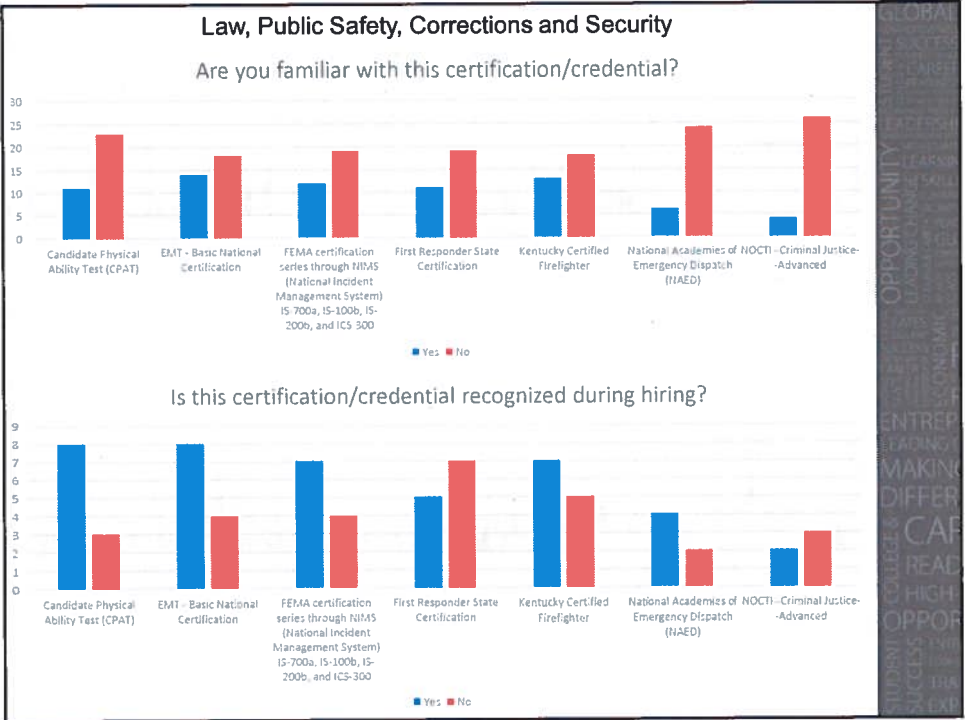


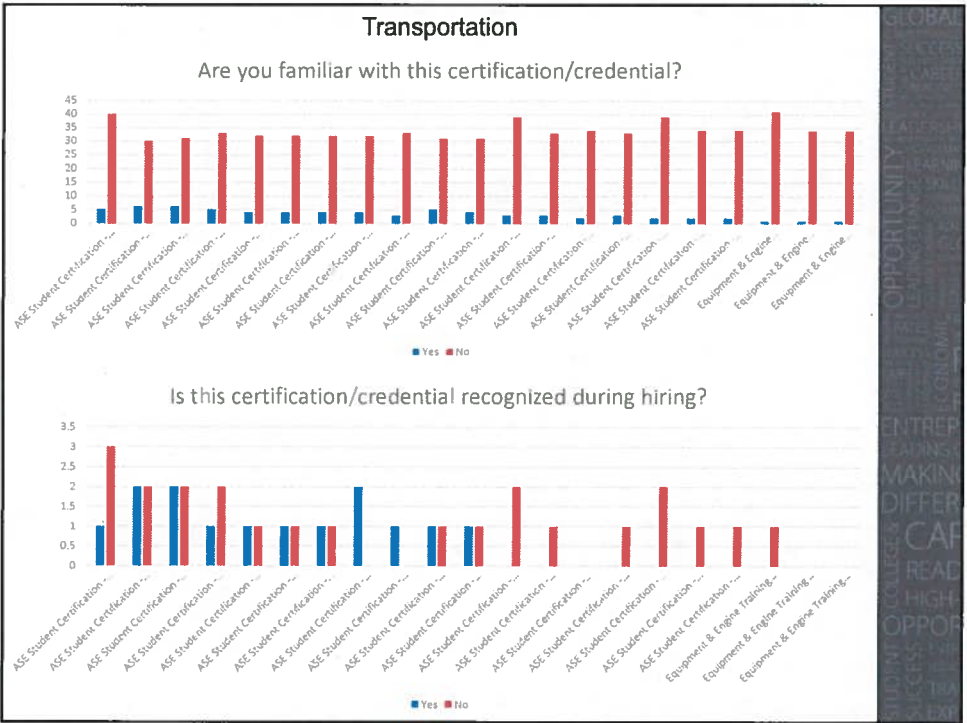
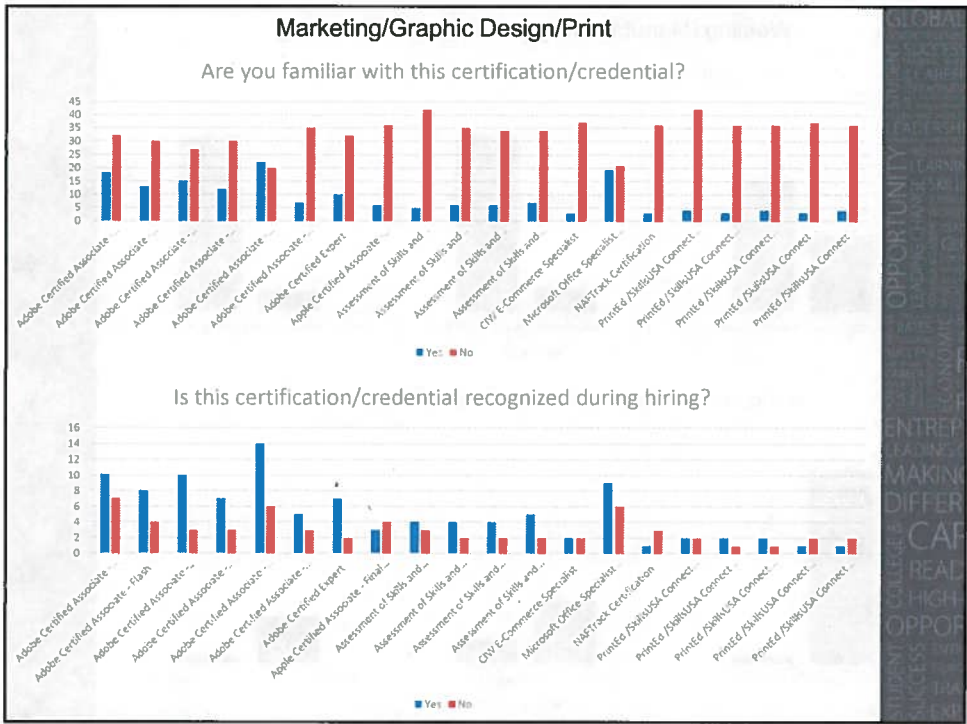


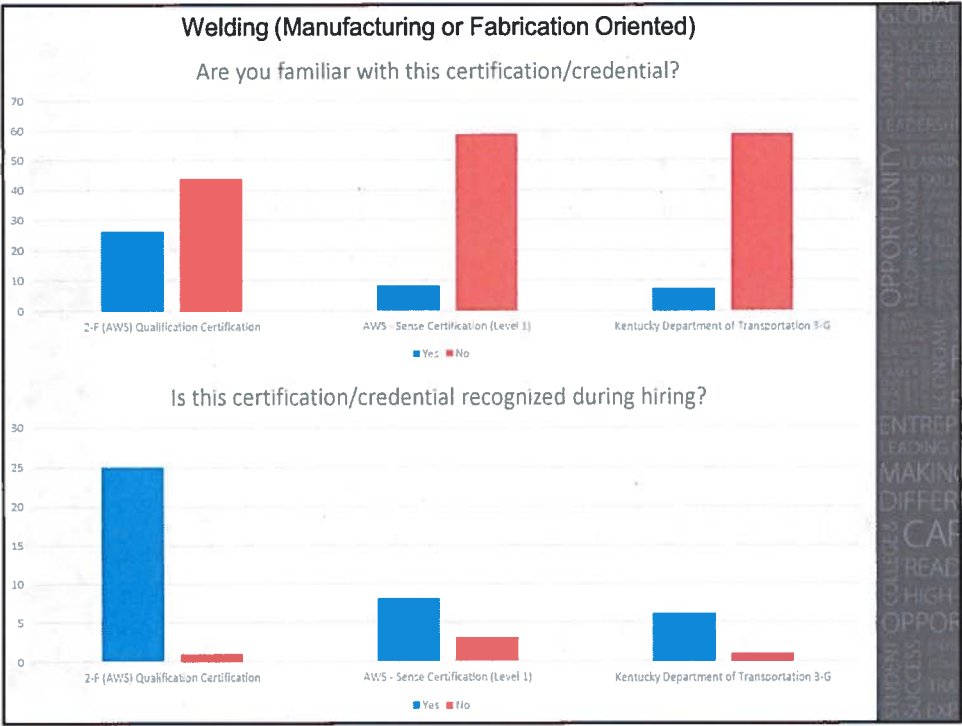












Health Science

SOC	Title	Current		Forecast				
		Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
29-1141	Registered Nurses	36,429	\$58,800	4,051	2,442	6,494	13.3%	12.9%
31-1014	Nursing Assistants	20,357	\$24,500	2,171	1,133	3,304	7.4%	6.6%
39-9021	Personal Care Aides	13,677	\$21,400	708	1,552	2,260	5.0%	4.5%
29-2061	Licensed Practical and Licensed Vocational Nurses	8,632	\$39,200	1,078	420	1,499	3.2%	3.0%
31-9092	Medical Assistants	8,630	\$28,900	842	863	1,704	3.2%	3.4%
39-9011	Childcare Workers	8,209	\$20,200	1,553	292	1,845	3.0%	3.7%
31-1011	Home Health Aides	7,526	\$23,600	737	1,109	1,846	2.7%	3.7%
43-6013	Medical Secretaries	7,140	\$29,100	326	640	966	2.6%	1.9%
43-4171	Receptionists and Information Clerks	6,493	\$25,504	862	652	1,514	2.4%	3.0%
43-9061	Office Clerks, General	5,287	\$28,600	579	319	898	1.9%	1.8%
29-1069	Physicians and Surgeons, All Other	4,326	\$174,800	585	352	937	1.6%	1.9%
25-2011	Preschool Teachers, Except Special Education	3,830	\$37,900	532	136	668	1.4%	1.3%
29-1111	Medical and Health Services Managers	3,793	\$91,514	483	262	745	1.4%	1.5%
21-1093	Social and Human Service Assistants	3,766	\$28,500	349	247	597	1.4%	1.2%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	3,755	\$30,800	201	206	407	1.4%	0.8%
37-2012	Maids and Housekeeping Cleaners	3,750	\$19,800	493	197	690	1.4%	1.4%
31-9091	Dental Assistants	3,576	\$33,600	420	306	726	1.3%	1.4%
43-3021	Billing and Posting Clerks	3,159	\$32,800	317	307	624	1.2%	1.2%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,989	\$47,300	226	274	501	1.1%	1.0%
29-1123	Physical Therapists	2,798	\$83,108	350	417	768	1.0%	1.5%
29-2034	Radiologic Technologists	2,789	\$49,800	240	97	336	1.0%	0.7%
29-2041	Emergency Medical Technicians and Paramedics	2,742	\$30,200	211	379	589	1.0%	1.2%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,305	\$23,300	230	116	346	0.8%	0.7%
29-2021	Dental Hygienists	2,286	\$57,300	169	194	364	0.8%	0.7%
35-2012	Cooks, Institution and Cafeteria	2,249	\$23,900	291	133	423	0.8%	0.8%
29-2071	Medical Records and Health Information Technicians	2,240	\$36,000	232	156	387	0.8%	0.8%
29-2011	Medical and Clinical Laboratory Technologists	2,117	\$56,800	241	128	370	0.8%	0.7%
21-1021	Child, Family, and School Social Workers	2,094	\$38,200	256	127	383	0.8%	0.8%
25-9041	Teacher Assistants	2,078	\$26,600	243	84	328	0.8%	0.7%

Health Science

		Current		Forecast				
SOC	Title	Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
29-2012	Medical and Clinical Laboratory Technicians	1,980	\$40,400	211	153	364	0.7%	0.7%
29-1062	Family and General Practitioners	1,863	\$191,400	292	75	367	0.7%	0.7%
21-1022	Healthcare Social Workers	1,827	\$45,700	218	146	364	0.7%	0.7%
21-1014	Mental Health Counselors	1,814	\$39,800	195	182	377	0.7%	0.8%
35-3041	Food Servers, Nonrestaurant	1,795	\$21,300	213	114	328	0.7%	0.7%
29-1126	Respiratory Therapists	1,774	\$47,811	195	95	290	0.6%	0.6%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,774	\$35,100	85	13	98	0.6%	0.2%
29-1171	Nurse Practitioners	1,728	\$95,100	209	278	487	0.6%	1.0%
11-1021	General and Operations Managers	1,679	\$91,000	222	152	375	0.6%	0.7%
43-4051	Customer Service Representatives	1,652	\$31,200	215	149	363	0.6%	0.7%
43-4111	Interviewers, Except Eligibility and Loan	1,615	\$29,600	171	41	212	0.6%	0.4%
49-9071	Maintenance and Repair Workers, General	1,503	\$36,800	200	92	292	0.5%	0.6%
39-9032	Recreation Workers	1,482	\$25,600	151	95	246	0.5%	0.5%
29-2055	Surgical Technologists	1,479	\$39,300	65	86	151	0.5%	0.3%
21-1023	Mental Health and Substance Abuse Social Workers	1,432	\$37,715	165	151	316	0.5%	0.6%
29-1021	Dentists, General	1,402	\$168,500	177	135	312	0.5%	0.6%
31-9097	Phlebotomists	1,391	\$29,400	146	147	293	0.5%	0.6%
29-2099	Health Technologists and Technicians, All Other	1,385	\$50,100	72	135	207	0.5%	0.4%
29-1122	Occupational Therapists	1,365	\$79,600	125	161	286	0.5%	0.6%
29-1051	Pharmacists	1,342	\$121,500	154	69	223	0.5%	0.4%
29-1071	Physician Assistants	1,276	\$98,400	135	184	319	0.5%	0.6%
21-1011	Substance Abuse and Behavioral Disorder Counselors	1,231	\$36,600	132	140	272	0.4%	0.5%
11-9151	Social and Community Service Managers	1,177	\$56,300	159	71	230	0.4%	0.5%
21-1015	Rehabilitation Counselors	1,172	\$35,600	125	45	170	0.4%	0.3%
29-2052	Pharmacy Technicians	1,171	\$27,800	56	60	115	0.4%	0.2%
35-2021	Food Preparation Workers	1,130	\$20,300	168	-11	157	0.4%	0.3%
31-2021	Physical Therapist Assistants	1,128	\$53,800	154	192	345	0.4%	0.7%
39-9041	Residential Advisors	1,053	\$22,100	170	55	224	0.4%	0.4%
Totals / Average		220,641	\$49,647	23,555	16,742	40,297		

Data Provided by KCEWS August 2016

Advanced Manufacturing

SOC	Title	Current		Forecast				
		Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
51-2092	Team Assemblers	28,931	\$36,100	3,407	-546	2,861	11.7%	12.4%
51-4041	Machinists	5,590	\$42,000	793	192	985	2.3%	4.3%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	6,135	\$27,300	965	-168	798	2.5%	3.4%
49-9041	Industrial Machinery Mechanics	4,044	\$49,100	520	273	793	1.6%	3.4%
51-9111	Packaging and Filling Machine Operators and Tenders	4,732	\$29,400	858	-105	753	1.9%	3.3%
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	2,912	\$37,900	445	240	686	1.2%	3.0%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	6,468	\$37,200	854	-189	664	2.6%	2.9%
51-4121	Welders, Cutters, Solderers, and Brazers	4,205	\$37,700	689	-38	651	1.7%	2.8%
51-1011	First-Line Supervisors of Production and Operating Workers	8,955	\$54,199	810	-277	534	3.6%	2.3%
51-9198	Helpers--Production Workers	5,265	\$25,400	819	-290	529	2.1%	2.3%
17-2112	Industrial Engineers	3,371	\$79,400	524	-34	490	1.4%	2.1%
53-7051	Industrial Truck and Tractor Operators	4,197	\$31,400	609	-124	484	1.7%	2.1%
2141	Mechanical Engineers	2,735	\$78,900	458	-15	443	1.1%	1.9%
49-9071	Maintenance and Repair Workers, General	4,218	\$36,800	549	-136	414	1.7%	1.8%
11-3051	Industrial Production Managers	2,863	\$87,300	478	-83	395	1.2%	1.7%
11-1021	General and Operations Managers	3,830	\$91,000	492	-129	363	1.6%	1.6%
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	2,424	\$35,300	429	-67	362	1.0%	1.6%
53-7064	Packers and Packagers, Hand	3,501	\$22,100	470	-115	355	1.4%	1.5%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	4,315	\$63,500	425	-150	275	1.7%	1.2%
51-3092	Food Batchmakers	1,753	\$31,100	253	-16	237	0.7%	1.0%
51-9199	Production Workers, All Other	3,041	\$25,700	307	-83	224	1.2%	1.0%
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and	1,304	\$26,500	375	-152	222	0.5%	1.0%
43-5081	Stock Clerks and Order Fillers	1,597	\$26,400	266	-44	222	0.6%	1.0%
43-4051	Customer Service Representatives	2,653	\$31,200	334	-117	217	1.1%	0.9%
43-5061	Production, Planning, and Expediting Clerks	1,951	\$46,400	279	-63	216	0.8%	0.9%
51-2099	Assemblers and Fabricators, All Other	3,142	\$26,800	282	-74	208	1.3%	0.9%
9011	Chemical Equipment Operators and Tenders	1,130	\$50,700	264	-69	195	0.5%	0.8%
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	2,009	\$34,800	264	-88	177	0.8%	0.8%
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	1,607	\$57,400	225	-50	175	0.7%	0.8%

Data Provided by KCEWS August 2016

Advanced Manufacturing

SOC	Title	Current		Forecast				
		Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	1,802	\$34,700	204	-35	169	0.7%	0.7%
43-5071	Shipping, Receiving, and Traffic Clerks	3,680	\$31,200	378	-212	166	1.5%	0.7%
53-3032	Heavy and Tractor-Trailer Truck Drivers	2,370	\$40,500	215	-50	166	1.0%	0.7%
51-3023	Slaughterers and Meat Packers	1,655	\$27,700	198	-35	164	0.7%	0.7%
11-9199	Managers, All Other	693	\$92,300	200	-42	159	0.3%	0.7%
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	1,126	\$25,300	191	-33	158	0.5%	0.7%
13-2011	Accountants and Auditors	1,459	\$63,200	203	-52	151	0.6%	0.7%
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	1,943	\$37,800	407	-256	151	0.8%	0.7%
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	2,109	\$23,600	190	-44	146	0.9%	0.6%
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1,387	\$31,900	261	-121	140	0.6%	0.6%
51-4051	Metal-Refining Furnace Operators and Tenders	700	\$41,500	158	-23	135	0.3%	0.6%
43-9061	Office Clerks, General	2,668	\$28,600	284	-151	133	1.1%	0.6%
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	1,228	\$34,000	197	-65	132	0.5%	0.6%
41-2031	Retail Salespersons	734	\$24,400	130	-1	129	0.3%	0.6%
51-3011	Bakers	1,097	\$24,700	137	-14	123	0.4%	0.5%
49-9043	Maintenance Workers, Machinery	1,300	\$44,800	101	21	123	0.5%	0.5%
51-2022	Electrical and Electronic Equipment Assemblers	2,072	\$32,100	209	-88	121	0.8%	0.5%
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	725	\$41,400	133	-13	121	0.3%	0.5%
51-9196	Paper Goods Machine Setters, Operators, and Tenders	2,012	\$36,000	223	-103	120	0.8%	0.5%
51-8091	Chemical Plant and System Operators	612	\$62,200	156	-41	116	0.2%	0.5%
51-2031	Engine and Other Machine Assemblers	1,178	\$39,700	121	-13	108	0.5%	0.5%
11-9041	Architectural and Engineering Managers	989	\$107,800	139	-33	107	0.4%	0.5%
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	1,423	\$24,800	138	-37	101	0.6%	0.4%
53-7063	Machine Feeders and Offbearers	1,487	\$30,400	158	-59	99	0.6%	0.4%
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	577	\$27,600	126	-31	95	0.2%	0.4%
17-3026	Industrial Engineering Technicians	887	\$59,700	122	-31	92	0.4%	0.4%
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	2,969	\$33,300	476	-385	91	1.2%	0.4%
47-2111	Electricians	1,609	\$50,100	131	-41	90	0.7%	0.4%
Totals / Average		171,368	\$41,557	23,030	-4,502	18,528		

Construction Trades

SOC	Title	Current		Forecast				
		Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
47-2061	Construction Laborers	13,573	\$33,700	1,689	1,068	2,756	13.3%	16.8%
47-2031	Carpenters	10,622	\$41,100	874	378	1,252	10.4%	7.7%
47-2111	Electricians	6,434	\$50,100	539	576	1,115	6.3%	6.8%
47-2141	Painters, Construction and Maintenance	3,866	\$35,400	542	169	711	3.8%	4.3%
47-2152	Plumbers, Pipefitters, and Steamfitters	5,016	\$48,500	370	334	703	4.9%	4.3%
47-1011	Supervisors of Construction and Extraction Workers	5,837	\$59,320	259	353	612	5.7%	3.7%
11-9021	Construction Managers	4,580	\$82,300	501	63	564	4.5%	3.4%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2,933	\$41,000	245	261	506	2.9%	3.1%
47-2073	Operating Engineers and Other Construction Equipment Operators	2,947	\$43,300	244	235	479	2.9%	2.9%
11-1021	General and Operations Managers	1,781	\$91,000	234	119	353	1.7%	2.2%
43-9061	Office Clerks, General	2,337	\$28,600	254	86	341	2.3%	2.1%
49-9051	Electrical Power-Line Installers and Repairers	733	\$59,100	153	171	325	0.7%	2.0%
1051	Cost Estimators	1,623	\$59,300	223	96	318	1.6%	1.9%
47-2181	Roofers	1,565	\$33,100	147	117	264	1.5%	1.6%
47-2051	Cement Masons and Concrete Finishers	1,742	\$35,800	107	115	222	1.7%	1.4%
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,313	\$40,500	122	84	206	1.3%	1.3%
11-9199	Managers, All Other	572	\$92,300	170	29	198	0.6%	1.2%
51-4121	Welders, Cutters, Solderers, and Brazers	809	\$37,700	135	57	192	0.8%	1.2%
47-2211	Sheet Metal Workers	1,280	\$43,100	135	56	190	1.3%	1.2%
49-9052	Telecommunications Line Installers and Repairers	700	\$46,000	57	124	181	0.7%	1.1%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,907	\$30,800	102	69	170	1.9%	1.0%
47-2021	Brickmasons and Blockmasons	1,041	\$44,400	49	114	163	1.0%	1.0%
41-3099	Sales Representatives, Services, All Other	781	\$54,400	98	46	144	0.8%	0.9%
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	592	\$59,700	60	66	127	0.6%	0.8%
47-3013	Helpers--Electricians	834	\$30,900	51	74	125	0.8%	0.8%
47-2132	Insulation Workers, Mechanical	467	\$50,100	68	56	124	0.5%	0.8%
37-3011	Landscaping and Groundskeeping Workers	740	\$24,300	85	35	120	0.7%	0.7%
43-7062	Laborers and Freight, Stock, and Material Movers, Hand	446	\$27,300	72	34	106	0.4%	0.6%
13-2011	Accountants and Auditors	516	\$63,200	73	31	104	0.5%	0.6%

Construction Trades

		Current		Forecast				
SOC	Title	Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth Replacement
47-2044	Tile and Marble Setters	626	\$39,000	82	21	102	0.6%	0.6%
49-9098	Helpers--Installation, Maintenance, and Repair Workers	389	\$27,900	61	38	99	0.4%	0.6%
47-2071	Paving, Surfacing, and Tamping Equipment Operators	547	\$36,600	64	31	95	0.5%	0.6%
47-2221	Structural Iron and Steel Workers	747	\$48,300	60	35	94	0.7%	0.6%
49-9071	Maintenance and Repair Workers, General	466	\$36,800	62	30	92	0.5%	0.6%
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	160	\$27,400	86	5	91	0.2%	0.6%
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	694	\$25,600	43	46	89	0.7%	0.5%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	566	\$63,500	57	32	89	0.6%	0.5%
17-2051	Civil Engineers	421	\$75,400	61	22	82	0.4%	0.5%
49-9044	Millwrights	343	\$52,600	34	40	74	0.3%	0.5%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	359	\$46,400	45	28	73	0.4%	0.4%
47-2081	Drywall and Ceiling Tile Installers	1,148	\$35,800	45	26	71	1.1%	0.4%
47-4021	Elevator Installers and Repairers	408	\$68,000	30	28	58	0.4%	0.4%
47-2121	Glaziers	434	\$37,300	30	26	57	0.4%	0.3%
47-2151	Pipelayers	374	\$42,300	23	33	56	0.4%	0.3%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,642	\$35,100	78	-22	56	1.6%	0.3%
47-2131	Insulation Workers, Floor, Ceiling, and Wall	272	\$33,800	45	9	54	0.3%	0.3%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	376	\$47,300	28	25	54	0.4%	0.3%
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	380	\$48,900	18	35	53	0.4%	0.3%
47-2171	Reinforcing Iron and Rebar Workers	224	\$55,200	19	32	51	0.2%	0.3%
53-7021	Crane and Tower Operators	221	\$53,000	37	13	51	0.2%	0.3%
53-7032	Excavating and Loading Machine and Dragline Operators	374	\$39,700	25	25	50	0.4%	0.3%
47-2041	Carpet Installers	446	\$30,800	53	-3	50	0.4%	0.3%
49-2098	Security and Fire Alarm Systems Installers	216	\$36,800	29	18	48	0.2%	0.3%
49-9011	Mechanical Door Repairers	164	\$38,700	32	14	46	0.2%	0.3%
43-5032	Dispatchers, Except Police, Fire, and Ambulance	229	\$36,000	29	17	46	0.2%	0.3%
43-5081	Stock Clerks and Order Fillers	173	\$26,400	29	13	42	0.2%	0.3%
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	195	\$57,400	28	14	42	0.2%	0.3%
49-9099	Installation, Maintenance, and Repair Workers, All Other	285	\$34,800	26	15	41	0.3%	0.3%
Totals / Average		90,462	\$44,460	8,917	5,657	14,574		

Data Provided by KCEWS August 2016

Transportation / Logistics

SOC	Title	Current		Forecast				
		Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	19,307	\$27,300	3,064	154	3,218	18.2%	22.6%
53-3032	Heavy and Tractor-Trailer Truck Drivers	18,527	\$40,500	1,702	474	2,179	17.4%	15.3%
53-3033	Light Truck or Delivery Services Drivers	9,532	\$32,900	903	98	1,003	9.0%	7.1%
53-7051	Industrial Truck and Tractor Operators	3,986	\$31,400	583	41	624	3.8%	4.4%
43-5052	Postal Service Mail Carriers	3,834	\$50,100	974	-585	389	3.6%	2.7%
43-5081	Stock Clerks and Order Fillers	2,107	\$26,400	354	24	378	2.0%	2.7%
53-7064	Packers and Packagers, Hand	1,845	\$22,200	251	50	302	1.7%	2.1%
53-5021	Captains, Mates, and Pilots of Water Vessels	1,099	\$86,600	226	67	293	1.0%	2.1%
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	1,759	\$54,800	271	-5	266	1.7%	1.9%
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	1,765	\$46,700	276	-21	256	1.7%	1.8%
43-5011	Cargo and Freight Agents	1,251	\$43,200	190	35	225	1.2%	1.6%
43-4051	Customer Service Representatives	1,550	\$31,200	198	25	222	1.5%	1.6%
53-5071	Shipping, Receiving, and Traffic Clerks	1,921	\$31,200	200	-1	200	1.8%	1.4%
43-5032	Dispatchers, Except Police, Fire, and Ambulance	1,484	\$36,000	185	11	196	1.4%	1.4%
11-1021	General and Operations Managers	1,195	\$91,000	156	27	183	1.1%	1.3%
11-9199	Managers, All Other	583	\$92,300	171	4	175	0.5%	1.2%
43-9061	Office Clerks, General	1,481	\$28,600	160	-14	146	1.4%	1.0%
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1,430	\$41,800	130	11	141	1.3%	1.0%
53-5011	Sailors and Marine Oilers	808	\$33,800	88	50	138	0.8%	1.0%
49-9071	Maintenance and Repair Workers, General	910	\$36,800	120	10	132	0.9%	0.9%
49-3011	Aircraft Mechanics and Service Technicians	910	\$82,000	106	22	128	0.9%	0.9%
53-7063	Machine Feeders and Offbearers	827	\$30,400	90	31	120	0.8%	0.8%
41-3099	Sales Representatives, Services, All Other	844	\$54,400	105	13	118	0.8%	0.8%
53-3022	Bus Drivers, School or Special Client	754	\$32,800	51	64	114	0.7%	0.8%
11-3071	Transportation, Storage, and Distribution Managers	813	\$85,300	98	13	111	0.8%	0.8%
53-2011	Airline Pilots, Copilots, and Flight Engineers	534	\$130,700	94	5	99	0.5%	0.7%
53-3021	Bus Drivers, Transit and Intercity	1,227	\$29,500	77	16	93	1.2%	0.7%
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	620	\$33,300	90	2	92	0.6%	0.6%
53-6099	Transportation Workers, All Other	294	\$33,000	79	8	88	0.3%	0.6%

43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,076	\$47,300	80	-5	87	1.0%	0.6%
53-2031	Flight Attendants	520	\$44,800	75	12	87	0.5%	0.6%
53-7061	Cleaners of Vehicles and Equipment	442	\$22,210	82	4	86	0.4%	0.6%
43-5051	Postal Service Clerks	897	\$46,800	223	-137	86	0.8%	0.6%
43-5021	Couriers and Messengers	696	\$23,900	85	-9	76	0.7%	0.5%
53-7011	Conveyor Operators and Tenders	526	\$47,500	76	-7	69	0.5%	0.5%
43-5061	Production, Planning, and Expediting Clerks	443	\$46,400	64	0	64	0.4%	0.5%
53-3041	Taxi Drivers and Chauffeurs	1,092	\$20,900	125	-71	58	1.0%	0.4%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	312	\$37,200	42	11	53	0.3%	0.4%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	567	\$23,300	56	-16	50	0.5%	0.3%
13-2011	Accountants and Auditors	291	\$63,200	41	5	46	0.3%	0.3%
53-2012	Commercial Pilots	215	\$58,800	31	13	43	0.2%	0.3%
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	396	\$59,685	39	2	43	0.4%	0.3%
53-5031	Ship Engineers	225	\$65,500	28	14	41	0.2%	0.3%
43-3021	Billing and Posting Clerks	324	\$32,800	32	7	39	0.3%	0.3%
51-9111	Packaging and Filling Machine Operators and Tenders	184	\$29,400	34	5	39	0.2%	0.3%
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	1,516	\$50,700	336	-297	39	1.4%	0.3%
49-3023	Automotive Service Technicians and Mechanics	412	\$34,800	63	-26	38	0.4%	0.3%
53-7021	Crane and Tower Operators	191	\$53,000	32	4	37	0.2%	0.3%
49-3043	Rail Car Repairers	219	\$53,300	27	7	34	0.2%	0.2%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	796	\$30,800	42	-9	34	0.7%	0.2%
51-8092	Gas Plant Operators	114	\$68,400	35	-2	33	0.1%	0.2%
51-2092	Team Assemblers	201	\$36,100	24	7	31	0.2%	0.2%
53-3031	Driver/Sales Workers	282	\$24,600	26	5	31	0.3%	0.2%
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	202	\$30,800	29	2	31	0.2%	0.2%
53-7121	Tank Car, Truck, and Ship Loaders	166	\$33,100	27	4	31	0.2%	0.2%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	226	\$63,500	23	7	29	0.2%	0.2%
43-4151	Order Clerks	241	\$30,300	34	-5	29	0.2%	0.2%
49-9041	Industrial Machinery Mechanics	128	\$49,100	17	12	28	0.1%	0.2%
41-2031	Retail Salespersons	119	\$24,400	21	7	28	0.1%	0.2%
13-1071	Human Resources Specialists	213	\$54,400	29	-2	27	0.2%	0.2%
43-9021	Data Entry Keyers	180	\$29,600	38	-11	26	0.2%	0.2%
Totals / Average		96,604	\$43,378	12,904	157	13,101		

Business / IT

		Current		Forecast				
SOC	Title	Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
13-2011	Accountants and Auditors	5,551	\$63,200	797	521	1,317	6.6%	9.2%
11-9199	Managers, All Other	2,110	\$92,300	629	151	780	2.5%	5.5%
13-1111	Management Analysts	2,998	\$76,800	265	325	590	3.5%	4.1%
23-1011	Lawyers	4,894	\$93,600	449	134	583	5.8%	4.1%
15-1132	Software Developers, Applications	2,539	\$73,100	200	334	534	9.0%	3.7%
15-1121	Computer Systems Analysts	1,802	\$74,900	121	264	385	2.1%	2.7%
11-1021	General and Operations Managers	1,818	\$91,000	239	126	366	2.1%	2.6%
43-9061	Office Clerks, General	2,462	\$28,600	267	46	313	2.9%	2.2%
17-2051	Civil Engineers	1,570	\$75,400	226	84	309	1.9%	2.2%
43-4051	Customer Service Representatives	1,438	\$31,200	186	105	291	1.7%	2.0%
15-1133	Software Developers, Systems Software	1,485	\$84,800	98	187	285	1.8%	2.0%
41-3099	Sales Representatives, Services, All Other	1,341	\$54,400	169	111	281	1.6%	2.0%
23-2011	Paralegals and Legal Assistants	1,986	\$46,400	208	67	275	2.3%	1.9%
15-1151	Computer User Support Specialists	1,351	\$45,500	87	172	260	1.6%	1.8%
13-1161	Market Research Analysts and Marketing Specialists	1,305	\$55,000	84	163	247	1.5%	1.7%
17-2141	Mechanical Engineers	746	\$78,900	128	65	192	0.9%	1.3%
29-2056	Veterinary Technologists and Technicians	1,306	\$28,800	65	120	185	1.5%	1.3%
13-2082	Tax Preparers	1,051	\$40,400	177	0	177	1.2%	1.2%
11-3021	Computer and Information Systems Managers	868	\$106,400	53	117	170	1.0%	1.2%
27-4021	Photographers	785	\$32,600	210	-51	159	0.9%	1.1%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2,335	\$30,800	124	35	158	2.8%	1.1%
27-1024	Graphic Designers	757	\$40,400	118	38	156	0.9%	1.1%
43-4171	Receptionists and Information Clerks	1,292	\$25,599	167	-23	144	1.5%	1.0%
13-1199	Business Operations Specialists, All Other	965	\$63,400	57	83	140	1.1%	1.0%
15-1142	Network and Computer Systems Administrators	841	\$63,900	55	84	139	1.0%	1.0%
29-1131	Veterinarians	946	\$86,900	93	39	132	1.1%	0.9%
21-9096	Veterinary Assistants and Laboratory Animal Caretakers	937	\$22,100	93	38	130	1.1%	0.9%
17-1011	Architects, Except Landscape and Naval	770	\$66,300	78	40	118	0.9%	0.8%
15-1134	Web Developers	462	\$51,700	38	78	116	0.5%	0.8%

Business / IT

		Current		Forecast				
SOC	Title	Current Employment	Regional Average Wage ¹	5-Year Replacement Demand	5-Year Growth Demand	5-Year Total Demand	% of Employment	% of Growth & Replacement
43-1011	First-Line Supervisors of Office and Administrative Support Workers	973	\$47,300	73	42	115	1.1%	0.8%
41-3011	Advertising Sales Agents	539	\$46,100	97	16	113	0.6%	0.8%
11-3031	Financial Managers	637	\$98,400	81	32	113	0.8%	0.8%
11-9041	Architectural and Engineering Managers	550	\$107,800	79	31	110	0.7%	0.8%
13-1071	Human Resources Specialists	517	\$54,400	72	29	101	0.6%	0.7%
17-2071	Electrical Engineers	538	\$84,400	64	30	94	0.6%	0.7%
19-2041	Environmental Scientists and Specialists, Including Health	339	\$51,800	53	32	86	0.4%	0.6%
43-3021	Billing and Posting Clerks	747	\$32,800	74	11	85	0.9%	0.6%
27-1011	Art Directors	316	\$73,100	68	12	80	0.4%	0.6%
47-4011	Construction and Building Inspectors	350	\$48,200	51	23	75	0.4%	0.5%
11-2021	Marketing Managers	369	\$102,900	46	28	74	0.4%	0.5%
17-2081	Environmental Engineers	277	\$78,600	39	31	70	0.3%	0.5%
15-1143	Computer Network Architects	443	\$77,300	28	41	69	0.5%	0.5%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	328	\$27,300	53	16	69	0.4%	0.5%
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	367	\$37,200	49	19	68	0.4%	0.5%
13-1151	Training and Development Specialists	309	\$56,900	40	28	68	0.4%	0.5%
27-3091	Interpreters and Translators	276	\$53,100	21	46	67	0.3%	0.5%
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	353	\$91,500	33	33	66	0.4%	0.5%
39-2021	Nonfarm Animal Caretakers	398	\$23,300	50	16	66	0.5%	0.5%
43-9021	Data Entry Keyers	332	\$29,600	70	-6	64	0.4%	0.4%
43-6012	Legal Secretaries	1,756	\$32,800	120	-56	64	2.1%	0.4%
15-1199	Computer Occupations, All Other	377	\$79,800	29	34	62	0.4%	0.4%
15-1152	Computer Network Support Specialists	401	\$55,400	27	35	62	0.5%	0.4%
13-2051	Financial Analysts	319	\$76,200	35	27	62	0.4%	0.4%
15-1131	Computer Programmers	1,349	\$69,400	158	-99	60	1.6%	0.4%
27-3043	Writers and Authors	204	\$49,700	50	9	59	0.2%	0.4%
11-2022	Sales Managers	273	\$106,800	34	23	57	0.3%	0.4%
41-9011	Demonstrators and Product Promoters	264	\$26,501	46	10	56	0.3%	0.4%
Totals / Average		62,610	\$60,404	7,116	3,944	11,060		



Workforce Supply & Demand Study

Presented by Josh Benton
Executive Director, Workforce Development
Kentucky Cabinet for Economic Development

Workforce Supply & Demand Study

- Purpose & Scope
- Timeline
- Phase I: Initial Findings
 - Sectors
 - Occupations



Purpose & Scope

- **Purpose:** Identify Kentucky's supply and demand for occupational needs in sustainable, high-wage sectors.
- **Scope:** Kentucky Cabinet for Economic Development (CED) will utilize current and predicative data to identify sectors and occupations
 - Sector criteria: current employment, wages, location quotient, growth & replacement employment
 - Occupational criteria: current employment, wages, growth & replacement employment

Purpose & Scope

- **Scope:** Kentucky Center for Education & Workforce Statistics (KCEWS) will review demand data and identify supply by examining correlating enrollment and graduation data for key demand occupations.
- **Scope:** Maher and Maher will review K-20 credential and degree offerings to align career pathways aligned to occupational demand data.
- **Scope:** Kentucky workforce stakeholders will collaboratively engage the private sector to develop sector-based, industry-led partnerships.

Timeline

- **Phase I: Identify Demand**
 - KY CED will collect and analyze demand data at the state, Workforce Development Region (WDR), and Workforce Development Area (WDA)
- **Phase II: Identify Supply**
 - KCEWS will review and crosswalk demand data to identify credentials and degrees required for occupations. Additionally, KCEWS will identify current enrollment and graduation rates for identified credentials and degrees.



Timeline

- **Phase III: Career Pathways & Industry Partnerships**
 - **Career Pathways:** Utilizing supply and demand data, Maher and Maher will research, identify, and align K-20 credentials and degrees that match sector and occupational demands
 - **Industry Partnerships:** At the state, WDR, and WDA levels, workforce stakeholders will collaboratively partner with the private sector to develop sector-based industry partnerships
 - Validate supply and demand data and career pathway information
 - Review and revise current credential and degree programs
 - Identify gaps and develop new programs
 - Provide sponsorship, apprenticeship, co-op, and internship opportunities for individuals in partnership approved programs

Phase I Initial Findings: Sectors

Top Employment Sectors

- ▶ Health Care
- ▶ Manufacturing
- ▶ Transportation
- ▶ Business & Technical Services
 - ▶ Includes: Finance, Insurance, R&D, Wholesale, IT
- ▶ Construction

Exceptions:

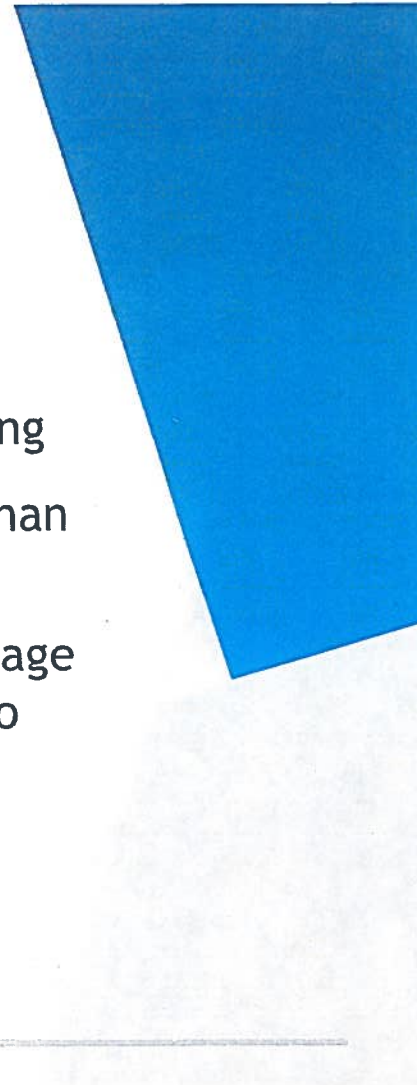
- ▶ East Kentucky WDR: Mining/Energy
- ▶ West Kentucky WDR: Agriculture



Phase I Initial Findings: Sectors

Within all areas of Kentucky there are three primary employment sectors.

- ▶ Health Care, Business & Technical Services, and Manufacturing
- ▶ Each have 150,000 more current and projected employees than the next closest sector (Transportation)
- ▶ Sub-sectors (i.e. Motor Vehicle Manufacturing, Food & Beverage Manufacturing, and Primary Health Care) are large enough to be top 5 sectors.



Phase I Initial Findings: Sectors

Within all employment sectors Kentucky needs to fill 288,196 jobs over the next 5 years

- ▶ Healthcare - 40,888
- ▶ Business & Technical Services - 34,091
- ▶ Manufacturing - 18,918
- ▶ Transportation - 13,005
- ▶ Construction - 12,673



Phase I Initial Findings: Occupations

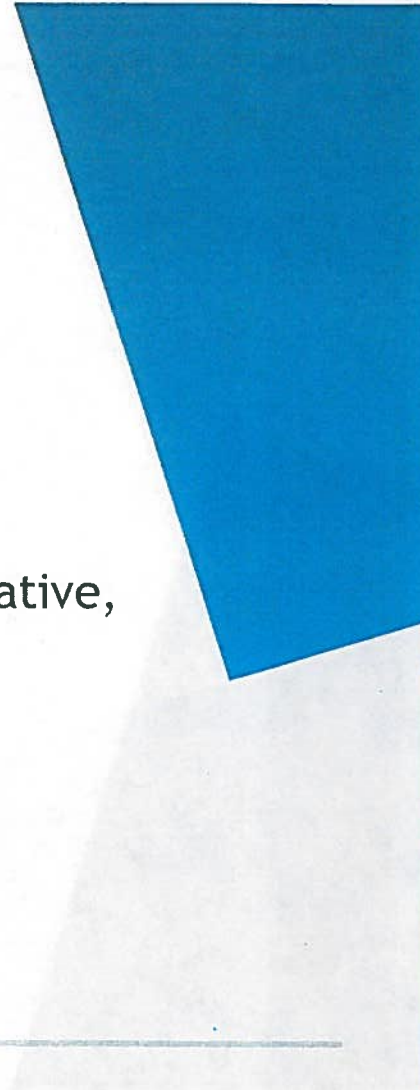
Top Demand Occupations: High Skills/High Wage

- ▶ **Health Care:** RN, LPN, General Physician
- ▶ **Manufacturing:** Skilled Technician, Skilled Operator, Mechanical Engineer, Electrical Engineer, Quality Engineer, Industrial Engineer, Welder
- ▶ **Business & Technical Services:** Accountant, Software Developer, Financial Analyst, Computer Systems Analyst, Civil Engineer, Computer Programmer, Technical Sales
- ▶ **Transportation:** CDL, Operations Managers
- ▶ **Construction:** Carpenter, Electrician, Plumber, Pipefitters, HVAC Installer, Heavy Equipment Operator

Phase I Initial Findings: Occupations

Top Demand Occupations: Low Skill/Low Wage

- ▶ **Health Care:** Nursing Assistant, Personal Care Aid, Medical Assistant, Home Health Aid
- ▶ **Manufacturing:** Assembler, Material Mover
- ▶ **Business & Technical Services:** Customer Service Representative, Office Clerk
- ▶ **Transportation:** Material Mover, Package Handler
- ▶ **Construction:** Laborer



Phase I Initial Findings: Occupations

Top Demand Occupations: Cross Sector Occupations

- ▶ All IT Occupations
- ▶ Accountant
- ▶ Financial Manager
- ▶ Operations Manager



Thank you

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KENTUCKY High-Demand Industry Sectors and Top Occupations

	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the constuction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemicial transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of products.
T O P O c c u p a t i o n s	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Laborers, Packers, Movers
	Managers, All Other	Carpenters	Personal Care Aides	Machine Maintenance Specialist	Heavy and Tractor-Trailer Truck Drivers
	Management Analysts	Electricians	Nursing Assistants	Machinist	Light Truck or Delivery Services Drivers
	Lawyers	Painters, Construction and Maintenance	Childcare Workers	Engineers - Process/Manufacturing	Industrial Truck and Tractor Operators
	Software Developers, Applications	Plumbers, Pipefitters, and Steamfitters	Medical Assistants	Machine Tool Operator	Stock, Shipping, and Receiving Clerks
	Computer Systems Analysts	Supervisors of Construction and Extraction Workers	Licensed Practical and Licensed Vocational Nurses	Inspectors, Testers, Sorters, Samplers, and Weighers	First-Line Supervisors
	General and Operations Managers	Construction Managers	Healthcare Managers	Welders	Postal Service Mail Carriers
	General Office Clerks	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Social Workers	First-Line Supervisors of Production and Operating Workers	Captains, Mates, and Pilots of Water Vessels
	Civil Engineers	Operating Engineers and Other Construction Equipment Operators	Medical Secretaries	Manufacturing Managers	Cargo and Freight Agents
	Customer Service Representatives	General and Operations Managers	Physicians and Surgeons, All Other	Engineers - Design	Bus Drivers
	Software Developers, Systems Software	Electrical Power-Line Installers and Repairers	Physical Therapists	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific	Dispatchers, Except Police, Fire, and Ambulance
	Sales Representatives	Cost Estimators	Dental Assistants	Food Batchmakers	General and Operations Managers
	Paralegals and Legal Assistants	Roofers	Social and Human Service Assistants	Production, Planning, and Expediting Clerks	Bus and Truck Mechanics and Diesel Engine
	Computer User Support Specialists	Cement Masons and Concrete Finishers	Emergency Medical Technicians and Paramedics	Purchasing Agents, Except Wholesale, Retail, and Farm Products	Sailors and Marine Oilers
	Market Research Analysts and Marketing Specialists	Heavy and Tractor-Trailer Truck Drivers	First-Line Supervisors of Office and Administrative Support Workers	Shipping, Receiving, and Traffic Clerks	Maintenance and Repair Workers, General
	Mechanical Engineers	Welders, Cutters, Solderers, and Brazers	Nurse Practitioners	Heavy and Tractor-Trailer Truck Drivers	Aircraft Mechanics and Service Technicians
	Veterinary Technologists and Technicians	Sheet Metal Workers	Medical Records and Health Information Technicians	Slaughterers and Meat Packers	Machine Feeders and Offbearers
	Tax Preparers	Telecommunications Line Installers and Repairers	Mental Health Counselors	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Transportation, Storage, and Distribution Managers
	Computer and Information Systems Managers	Brickmasons and Blockmasons	Medical and Clinical Laboratory Technologists	Meat, Poultry, and Fish Cutters and Trimmers	Airline Pilots, Copilots, and Flight Engineers
	Photographers	First-Line Supervisors of Mechanics, Installers, and Repairers	Family and General Practitioners	Metal-Refining Furnace Operators and Tenders	Reservation and Transportation Ticket Agents and Travel Clerks
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services	Public Administration	Government	Accomodation and Food Services
Agriculture (West Region)		Entrepreneurship	Media and Visual Arts (West Region)	Energy	

EAST Region High-Demand Industry Sectors and Top Occupations

	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the construction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemical transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of products.
T O P O c c u p a t i o n s	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Heavy and Tractor-Trailer Truck Drivers
	Managers, All Other	Carpenters	Personal Care Aides	Machine Maintenance Specialist	Laborers, Packers, Movers
	Lawyers	Electricians	Nursing Assistants	Machinist	Captains, Mates, and Pilots of Water Vessels
	Software Developers, Applications	Painters, Construction and Maintenance	Emergency Medical Technicians and Paramedics	Engineers - Process/Manufacturing	Postal Service Mail Carriers
	Management Analysts	Construction Managers	Medical Assistants	Inspectors, Testers, Sorters, Samplers, and Weighers	First-Line Supervisors
	Computer Systems Analysts	Operating Engineers and Other Construction Equipment Operators	Licensed Practical and Licensed Vocational Nurses	Machine Tool Operator	Industrial Truck and Tractor Operators
	Paralegals and Legal Assistants	Plumbers, Pipefitters, and Steamfitters	Childcare Workers	Petroleum Pump System Operators, Refinery Operators, and Gaugers	Light Truck or Delivery Services Drivers
	General and Operations Managers	Supervisors of Construction and Extraction Workers	Social Workers	Welders	Sailors and Marine Oilers
	Software Developers, Systems Software	Electrical Power-Line Installers and Repairers	Physicians and Surgeons, All Other	Food Batchmakers	Bus Drivers
	Civil Engineers	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Healthcare Managers	Engineers - Design	Stock, Shipping, and Receiving Clerks
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services	Public Administration	Government	Accommodation and Food Services
Energy		Entrepreneurship			

CENTRAL Region High-Demand Industry Sectors and Top Occupations

	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the constuction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemicial transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of products.
T o p O c c u p a t i o n s	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Laborers, Packers, Movers
	Managers, All Other	Electricians	Personal Care Aides	Machine Maintenance Specialist	Heavy and Tractor-Trailer Truck Drivers
	Lawyers	Carpenters	Nursing Assistants	Machinist	Light Truck or Delivery Services Drivers
	Management Analysts	Plumbers, Pipefitters, and Steamfitters	Childcare Workers	Engineers - Process/Manufacturing	First-Line Supervisors
	Software Developers, Applications	Painters, Construction and Maintenance	Medical Assistants	Machine Tool Operator	Industrial Truck and Tractor Operators
	Computer Systems Analysts	Supervisors of Construction and Extraction Workers	Licensed Practical and Licensed Vocational Nurses	Welders	Stock, Shipping, and Receiving Clerks
	General and Operations Managers	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Healthcare Managers	Inspectors, Testers, Sorters, Samplers, and Weighers	Postal Service Mail Carriers
	General Office Clerks	Construction Managers	Medical Secretaries	First-Line Supervisors of Production and Operating Workers	Cargo and Freight Agents
	Civil Engineers	Operating Engineers and Other Construction Equipment Operators	Social Workers	Engineers - Design	Bus Drivers
	Customer Service Representatives	General and Operations Managers	Physicians and Surgeons, All Other	Manufacturing Managers	Dispatchers, Except Police, Fire, and Ambulance
	Software Developers, Systems Software	Cost Estimators	Physical Therapists	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	General and Operations Managers
	Sales Representatives, Services, All Other	Roofers	Dental Assistants	Production, Planning, and Expediting Clerks	Aircraft Mechanics and Service Technicians
	Paralegals and Legal Assistants	Electrical Power-Line Installers and Repairers	Social and Human Service Assistants	Food Batchmakers	Machine Feeders and Offbearers
	Computer User Support Specialists	Cement Masons and Concrete Finishers	First-Line Supervisors of Office and Administrative Support Workers	Heavy and Tractor-Trailer Truck Drivers	Airline Pilots, Copilots, and Flight Engineers
	Market Research Analysts and Marketing Specialists	Sheet Metal Workers	Nurse Practitioners	Architectural and Engineering Managers	Bus and Truck Mechanics and Diesel Engine Specialists
	Veterinary Technologists and Technicians	Heavy and Tractor-Trailer Truck Drivers	Dental Hygienists	Chemical Plant and System Operators	Maintenance and Repair Workers, General
	Mechanical Engineers	Telecommunications Line Installers and Repairers	Medical Records and Health Information Technicians	Electricians	Sales Representatives, Services, All Other
	Tax Preparers	Welders, Cutters, Solderers, and Brazers	Medical and Clinical Laboratory Technologists	Industrial Engineering Technicians	Transportation, Storage, and Distribution Managers
	Computer and Information Systems Managers	Brickmasons and Blockmasons	Medical and Clinical Laboratory Technicians		Flight Attendants
	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	Insulation Workers, Mechanical	Family and General Practitioners		Reservation and Transportation Ticket Agents and Travel Clerks
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services	Public Administration	Government	Accomodation and Food Services
Energy		Entrepreneurship			

SOUTH Region High-Demand Industry Sectors and Top Occupations					
	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the constuction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemical transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of products.
T O P O C C U P A T I O N S	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Laborers, Packers, Movers
	Managers, All Other	Carpenters	Personal Care Aides	Machine Maintenance Specialist	Heavy and Tractor-Trailer Truck Drivers
	Lawyers	Electricians	Nursing Assistants	Machinist	Industrial Truck and Tractor Operators
	Management Analysts	Painters, Construction and Maintenance	Childcare Workers	Engineers - Process/Manufacturing	Stock, Shipping, and Receiving Clerks
	Software Developers, Applications	Construction Managers	Licensed Practical and Licensed Vocational Nurses	Machine Tool Operator	Light Truck or Delivery Services Drivers
	Computer Systems Analysts	Supervisors of Construction and Extraction Workers	Medical Assistants	Inspectors, Testers, Sorters, Samplers, and Weighers	Postal Service Mail Carriers
	Paralegals and Legal Assistants	Operating Engineers and Other Construction Equipment Operators	Healthcare Managers	First-Line Supervisors of Production and Operating Workers	First-Line Supervisors
	General and Operations Managers	Plumbers, Pipefitters, and Steamfitters	Social Workers	Welders	General and Operations Managers
	Software Developers, Systems Software	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Medical Secretaries	Manufacturing Managers	Dispatchers, Except Police, Fire, and Ambulance
	General Office Clerks	Cement Masons and Concrete Finishers	Emergency Medical Technicians and Paramedics	Engineers - Design	Cargo and Freight Agents
	Computer User Support Specialists	General and Operations Managers	Physicians and Surgeons, All Other	Food Batchmakers	Bus and Truck Mechanics and Diesel Engine Specialists
	Customer Service Representatives	Heavy and Tractor-Trailer Truck Drivers	Physical Therapists	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Machine Feeders and Offbearers
	Photographers	Cost Estimators	Dental Assistants	Production, Planning, and Expediting Clerks	Maintenance and Repair Workers, General
	Sales Representatives	Roofers	Social and Human Service Assistants	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Bus Drivers
	Veterinary Technologists and Technicians	Brickmasons and Blockmasons	First-Line Supervisors of Office and Administrative Support Workers	Metal-Refining Furnace Operators and Tenders	Transportation, Storage, and Distribution Managers
	Market Research Analysts and Marketing Specialists	Welders, Cutters, Solderers, and Brazers	Nurse Practitioners	Heavy and Tractor-Trailer Truck Drivers	
	Tax Preparers	Paving, Surfacing, and Tamping Equipment Operators	Mental Health Counselors	Purchasing Agents, Except Wholesale, Retail, and Farm Products	
	Computer and Information Systems Managers	Electrical Power-Line Installers and Repairers	Medical Records and Health Information Technicians	Slaughterers and Meat Packers	
	Civil Engineers	Sheet Metal Workers	Physical Therapist Assistants		
	Veterinarians	Tile and Marble Setters	Family and General Practitioners		
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services	Public Administration	Government	Accomodation and Food Services
Energy		Entrepreneurship			

WEST Region High-Demand Industry Sectors and Top Occupations					
T o p O c c u p a t i o n s	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the constuction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemical transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of products.
	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Heavy and Tractor-Trailer Truck Drivers
	Managers, All Other	Carpenters	Personal Care Aides	Machine Maintenance Specialist	Laborers, Packers, Movers
	Management Analysts	Electricians	Nursing Assistants	Machinist	Captains, Mates, and Pilots of Water Vessels
	Lawyers	Plumbers, Pipefitters, and Steamfitters	Childcare Workers	Engineers - Process/Manufacturing	Sailors and Marine Oilers
	Civil Engineers	Painters, Construction and Maintenance	Licensed Practical and Licensed Vocational Nurses	Welders	Industrial Truck and Tractor Operators
	Mechanical Engineers	Supervisors of Construction and Extraction Workers	Medical Assistants	Machine Tool Operator	First-Line Supervisors
	General and Operations Managers	Construction Managers	Healthcare Managers	Inspectors, Testers, Sorters, Samplers, and Weighers	Postal Service Mail Carriers
	Software Developers, Applications	Operating Engineers and Other Construction Equipment Operators	Physicians and Surgeons, All Other	Slaughterers and Meat Packers	Light Truck or Delivery Services Drivers
	Office Clerks, General	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Medical Secretaries	Meat, Poultry, and Fish Cutters and Trimmers	Bus Drivers
	Paralegals and Legal Assistants	General and Operations Managers	Social Workers	Manufacturing Managers	Dispatchers, Except Police, Fire, and Ambulance
	Computer Systems Analysts	Cost Estimators	Social and Human Service Assistants	First-Line Supervisors of Production and Operating Workers	Ship Engineers
	Customer Service Representatives	Heavy and Tractor-Trailer Truck Drivers	Dental Assistants	Engineers - Design	Stock, Shipping, and Receiving Clerks
	Veterinary Technologists and Technicians	Roofers	Physical Therapists	Metal-Refining Furnace Operators and Tenders	General and Operations Managers
	Photographers	Welders, Cutters, Solderers, and Brazers	Emergency Medical Technicians and Paramedics	Food Batchmakers	Bus and Truck Mechanics and Diesel Engine Specialists
	Sales Representatives, Services, All Other	Brickmasons and Blockmasons	Nurse Practitioners	Chemical Plant and System Operators	Maintenance and Repair Workers, General
	Market Research Analysts and Marketing Specialists	Cement Masons and Concrete Finishers	First-Line Supervisors of Office and Administrative Support Workers	Production, Planning, and Expediting Clerks	Gas Plant Operators
	Tax Preparers	Sheet Metal Workers	Mental Health Counselors	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Taxi Drivers and Chauffeurs
	Software Developers, Systems Software	Electrical Power-Line Installers and Repairers	Medical Records and Health Information Technicians	Heavy and Tractor-Trailer Truck Drivers	Riggers
	Architectural and Engineering Managers	Telecommunications Line Installers and Repairers	Medical and Clinical Laboratory Technologists	Architectural and Engineering Managers	Crane and Tower Operators
	Veterinary Assistants and Laboratory Animal Caretakers	First-Line Supervisors of Mechanics, Installers, and Repairers	Family and General Practitioners	Architectural and Engineering Managers	Industrial Machinery Mechanics
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services	Public Administration	Government	Accomodation and Food Services
Agriculture		Entrepreneurship	Media and Visual Arts	Energy	

KENTUCKY SECTOR STRATEGY PROJECT

Proposed Scope of Work – Revised October 17, 2016

PROJECT PHASES: To summarize each phase:

- Phase 1 – To supplement the work of the State Data Team and the Future Kentucky Skills Report, complete a brief literature review in memo format on the future of work as shaped by technology and identify, to the extent available, the top technology changes in each of Kentucky's top 5 industries that may impact the future workforce needs of each industry.
- Phase 2 – Develop a state-level model Career Pathway in each sector (5 pathways total) as well as a Toolkit to assist regions in replicating pathway development.
- Phase 3 – Establish and meet with (four) Regional Teams in separate Regional Institutes to foster decision-making and validation of target industries and introduce the state career pathway and Pathway Toolkit.

Preliminary Work

Once the scope of the project is finalized, our team will collaborate with the Commonwealth to facilitate a webinar for the local area directors to review the project scope, deliverables, and timeline as well as answer any questions that they may have. If the directors have a standing meeting, we would be happy to hold the webinar at that time to maximize scheduling efficiency. If desired, this webinar can be recorded and transcribed for posting and viewing by stakeholders that are unable to attend the live event. The Maher team will also develop a one-pager in advance of the kickoff webinar to describe the project and its objectives for sharing with local directors and other stakeholders.

Deliverable: Project one-pager; Kickoff webinar

Phase 1: Support Statewide Data Team

To supplement the work of the State Data Team and the Future Kentucky Skills Report, we will conduct secondary research on the impact of new technology on the future of work and on the Commonwealth's top five target industry sectors. This will be a brief (3-5 pages) review of existing literature and not extensive in nature; research efforts will focus on summarizing key emerging trends in each of the five sectors, as well as trends that may be cross-sector in nature.

Deliverable: 3-5 page memo outlining a summary of the literature with links for additional information

Phase 2: Career Pathways and Toolkit Development

In this phase, we will use state-level data – and demand-side intelligence provided by employers – to move from merely identifying statewide target industry sectors to actually mapping a career pathway in each of the state's top five target industry sectors.

In collaboration with the State Data Team and other partners and drawing from existing best-practice examples, we will develop a draft career pathway map for each of the state's top five industry sectors. For each sector, we will concentrate on developing a pathway that is most common in regions across

Kentucky and that represents the most typical education, skill, and career progressions. To accomplish this, we will focus as much as possible on existing Kentucky pathways models, as well as best-practice models from around the country. Once we have identified a few sample pathways for each sector, we will hold a webinar with state partners and local directors to get feedback on the desired focus pathway for each sector. At this point we will develop a draft pathway map for each sector.

Working with the local directors and state partners, we will then validate the draft maps with a group of employers from each industry. Maps will be developed using data and existing pathways models and best practices and then finalized through engagement and dialogue in an in-person meeting (one meeting per sector, 90-120 minutes per meeting) with employers (participating employers will be identified by both state partners and local directors). To the fullest extent possible, we will seek to ensure that participating employers are diverse in terms of factors such as urban vs. rural, company size, industry sub-sector, local vs. statewide presence, etc. Note that the employer meetings will need to occur within the same week to align with the project budget. The Commonwealth is responsible for meeting logistics and related costs.

Deliverables: One State-level career pathway for each of the five target industry sectors

Phase 3: Regional Career Pathway Institutes

Upon completion of the state-level career pathway models, we will work with the state to:

- Form and orient Regional Teams (virtually)
 - Hold a webinar to share the 5 pathways and assist local directors in beginning to form teams
 - Identify points of contact for each region to assist in forming the Regional Teams
 - Provide a roster of potential members of each team to assist the points of contact in identifying partners to invite to the Institute
 - Provide draft language that points of contact can use to invite individuals to the Institute
- Develop the Institute Toolkit
 - The toolkit will include the pathways developed for each sector, a brief discussion of the process pursued to develop and validate the pathways (including any related resources), recommendations for how the pathways can be further explored and customized at the regional level, and any tools/resources developed to be used during the Institute
- At in-person, Regional Institutes (four):
 - Review the data prepared by the State Data Team (Future Kentucky Skills Report)
 - Facilitate decision-making/validation on regional target industries with the assistance the State Data Team
 - Introduce state career pathway templates for the five industry sectors
 - Facilitate discussion of existing career pathways and pathways efforts in the region
 - Facilitate discussion on the alignment of training, investments, operations, and service delivery around a target industry sector of primary interest to the team and a specific career pathway within that sector
 - Facilitate action planning for next steps to continue pathway work and operationalize within the region
 - Provide summary notes to each regional team that capture key Institute discussion items and next steps

- Note that the Regional Institutes will need to occur within the same week to align with the project budget. The Commonwealth is responsible for meeting logistics and related costs.

Deliverables: Formation of regional teams; facilitation of four Regional Institutes; development of materials for use at Institutes; development of Institute Toolkit, which will include state-level career pathway maps, meeting tools and/or templates, and other resources, as appropriate

TIMELINE: The timeline below is contingent upon the 5 statewide sectors already being decided by the time the project kicks off in October and also upon the Future Kentucky Skills Report being complete and available for distribution prior to the Regional Institutes.

October:	Develop project one-pager
Early November:	Kickoff webinar for local directors
October – end of November:	Literature Review
October – late January:	Develop draft state-level career pathways, including a webinar with state partners and local directors to present pathways examples and select desired pathway focus for each sector (immediately before or after Thanksgiving) and one in-person meeting with each group of employers to validate and refine pathways for finalization by late January (5 meetings total)
January – February:	Form Regional Teams (virtually), including early February webinar with local directors to support them in forming teams and to present the 5 pathways
March:	Provide Future Kentucky Skills Report and Career Pathway Models to regions to review
April:	Develop Institute Toolkit; Facilitate four, in-person Regional Institutes

Business and Education Alignment Committee

Meeting – November 11, 2016

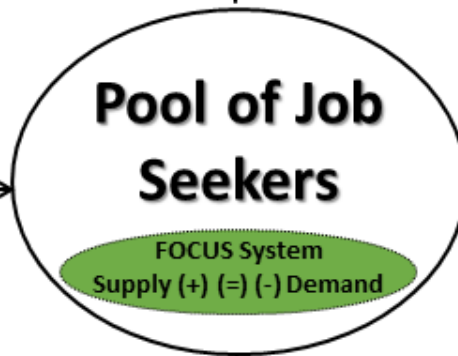
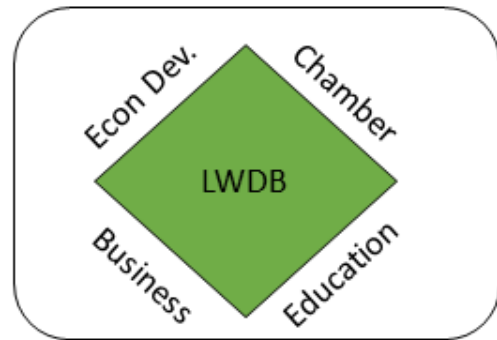
Charter

Identify and implement comprehensive strategies to align education (supply) with industry needs (demand).

The committee will focus on:

- Working specifically with Career and Technical Education Leadership Funds
- Building regional linkages between education and growth / demand industry sectors
- Creating opportunities for all students to receive nationally recognized, industry-valued certifications / credentials
- Expanding work-based education opportunities for all learners
- Providing recommendations on specific areas where there are opportunities to directly align education with industry

Employer Demand



KCEWS
Provides data that characterizes each of the specific populations in terms of total supply numbers, skills, and status to completion / retention

Sector Based Industry Partnership Models

Internships
Co – Ops
Summer Jobs

Apprenticeships/
Externships
(FAME / TRACK, etc)

Customized Cohort Training
For Immediate Vacancy Relief

Incumbent Worker Training
Skill Development
Enhancement

Other

Supply Pipeline

Middle
School

High
School

Adult
Ed /
GED

2yr/
4yr

Dislocated
Workers

Disabilities

Youth

Veterans

Unemployed

Under-Employed

Short Term Recommendation

The initial recommendation at the last meeting was to leave the credential list the same for the 2016-2017 school year.

What Do We Know?

- 2010 – 3000 Certifications Earned
- 2015 – 10,000 Certifications Earned
- 97% of students with a Certification Graduated
- A greater percentage of students who receive a certification graduate and go on to post-secondary. The dual credit initiative will likely increase these percentages as we have already seen a significant increase this year.
- Long List of Career Technical Education Credential Certifications Offered (List in your handout)
- No state funds – District / School / Student
- There is “value” for those who receive a certification
 - Industry Awareness and Exposure for student
 - Entry Level Skill Set and Education
 - Empowerment and perhaps a Career “Headstart”

CTE / Business & Education Alignment Committee Survey

- 600+ Respondents
- Are you familiar with the National Career Readiness Certificate (NCRC)?
 - Yes = 62% / No = 38%
- Is the NCRC recognized during the hiring screening process and is preference given in consideration for employment?
 - Not Recognized = 65%
- Does your business use apprenticeships (any earn and learn opportunity) as a source of training?
 - Yes = 40%

What Do We Not Know?

- Sector employed?
 - We know the sector but not the occupation
- Pay rates (ROI (definition of ROI?) on certification)?
 - We know aggregate wage information
- Are “certified” candidates more qualified (definition of qualified?) then candidates without certification in the employer’s eyes?
- Success in private sector (retention / promotion)?
- Would certifications truly be valued by employers if they were aware?
- Are the certified students truly better prepared?
- Are the certifications aligned with the job market?
- What do employers truly need?

What Do We NOW Know?

- Top 5 High Demand Sectors (State and Regionally)
 - Currently analysis now shows (different from before)...
 - Healthcare
 - Manufacturing
 - Construction
 - Transportation Logistics
 - Business and IT

➤ Top 20 Demand Occupations

➤ What else do we need?

Kentucky High-Demand Industry Sectors and Top Occupations					
	Business & IT Services	Construction	Healthcare	Advanced Manufacturing	Transportation & Logistics
	This sector comprises professional and financial services, information technology, wholesale trade, and scientific and technical occupations.	This sector comprises occupations primarily engaged in the construction and maintenance of buildings.	This sector comprises both health care services and social assistance.	This sector comprises occupations in the mechanical, physical or chemical transformation of materials, substances or components into new products.	This sector comprises occupations in industries providing movement of passengers or cargo, warehousing and storage, and those that plan, direct or coordinate the distribution activities of
T O P O C C U P A T I O N S	Accountants and Auditors	Construction Laborers	Registered Nurses	Manufacturing Operator/Technician	Laborers, Packers, Movers
	Managers, All Other	Carpenters	Personal Care Aides	Machine Maintenance Specialist	Heavy and Tractor-Trailer Truck Drivers
	Management Analysts	Electricians	Nursing Assistants	Machinist	Light Truck or Delivery Services Drivers
	Lawyers	Painters, Construction and Maintenance	Childcare Workers	Engineers - Process/Manufacturing	Industrial Truck and Tractor Operators
	Software Developers, Applications	Plumbers, Pipefitters, and Steamfitters	Medical Assistants	Machine Tool Operator	Stock, Shipping, and Receiving Clerks
	Computer Systems Analysts	Supervisors of Construction and Extraction Workers	Licensed Practical and Licensed Vocational Nurses	Inspectors, Testers, Sorters, Samplers, and Weighers	First-Line Supervisors
	General and Operations Managers	Construction Managers	Healthcare Managers	Welders	Postal Service Mail Carriers
	General Office Clerks	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Social Workers	First-Line Supervisors of Production and Operating Workers	Captains, Mates, and Pilots of Water Vessels
	Civil Engineers	Operating Engineers and Other Construction Equipment Operators	Medical Secretaries	Manufacturing Managers	Cargo and Freight Agents
	Customer Service Representatives	General and Operations Managers	Physicians and Surgeons, All Other	Engineers - Design	Bus Drivers
	Software Developers, Systems Software	Electrical Power-Line Installers and Repairers	Physical Therapists	Sales Representatives, Wholesale and Manufacturing, Except Technical and	Dispatchers, Except Police, Fire, and Ambulance
	Sales Representatives	Cost Estimators	Dental Assistants	Food Batchmakers	General and Operations Managers
	Paralegals and Legal Assistants	Roofers	Social and Human Service Assistants	Production, Planning, and Expediting Clerks	Bus and Truck Mechanics and Diesel Engine
	Computer User Support Specialists	Cement Masons and Concrete Finishers	Emergency Medical Technicians and Paramedics	Purchasing Agents, Except Wholesale, Retail, and Farm Products	Sailors and Marine Oilers
	Market Research Analysts and Marketing Specialists	Heavy and Tractor-Trailer Truck Drivers	First-Line Supervisors of Office and Administrative Support Workers	Shipping, Receiving, and Traffic Clerks	Maintenance and Repair Workers, General
	Mechanical Engineers	Welders, Cutters, Solderers, and Brazers	Nurse Practitioners	Heavy and Tractor-Trailer Truck Drivers	Aircraft Mechanics and Service Technicians
	Veterinary Technologists and Technicians	Sheet Metal Workers	Medical Records and Health Information Technicians	Slaughterers and Meat Packers	Machine Feeders and Offbearers
	Tax Preparers	Telecommunications Line Installers and Repairers	Mental Health Counselors	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Transportation, Storage, and Distribution Managers
	Computer and Information Systems	Brickmasons and Blockmasons	Medical and Clinical Laboratory	Meat, Poultry, and Fish Cutters and Tenderers	Airline Pilots, Copilots, and Flight Engineers
	Photographers	First-Line Supervisors of Mechanics, Installers, and Repairers	Family and General Practitioners	Metal-Refining Furnace Operators and Tenders	Reservation and Transportation Ticket Agents and Travel Clerks
*Top 20 Occupations based on the Forecasted Number of Growth and Replacement job openings over the next 5 years. Occupations not industry specific were removed.					
Support Sectors					
Retail Trade		Educational Services		Public Administration	
Agriculture (West Region)		Entrepreneurship		Government	
				Energy	
				Accommodation and Food Services	

Next Round of Recommendations

Six actionable recommendations to align, incentivize and drive results that meet the needs of all stakeholders.

We will now complete an in-depth look at credentials as tied to updated sector data to be presented at the May 19th KWIB meeting for the 2017-2018 school year.

Additionally, the committee will be reviewing the career pathways to ensure they are aligned with specific industry sectors on a regional basis. The preface of the career pathways work is now beginning with the local areas in working with education, workforce and economic development. (Facilitated by Maher & Maher)

Recommendation 1

The new analysis of the top industry sectors have been completed. **We are recommending we now follow the new top 5 sectors** as related to the handout in your packets and with regard to understanding the sectors are also to be followed as broken down by the regional information (also included in your packets).

Last 5 Sectors Approved by KWIB

Healthcare

Advanced Manufacturing

Business / IT

Transportation / Logistics

Energy

Current 5 Being Recommended

Healthcare

Advanced Manufacturing

Business / IT

Transportation / Logistics

Construction

Recommendation 2

Recommend the **Office of Career and Technical Education complete a review of all current Certifications and Career Pathways being offered and whether they align with the Sector Strategy data.**

- If certifications do not align with the “demand” based on the Sector Strategy data and employer feedback, there should be a formal recommendation to the Business and Education Committee to realign / eliminate / phase out those certifications for the 2017 / 2018 School Year. (Timeline: January – March 2017)
- Recommend a “core” set of Certifications and Career Pathways to be offered across the state in each school district but ensure appropriate regional nuances are met based on Sector Strategy data. (Timeline: May 2017)
- Annual review process

List of Current Certifications are Provided

Recommendation 3

In order to strengthen the partnership between school districts and local employers, we must create a structure which allows **the formalization, identification and funding for Business Partnership Liaisons to be placed in each local school district** (in partnership with workforce boards, chambers, economic development, post secondary education and private sector).

Best practices already exist in KY and need to be reviewed.

The Business Partnership Liaisons function is to connect schools and students with employers (evaluate best practices as related to the following):

- Career opportunities post graduation
- Internships / Co-ops / Apprenticeships
- Formal mentoring and industry exposure for students
- Technical and career skill awareness and development
- How can schools improve the “supply” based on the “demand” of local business?
- Identify resources and partnerships for students with disabilities who need access
- Eliminate finger pointing and build true partnerships

Recommendation 4

Promote and incentivize school systems to implement a formal “Earn and Learn” program in each career pathway to accelerate career readiness of students and increase “supply” to meet local talent needs.

- Need to have consistent set of core criteria and metrics to ensure statewide consistency
- “Earn and Learn” Program would fall under job role and responsibilities of Business Partnership Liaisons
- Participating employers would need to meet specific student career development criteria
- Need to ensure program takes into consideration needs and resources of small employers and large employers
- Need to ensure program takes into consideration needs and resources of students with disabilities and connecting them with employers

Recommendation 5

Through the appropriate tax incentives, tax credits or salary rebates, create a formal annual incentive for companies that are an active partner with the respective school system(s).

- “Active Partnership” would require key criteria* to ensure employers are both active with real hands on Internships, Co-ops and Apprenticeships, but also with true career development actions for participating students.
- Create a statewide award for companies and school systems leading the way = significant Employment Branding and potentially additional state resources

* Career Mentoring, Skill Demonstrations or Training, Mock Interviewing, Student Facility Tours, Donations (\$ or Equipment), etc.

Recommendation 6

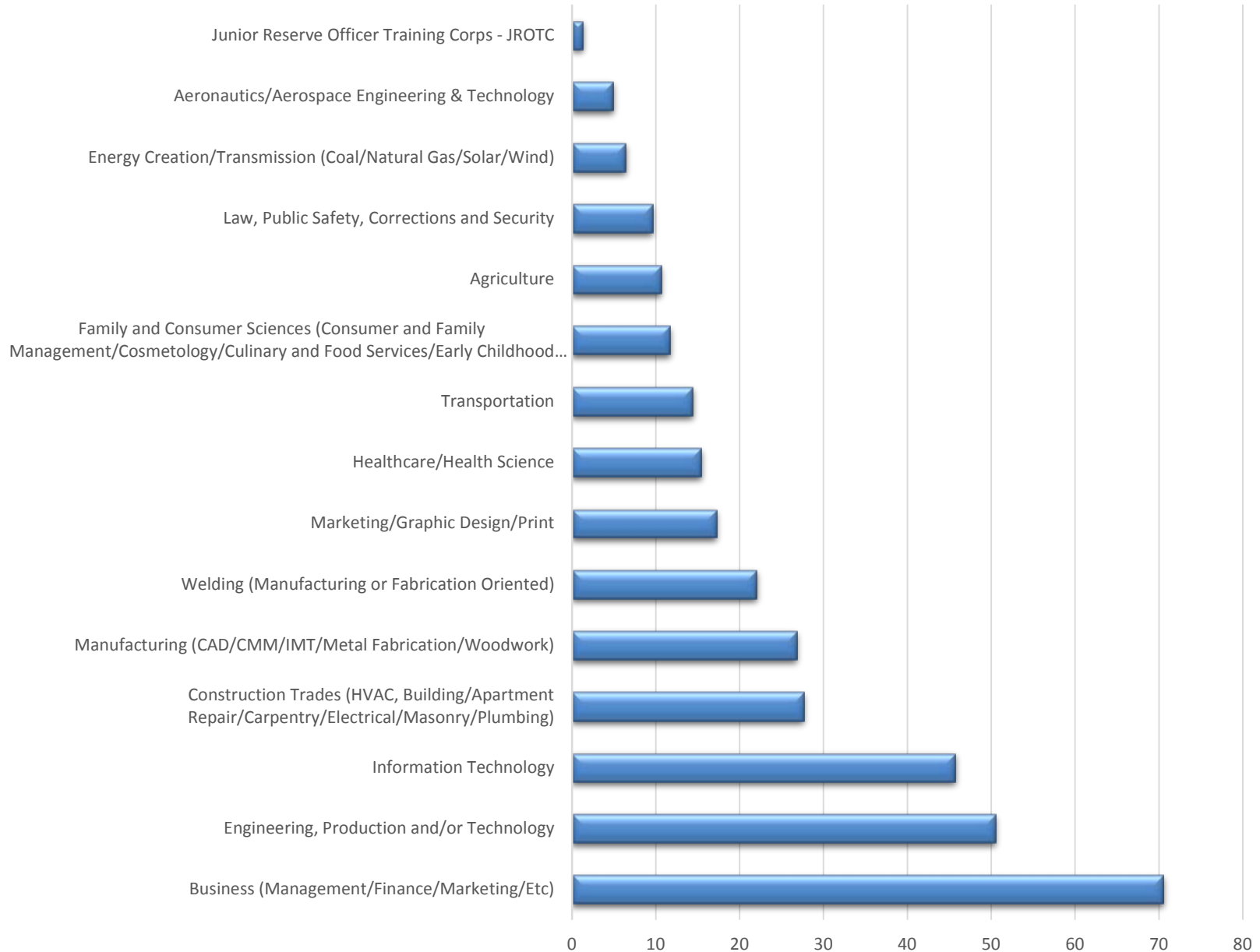
Recommend a formal marketing effort to ensure both the private sector but also parents and students are educated about the program offerings and efforts by the school systems to improve the “supply” to meet the “demands” of the future.

- Make it simple for employers on what schools are doing and how they can get involved.
- Track key metrics and then report them out annually to drive education and resources.
- What is the CCR Accountability Model and why should parents, students and the private sector care?
- What are the high demand sectors and occupations so parents and students are informed?

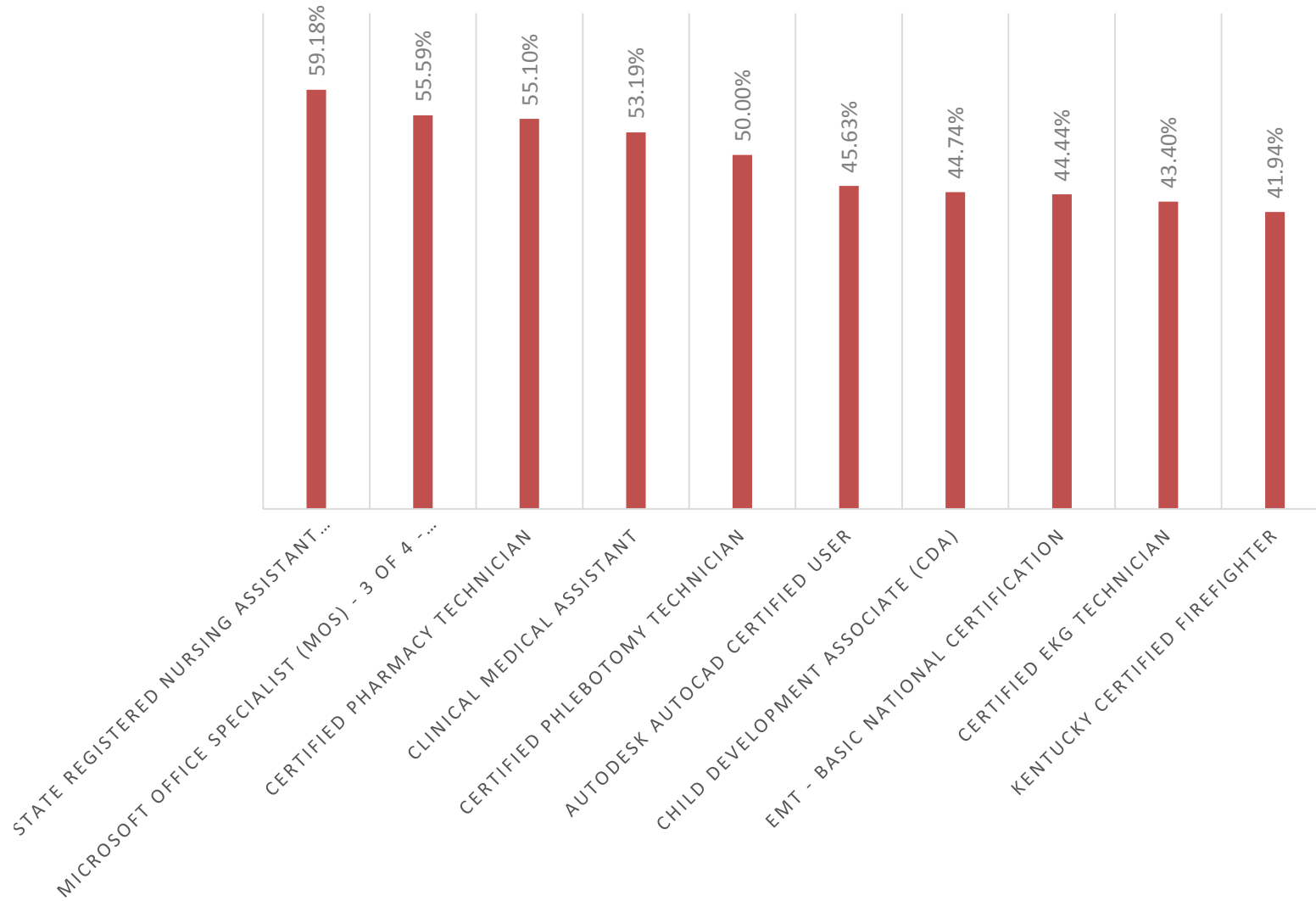
Business and Education Alignment Committee

Appendix – Additional Data from the
CTE / Business and Education Alignment
Committee Survey

Percent of Respondents by Area



MOST WELL KNOWN INDUSTRY CERTIFICATIONS



Least Known Industry Certifications

