



CAEL



Completion With a Purpose®

TALENT IN THE DRIVER'S SEAT

*Positioning Talent and Skills Development
as a Driver of Economic Development*

Supported by funding from Strata Educational Network
May-17





Project Background and Report Objectives

This report represents a summary, analysis and set of regional recommendations for the Greater Madison County area to utilize the availability of training opportunities and the workforce itself as a leading element in economic development business retention, expansion and attraction marketing efforts. The reports summarizes and builds upon a stakeholder convening held in early April, 2017 to discuss the various themes and core messages that could be leveraged to increase the economic growth of the Madison County region's Biofuels sector through highlighting the educational systems, talent and worker culture.

Project Overview

National Corn-to-Ethanol Research Center (NCERC) at Southern Illinois University Edwardsville (SIUE) along with their core partners: Madison County Community Development, Madison Co. Employment and Training, Southern Illinois University Edwardsville, Blue Green Alliance, Madison County Energy Advisory Board, Building Illinois Bioeconomy Consortium; were selected as one of four regions across the state of Illinois to participate in the Future for the Illinois Workforce grant in partnership with the Council for Adult and Experiential Learning (CAEL) and Illinois Board of Higher Education (IBHE). Madison County, IL was selected along with Rockford, Lake County and Greater Egypt, Illinois to receive technical assistance to help impact their existing college completion and workforce development strategies and activities.

The Future of the Illinois Workforce grant, funded by Strada Education, formerly USA Funds, aimed to further the efforts of interested communities in utilizing the principles of collective impact theory to assist them in preparing for the workforce of the future and build on recommendations of the IBHE led Commission on the Future of the Workforce: www.ibhe.org/WorkforceCommission. CAEL's objective within this grant was to provide technical assistance, at no cost to the selected partners, to equip them with the tools necessary to take the next steps by engaging state agencies, nonprofits, and others in and outside Illinois who are best positioned to serve the needs of the region.

Activities within the grant were customized for reach region and included, for Madison County, the following direct technical assistance from CAEL:

Adult Learning Focused Assessment of Higher Education Partners – this assessment, conducted for Southern Illinois University at Edwardsville and Lewis and Clark Community College, benchmarks for each institution their strengths, challenges and disconnects in their policies and offerings to support the success of adult students.



Educational Asset Inventory for Targeted Sector – Biofuels sector – This inventory provides a regional overview of educational assets and programs aligned to, and help produce human capital for, an identified focus industry sector. Human capital development efforts spanned the postsecondary credential continuum from sub-associate certificates to graduate degrees depending on regional needs. For the Biofuels sector in Madison County all programs offered within traditional regional Higher Education providers were inventoried that supported skills development in each of these education and competency areas:

Education Area	Competency
Architecture	Architecture
Construction	Construction Electrical
Electrical	Electrical
Engineering	Engineering
Engineering Technology	Drafting/Technologies Engineering
Industrial Maintenance	Automotive Technology Manufacturing
Manufacturing/ Industrial Technology	Electrical Energy Technology Machining Manufacturing
Physical Sciences	Chemistry Environmental/Earth Sciences Physics
Welding	Pipefitting Welding

Positioning the Biofuels Workforce as an Economic Driver – At the onset of this project it became clear that there were a number of initiatives, thought leaders, education opportunities and business development efforts either aligned or designed to support the health and growth of the Biofuels sector in Madison County. CAEL worked with NCERC leadership to determine what customized assistance would be of highest value along with the Adult Learning assessments of education partners and a full regional inventory of all related coursework. Leveraging the workforce system and talent pool specifically to help grow business opportunities for the biofuels sector was something Madison County was interested in pursuing. To that end, CAEL conducted a workshop session with partnership representatives to begin to craft the core elements for those marketing messages.



Industry Focus and Workforce Alignment

The following two sections of this report: Educational Assets in Madison County and Workforce System and Talent as Economic Driver are to be considered in tandem to better align business recruitment, retention and expansion efforts in the region. The objectives are:

1. For Workforce Development systems to better understand the types of education and training offerings that are available to students, unemployed, underemployed and career changers in the region;
2. For education and training providers to see what they are offering in contrast to other providers in the region, determine what competencies are missing from the education ecosystem and identify where programs are under or over supplying talent;
3. Increase the capacity of Madison County area Economic Developers and national Site Selectors to talk about the value the education and workforce system (both the providers and the talent pool) bring to Biofuel focused employers in the region.

Educational Assets in Madison County

The following provides an overview of the process and methodology for gathering education offering detail and includes the data analysis and subsequent alignment recommendations to strengthen the offerings available across the region that support the Biofuels sector.

Program Review

A program inventory of Biofuels offerings was conducted including any program in support of Biofuels sub-industry sectors including Energy, Advanced Manufacturing and Construction. In order to gather all of this data CAEL reviewed course catalogs and online available information for 21 institutions of higher education from over a 50 mile radius of Madison County, IL. The schools included in this inventory are listed below. Please note that the following inventory represents the availability of education offerings and does not include any detail on student enrollment or completion within each program.

Institution	Type	Location
Blackburn College	private	Carlinville, IL
Greenville College	private	Greenville, IL
Jefferson College	public	Hillsboro, MO
Kaskaskia College	public	Centralia, IL



Institution	Type	Location
Lewis and Clark Community College	public	Godfrey, IL
Lindenwood University	private	St Charles, MO
Maryville University of Saint Louis	private	St. Louis, MO
McKendree University	private	Lebanon, IL
Missouri Baptist University	private	St. Louis, MO
Ranken Technical College	private	St. Louis, MO
Saint Louis Community College	public	St. Louis, MO
Saint Louis University Main Campus	private	St. Louis, MO
Southern Illinois University Edwardsville	public	Edwardsville, IL
Southwestern Illinois College	public	Belleville, IL
St Charles Community College	public	Cottleville, MO
University of Missouri St Louis	public	St. Louis, MO
Vatterott College Berkeley	for profit	Berkeley, MO
Vatterott College St Charles	for profit	St Charles, MO
Vatterott College Sunset Hills	for profit	Fenton, MO
Washington University in St Louis	private	St. Louis, MO
Webster University	private	Webster Groves, MO

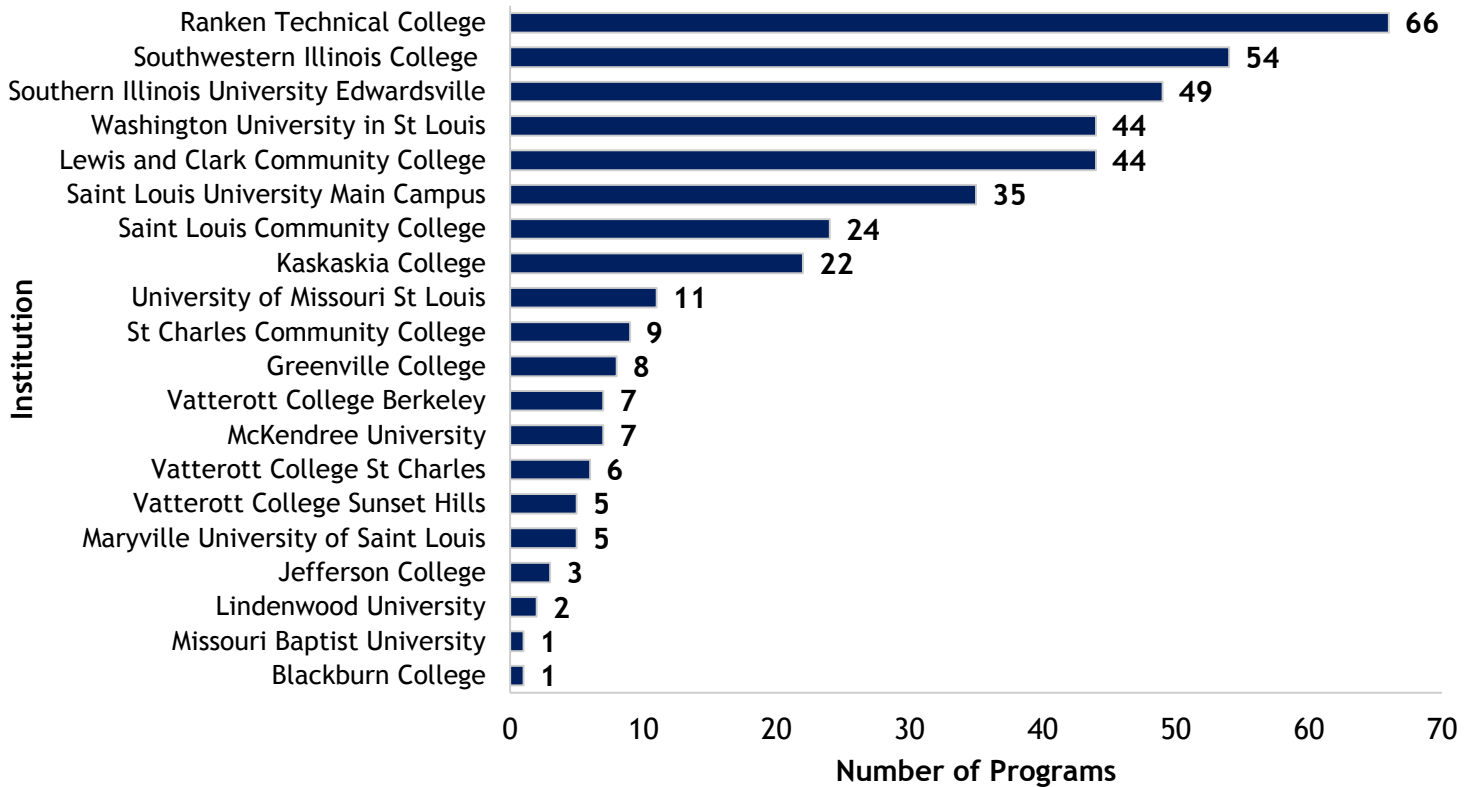
Various levels of analysis were conducted to allow for numerous ways to understand the current make-up of the education and training ecosystem as it relates to Biofuels skill development and to guide any future realignment, program closure or program development. The following analysis was conducted for the Education Inventory review:



Data Analysis - Institutions- Summary

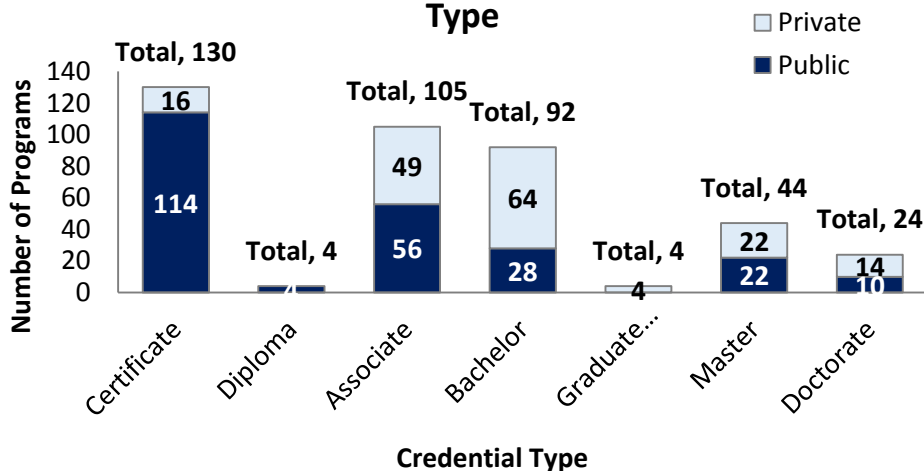
- Institution Programs :Total number of programs for each institution
- Institution Types: Programs by institution type

Number of Programs by Institution

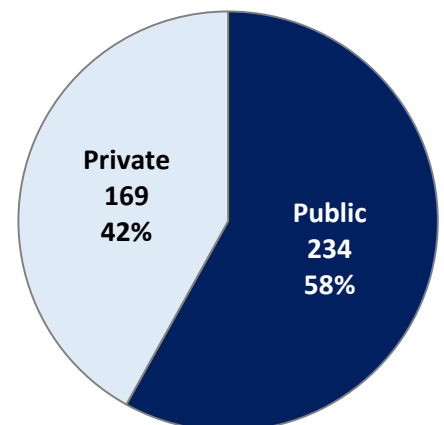


- Nearly 60% of inventoried programs are at public institutions
- More than 50% of Bachelor, Graduate Certificate, Master, and Doctoral programs are offered at private institutions

Number of Programs by Credential and School Type



Proportion of Programs by School Type

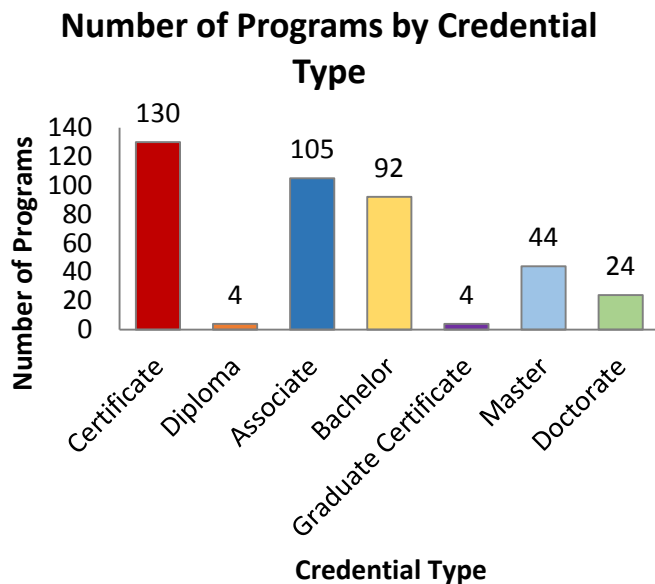




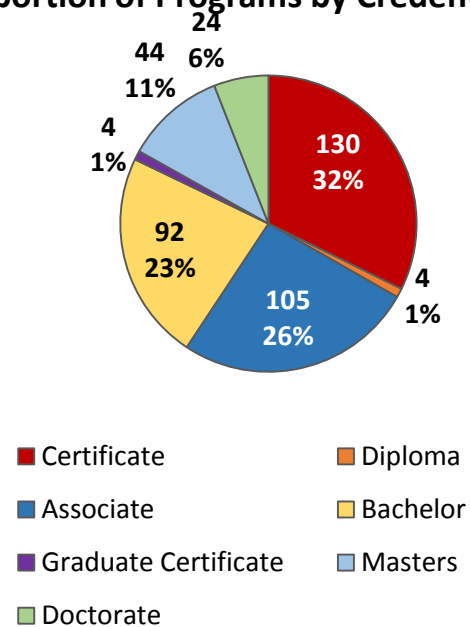
Data Analysis - Credentials

- Programs by credential type

- Nearly 60% of programs supporting the target industries are offered at the pre-baccalaureate level.
- Certificates comprise 32% of programs, followed by associates (26%) and bachelor's (23%) degrees.

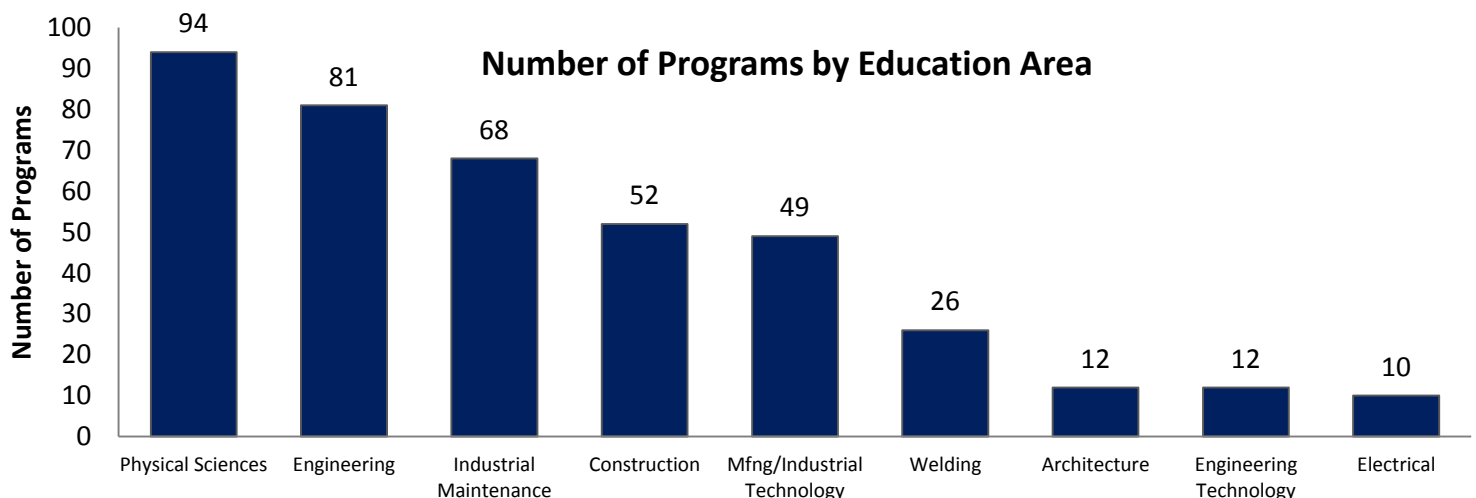


Proportion of Programs by Credential Type



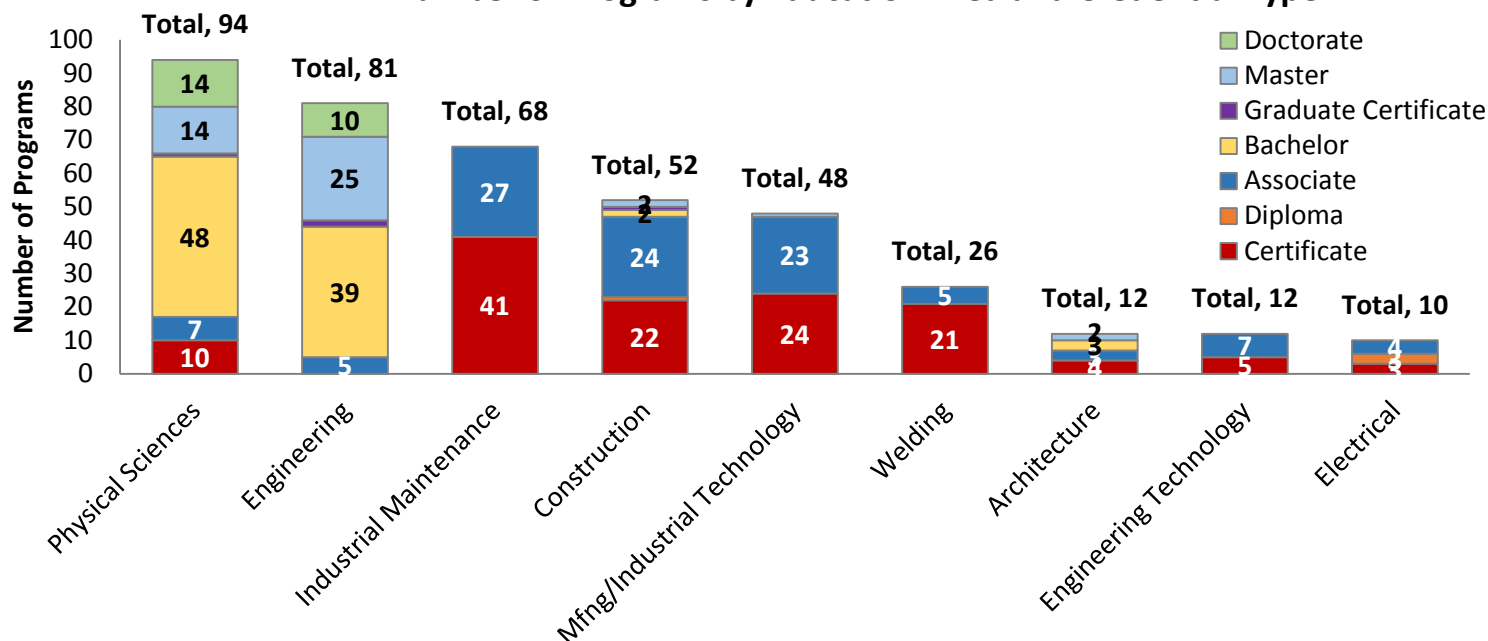
Data Analysis - Education Areas

- Education Areas: Number of programs by education area
- Education Area by Credential Type: Number of programs by education area and credential type
- Education Area by Credential Type- Institutions: Number of programs in each education area by credential type for each institution



- Physical Sciences and Engineering have the largest number of programs and are comprised mostly of advanced credentials
- Industrial Maintenance, Welding, Engineering Technology, and Electrical programs grant only pre-baccalaureate

Number of Programs by Education Area and Credential Type



1 = Certificate
 1 = Diploma
 1 = Associate
 1 = Bachelor
1 = Graduate Certificate
 1 = Master
 1 = Doctorate

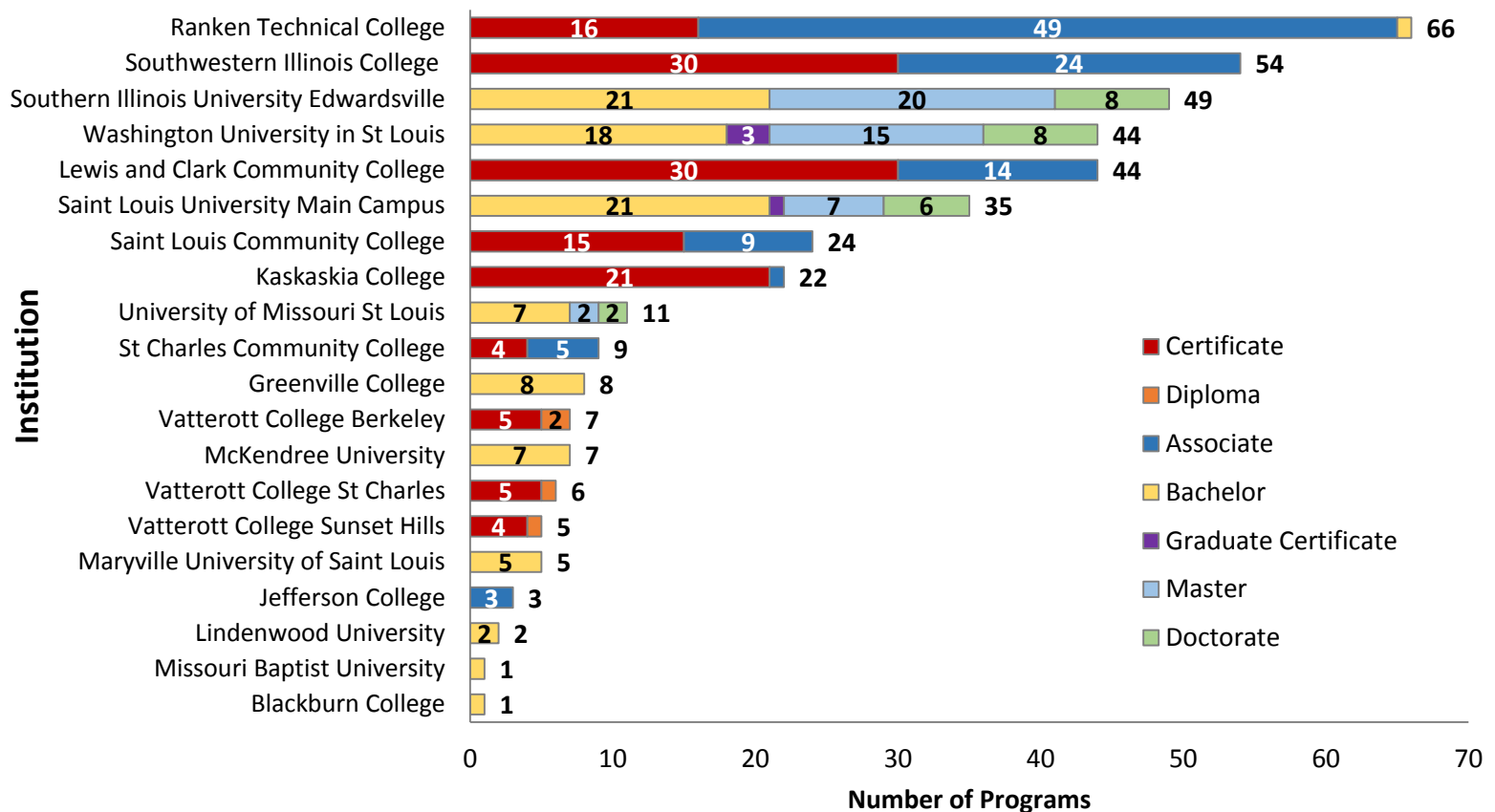
	Physical Sciences	Engineering	Industrial Maintenance	Construction	Mfg/Industrial Technology	Welding	Architecture	Engineering Technology	Electrical
Blackburn College	1								
Greenville College	2	6							
Jefferson College			1			1			1
Kaskaskia College	1	1	10	1	5	3		1	
Lewis and Clark Community College	9 3	1	3 1		2 6	10 1	4 1	1 2	
Lindenwood University	1	1							
Maryville University of Saint Louis	1	4							
McKendree University	7								
Missouri Baptist University	1								
Ranken Technical College			4 20	5 13	6 13	1 1	2 1		
Saint Louis Community College		1	5 2	5 2	1			1 3	
Saint Louis University Main Campus	11 1 3 3	10 4 3			4				
Southern Illinois University Edwardsville	12 9 8	7 11		2					
Southwestern Illinois College	3	1	7 3	9 9	6 2	5 2		1	3 3
St Charles Community College	1	1		1	1 1	1		1 2	
University of Missouri St Louis	4 2 2	3							
Vatterott College Berkeley			3	1 1		1			1
Vatterott College St Charles			5						1
Vatterott College Sunset Hills			4						1
Washington University in St Louis	8 1	8 2 10 7		1 2	1		2 2		



Data Analysis - Institutions by Credential

- Number of programs by credential type for each institutions

Number of Programs by Institution and Credential Type



Data Analysis - Competencies

- Competencies: Number of Programs by Competency and Credential Type

Education Area	Competency	Certificate	Diploma	Associate	Bachelor	Graduate Certificate	Master	Doctorate
Architecture	Architecture	4		3	3		2	
Construction	Construction	21	1	22	2	1	2	
	Electrical	1		2				
Electrical	Electrical	3	3	4				
Engineering	Engineering			5	39	2	25	10
Engineering Technology	Drafting/Technologies	5		4				
	Engineering			3				
Industrial Maintenance	Automotive Technology	32		24				
	Manufacturing	9		3				
Manufacturing/Industrial Technology	Electrical	3		5				
	Energy Technology	2		2				
	Machining	4		4				
	Manufacturing	15		12			1	
Physical Sciences	Chemistry			2	19		3	3
	Environmental/Earth Sciences	10		4	20	1	9	9
	Physics			1	9		2	2
Welding	Pipefitting	1		1				
	Welding	20		4				



Alignment/Analysis Observations

Based on the overview of the data collected the following themes have been identified that could be used in more regional alignment conversations centered on skill development needs and program availability.

- The more advanced the credential type, the larger the share of those programs offered at private institutions
 - For example, 58% of doctoral programs vs. 12% of certificate programs are offered at private institutions
- Pre-baccalaureate programs (non-credit training, certificates, and associates degrees) make up over half of all programs (59%)
 - Non-credit training programs are only 1% of total programs
- Graduate certificates are underrepresented at 1% of total programs
- The distribution of credential types is not equal across education areas
 - The majority of bachelor's and post-baccalaureate degrees are in Physical Sciences and Engineering, which comprise 43% of all programs in the inventory.
 - The remaining education areas offer mostly pre-baccalaureate programs

Workforce System and Talent as Economic Driver

Making the case for Madison County

Increasingly Business Executives and Site Selectors are looking at the availability of a talent workforce and a coordinate and responsive Education and Training System (from K-12 to workforce training to traditional Higher Education) as one of the key drivers in deciding where to build or grow their business operations. As recently as January 2016 Site Selector Magazine conducted a survey of Company Executives on the top reasons that factor in to Business Development and Expansion analysis when making location decisions. The top six factors are included below with Workforce being top of that critical list:

1. **Workforce**
2. State and local taxes
3. Transportation infrastructure
4. Utility infrastructure
5. Land and building prices and supply
6. Ease of permitting and regulatory procedures

With St. Louis across the river and a number of fractional municipalities locally it is more critical than ever for Madison County to coordinate their efforts and messaging to



highlight the value of business development and expansion within its geographic boundaries in Illinois. There are many factors that could be highlighted, however, the innovation, coordination and availability of a talented and strong talent pool should lead this messaging campaign and incentivize businesses, either already in the area or looking for new places to build or expand, that Madison County has the people, systems and resources needed to fill their workforce demands and improve business outcomes.

Top Themes to Highlight

During the Marketing workshop in April 2017 CAEL facilitated several activities to spur ideas and discussion around what type of Headlines, either currently true or future facing, could highlight the Workforce System and Talent Pool as key factors in driving business growth and expansion in Madison County. The group explored the following questions to drive discussion:

- What are some interesting assertions we can make about Madison County?
- What does the perfect end state look like?
- What are some obstacles we should consider to get to the ideal end state?

The group then went through an exercise to actually make some bold statements about what the current state of future of Madison County's workforce system, talent pool and regional coordination in relation to how these factors could incentivize business development and support a regional economic development strategy.

- What about our Talent is special?
- What about our education/training system is special?
- What about our processes is unique and advantageous for business development?
- Other assets?

The themes that emerged from this exercise, and the relative current state of these factors were then discussed. Each theme was ranked on a three point scale of Not At All True, Sort of True, Mostly True and Completely True. The following represents a summary from that group activity discussion.

Theme: <i>We focus on degree completion – our people have the higher education you're looking for</i>	Not At All True Sort of True <u>Mostly True</u> Completely True
Discussion Points: Challenging to complete a 4 year as a transfer student within the current system structure. This is not true across the whole state but particular there are challenges in Madison County with this articulation and progression. There has been a huge boom in Agriculture, it's not just farmers, there are big companies focusing on this. While Madison County will struggle to compete with Chicago there is a	



desire to leverage entrepreneurial spirit and highlight value of this region. Challenge is an unclear pathway for the children of residents. Have “Grow your Future” campaign to deal with the lack of awareness on what these jobs actually look like in Madison County.

Theme: <i>Fastest growing region in the State</i>	Not At All True Sort of True Mostly True Completely True
Discussion Points: Bedroom communities are largely St. Clare county. There are core businesses, like Amazon as a key anchor, which provide evidence of growth. There is a magnet for these businesses in Madison County and a support infrastructure to help them grow and get them the talent they are looking for, or will need in the future.	

Theme: <i>Most innovative HE partners in the State / leading in the Nation</i>	Not At All True Sort of True Mostly True Completely True
Discussion Points: Research and Development activity has a very strong concentration in Madison County. Challenge is that there is very limited awareness and marketing/understanding of the innovation that goes on in this area. This is a core area to focus on in future marketing messaging, campaigns and discussions with potential businesses.	

Theme: <i>Highly entrepreneurial spirit – concept to creation</i> <i>Robust business expansion with a strong talent pool to pull from</i>	Not At All True Sort of True Mostly True Completely True
Discussion Points: The region still needs to get the message out, to the Midwest and Nationally, that Madison County is a very innovative place with a lot of startup energy and support. Focus on the Gateway Commerce Center – (real estate list) this is a hot spot and THE place to live.	

Theme: <i>Strong Work Ethic, Motivated, hard working Workforce readiness in K-12 – ready to be successful in PSE AND the Workforce</i>	Not At All True Sort of True Mostly True Completely True
Discussion Points: There is a strong difference between perception and reality in terms of what students/workers realize the job is actually going to look like and what will be required. The systems need	



to really examine policies vs. practice to see where the population with high barriers to employment can't access jobs (drug offenses, ex-offenders).

Theme: <i>Coordinated system – we are the ANTI-Springfield – common business expansion – Uniting the Region for Growth</i>	Not At All true Sort of True Mostly True Completely True
Discussion Points: Madison County has regions within the regions and in many cases this works against us when it can work for us. Some examples of how anchor stores were killed because of the infighting across the municipalities. There are some areas where these systems are highly coordinated – other areas very challenging. The goal for the region should be to have Macro and Micro coordination. Even though there are challenges the region keeps trying to have a more coordinated approach and conversation.	

Of all these highly important themes the three most important to highlight and strive for, as determined by the group, were the following:

#1. Coordinated Systems

#2. Strong Work Ethic

#3. Innovation and Entrepreneurial Environment

CAEL facilitated deeper conversation that focused on these top themes. Full detail on the responses from those conversations are included in the Appendix of this report.

System and Approach Recommendations

The following provides a high level set of recommendations and approaches the key systems in Madison County could pursue in future efforts to impact Business Development. This is not meant to be an exhaustive or prescriptive list, but rather to represent core ideas that should be at the forefront as stakeholders continually coordinate to increase the economic prosperity in Madison County.

- Utilize the Southwest Illinois Leadership Council to drive coordination and collaboration on Business Development and Industry Engagement strategies
- Coordinate business messaging – from the Workforce System, Economic Development, Chambers of Commerce and any other regional entity tasked with Business Retention, Expansion and Attraction efforts



- Incorporate learning from the Education Asset Inventory for the sector to highlight training availability to potential business prospects
- Develop a regional “call to action” on economic development and workforce initiatives to help address fractured nature of municipalities business development efforts
- Conduct career awareness and industry marketing campaign to exposure strong employment opportunities in the region to the people that live in Madison County

Appendix - Workshop Activity Responses

Bold Statements Marketing the Madison County Workforce and Talent Pool

Activity – What Workforce Assets (People, System, Processes) make Madison County unique and attractive to the Biofuels “Super-Sector” businesses (Energy, Advanced Manufacturing, Construction)? Now and in the future (5 years from now).

Write the NEW Headlines

People	<ul style="list-style-type: none"> • Rural area mentality; more inter-connected; better team work • Innovation – preparing for jobs of tomorrow while filling jobs of today • Farm kids with technical chops • The best of America’s heartland with the convenience of the Coasts • Metroeast is full of life-long learners • Mom and Pop business loyal to the region continues to invest and grow • Madison County workforce continues to grow and create best location in Midwest for company locations • Workforce more education now than ever before • Innovative educational programs leading the nation • Part of the Greater St. Louis area we can build a strong training program with top-level trainers, programs, more representative of current industry needs and the job market is more dynamic • Cost of living and education systems make residents loyal to the region
System	<ul style="list-style-type: none"> • Hands-on training available • Streamlined coordination of institutions • From concept to commercialized – everything you need to take business to the next level • Variety of corporations kill two birds with one strong by offering training with credit • Transportation infrastructure attracts new companies and thousands of jobs to Madison County • Taxes and Budget in Illinois attract new companies to Southwestern Illinois • Entrepreneurial Spirit • Our learning institutions have the flexibility to evolve with industry needs
Processes	<ul style="list-style-type: none"> • Partnerships • K-12 gaps, we being preparing at Kindergarten and develop through career pathways • Communication • Students in Madison County are continuing education more than ever before due to ease of enrollment and tuition assistance • Robust business expansion • Partners regularly communicate regarding regional needs to coordinate efforts



Evidence to Support Top Three Themes

Top Theme #1 – COORDINATED SYSTEM

What are the core elements? *For example, what infrastructure is there (e.g. we have the right education programs), what are the meaningful outcomes (e.g. industry hires all of our graduates), what are the funding elements (e.g. we receive State and Federal grants more than average regions).*

- Coordinated / Inclusive Marketing Materials and Plan
- The collaboration between the institutions are always here: SIUE with 2-year colleges, even with same HS's
- Articulation and alignment
- Clear definition of roles, accountability, collective impact framework
- Craft/manufacture your community
- Companies and educators work together to offer useful training for credit as well
- Chamber's, municipalities, educational institutions, regional developers, current & future employers
- Articulation from community colleges to higher institutions
- Southwest IL Leadership Council maybe the best place – Membership of Education and Business, Business Development Community. Not sure what they do but could coordinate these discussions

What is the anecdote/success – tell the story proving these elements are in place and high functioning. *For example, Business needed to expand but we didn't teach the business line they wanted to build. We worked with our training providers and college system to develop cohort programs to upskill people quickly and get them into the job where we partnered with industry to create on the job training modules so they could work and learn. Business was able to completely fill their workforce and continues to work with our education system to develop incumbent worker skills and refresh competencies as technology evolves.*

- Regional efforts to bring industry in to the REGION, not just a particular municipality (anti-Legoland story)
- NCERC's TAACCCT fund is a great example
- All of the key stakeholder organizations meet and formulate a plan to address the issues of the region. Continuously seek improvement to attract other companies to the region
- NCERC student intern from PTEC goes into SIUE Integrative Studies
- Elements in place, not sure they are high functioning – still a very fractional system

Top Theme #2 – STRONG WORK ETHIC

What are the core elements? *For example, what infrastructure is there (e.g. we have the right education programs), what are the meaningful outcomes (e.g. industry hires all of our graduates), what are the funding elements (e.g. we receive State and Federal grants more than average regions).*

- High employee retention and career promotion
- The K-12 system have always instilled the education and strong work ethic. That needs to be built in the workforce training
- Show up and stay late culture
- Attrition rates, Asset inventory, Completion rates, Classes
- Farm Kids ethic all across the board - Discipline in professionalism

- Societal norms, culture, employers, educational institutions, K-12
- Highlight drug testing, on time, soft skills in classroom as part of curriculum

What is the anecdote/success – tell the story proving these elements are in place and high functioning. *For example, Business needed to expand but we didn't teach the business line they wanted to build. We worked with our training providers and college system to develop cohort programs to upskill people quickly and get them into the job where we partnered with industry to create on the job training modules so they could work and learn. Business was able to completely fill their workforce and continues to work with our education system to develop incumbent worker skills and refresh competencies as technology evolves.*

- Employee educational assistance utilization rates are high
- Society provides framework with employers to alter the current problem with the workforce being lazy, late, unable to pass drug test, etc.
- Student gives up drugs, improves soft skills early on a gets job

Top Theme #3 – INNOVATIVE / ENTREPRENUERIAL WORKERS

What are the core elements? *For example, what infrastructure is there (e.g. we have the right education programs), what are the meaningful outcomes (e.g. industry hires all of our graduates), what are the funding elements (e.g. we receive State and Federal grants more than average regions).*

- Increased number of new startups
- Innovation is one of the major themes the workforce training advocates
- POET's never satisfied campaign; State statistics
- Workers are equipped to move forward in industry
- Educational institutional, society, culture, taxing, cities, regional development, government
- More "Grow Your Future Campaigns"
- Look at members of business startups and number of new program and certificates – employment by sector

What is the anecdote/success – tell the story proving these elements are in place and high functioning. *For example, Business needed to expand but we didn't teach the business line they wanted to build. We worked with our training providers and college system to develop cohort programs to upskill people quickly and get them into the job where we partnered with industry to create on the job training modules so they could work and learn. Business was able to completely fill their workforce and continues to work with our education system to develop incumbent worker skills and refresh competencies as technology evolves.*

- Cortex
- With the competitiveness in the business field, innovation is the only key to stay strong
- Begin, expand and grow new businesses. Framework is created to nurture and foster economic development
- East St. Louis centers and SIUE successfully train and place graduates
- The new Operations and Controls curriculum at LCCC good examples of working with business to build programs that are needed by employers