

November 6, 2017



Cissy Proctor
Executive Director
Florida Department of Economic Opportunity
107 East Madison Avenue
Tallahassee, FL 32399

Peter Antonacci
President & CEO
Enterprise Florida, Inc.
101 North Monroe Street, Suite 1000
Tallahassee, Florida 32301

Dear Ms. Proctor and Mr. Antonacci:

On behalf of the FloridaMakes Board of Directors, we are pleased to submit our proposal, "Advanced Manufacturing Workforce: Accelerative Talent Development Initiative", to the Florida Job Growth Grant Fund Initiative.

As an industry-led, statewide network for strengthening and advancing Florida's manufacturing competitiveness, our statewide board and regional boards are composed of manufacturers that ensure the services of FloridaMakes are uniquely tuned and responsive to the needs of Florida's manufacturing sector. With the mission of improving the productivity and technological performance of the state's over 20,000 manufacturing establishments, our focus is on advancing these firms through talent development, technology adoption, and business growth. Our experience, based on our first 82 surveyed, is that FloridaMakes is creating or retaining 17.8 manufacturing jobs and \$1.35M in economic impact per client served. These results have validated that our industry-driven, market-responsive business model.

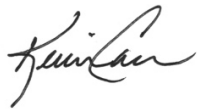
In reviewing the application requirements, we expect that you will find our proposal unique in terms of how we approach the marketplace, engage manufacturing firms, and develop Florida's manufacturing workforce. Similarities likely exist in that we leverage the state's public and private talent development infrastructure, yet we ensure that these training and development activities are driven to a specific need that results in measurable impact to the firm and, more importantly, to the state's economy: it is our mission.

As manufacturers, our Board is enthusiastic about the progress that FloridaMakes has made toward advancing Florida manufacturers and the state's manufacturing economy. Our application to the Job Growth Grant Fund is specifically focused on expanding our services

throughout the state and driving that impact to a much higher level. Our goal is to have these services available within one hour's drive of all manufacturing firms in Florida. The Job Growth Grant Fund provides FloridaMakes the opportunity to expand its services, particularly in regions of lower manufacturing density and rural areas, and achieve the necessary statewide coverage. Since its establishment, economic development organizations in many of these regions have desired a FloridaMakes service presence for their area but lacked the required cost share necessary to realize that goal. In appendix A of our proposal you will find letters of support from many of these regions, as well as letters supporting the overall proposal. We believe the Fund will provide that opportunity.

We appreciate your consideration in reviewing our proposal and welcome the opportunity to answer any questions or concerns that you may have with our approach. We look forward to working together and achieving the results we mutually desire.

Sincerely,



Kevin Carr
Chief Executive Officer
FloridaMakes



Bob Provitola
Chairman
FloridaMakes Board of Directors

Board of Directors

Bob Provitola
Division Vice President
Mitsubishi-Hitachi Power Systems
Orlando, FL

Ray Aguerrevere
VP & General Manager
Custom Metal Designs
Oakland, FL

Abe Alangaden
Business Unit Manager
Johnson & Johnson Vision, Inc.
Jacksonville, FL

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North Venice, FL

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Technology, Inc.
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Tim Vanderhoof (ex-officio)
SVP for Business Development
Enterprise Florida
Orlando, FL

Andra Cornelius (ex-officio)
SVP, Business & Workforce Dev.
CareerSource Florida
Tallahassee, FL

Nicole Gislason (ex-officio)
Director, Career & Profession Edu.
University of West Florida
Pensacola, FL



Florida Job Growth Grant Fund Workforce Training Grant Proposal

Proposal Instructions: The Florida Job Growth Grant Fund Proposal (this document) must be completed and signed by an authorized representative of the entity applying for the grant. Please read the proposal carefully as some questions may require a separate narrative to be completed.

Entity Information

Name of Entity: FloridaMakes, Inc.

Federal Employer Identification Number (if applicable): ██████████

Contact Information:

Primary Contact Name: Kevin Carr

Title: CEO

Mailing Address: 800 N. Magnolia Avenue, Suite 1850
Orlando, FL 32803

Phone Number: 407.450.7206

Email: Kevin.Carr@floridamakes.com

Workforce Training Grant Eligibility

Pursuant to 288.101, F.S., The Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. This includes workforce training grants to support programs offered at state colleges and state technical centers.

Eligible entities must submit proposals that:

- Support programs and associated equipment at state colleges and state technical centers.
- Provide participants with transferable and sustainable workforce skills applicable to more than a single employer.
- Are offered to the public.
- Are based on criteria established by the state colleges and state technical centers.
- Prohibit the exclusion of applicants who are unemployed or underemployed.



1. Program Requirements:

Each proposal must include the following information describing how the program satisfies the eligibility requirements listed on page 1.

- A. Provide the title and a detailed description of the proposed workforce training.
See attached.

- B. Describe how this proposal supports programs at state colleges or state technical centers.
See attached.

- C. Describe how this proposal provides participants transferable, sustainable workforce skills applicable to more than a single employer.
See attached.

- D. Does this proposal support a program(s) that is offered to the public?

Yes No

- E. Describe how this proposal is based on criteria established by the state colleges and state technical centers.
See attached.

- F. Does this proposal support a program(s) that will not exclude unemployed or underemployed individuals?

Yes No



G. Describe how this proposal will promote economic opportunity by enhancing workforce training. Please include the number of jobs anticipated to be created from the proposed training. Further, please include the economic impact on the community, region, or state and the associated metrics used to measure the success of the proposed training.
See attached.

2. Additional Information:

A. Is this an expansion of an existing training program? Yes No
 If yes, please provide an explanation for how the funds from this grant will be used to enhance the existing program.
 See attached.

B. Does the proposal align with Florida’s Targeted Industries? (View Florida’s [Targeted Industries here.](#))
 Yes No
 If yes, please indicate the targeted industries with which the proposal aligns.
 If no, with which industries does the proposal align?
 Cleantech, Life Sciences, Infotech, Aviation / Aerospace, & Homeland Security / Defense.

C. Does the proposal align with an occupation(s) on the Statewide Demand Occupations List and/or the Regional Demand Occupations List? (View Florida’s [Demand Occupation Lists here.](#))
 Yes No
 If yes, please indicate the occupation(s) with which the proposal aligns.
 If no, with which occupation does the proposal align?
 SOC Codes: 493011, 531031, 511011, 111021, 499041, 514041, 472073, 414011, 414012, and 514121



D. Indicate how the training will be delivered (e.g., classroom-based, computer-based, other).

If in-person, identify the location(s) (e.g., city, campus, etc.) where the training will be available.

If computer-based, identify the targeted location(s) (e.g. city, county, statewide) where the training will be available.

See attached.

E. Indicate the number of anticipated enrolled students and completers.

See attached.

F. Indicate the length of program (e.g., quarters, semesters, weeks, etc.), including anticipated beginning and ending dates.

Begin Date: 01-01-2018 End Date: 12-31-2018

G. Describe the plan to support the sustainability of the proposal.

See attached.

H. Identify any certifications, degrees, etc. that will result from the completion of the program. Please include the Classification of Instructional Programs (CIP) code if applicable.

See attached.



I. Does this project have a local match amount?

Yes No

If yes, please describe the entity providing the match and the amount.

If additional space is needed, attach a word document with your entire answer.

J. Provide any additional information or attachments to be considered for the proposal.
See attached.

3. Program Budget

Estimated Costs and Sources of Funding: Include all applicable workforce training costs and other funding sources available to support the proposal.

A. Workforce Training Project Costs:

Equipment	<u>\$ see attached</u>	
Personnel	<u>\$</u>	
Facilities	<u>\$</u>	
Tuition	<u>\$</u>	
Training Materials	<u>\$</u>	
Other	<u>\$</u>	Please Specify: _____
Total Project Costs	<u><u>\$</u></u>	

B. Other Workforce Training Project Funding Sources:

City/County	<u>\$ see attached</u>	
Private Sources	<u>\$</u>	
Other (grants, etc.)	<u>\$</u>	Please Specify: _____
Total Other Funding	<u><u>\$</u></u>	

Total Amount Requested \$3,000,000

Note: The total amount requested must equal the difference between the workforce training project costs in 3.A. and the other workforce training project funding sources in 3.B.



- C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding, how equipment purchases will be associated with the training program, if applicable, and any other pertinent budget-related information.

See attached.

4. Approvals and Authority

- A. If entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g., approval of a board, commission or council)?

None

- B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the entity and the Florida Department of Economic Opportunity:

- i. Provide the schedule of upcoming meetings for the group for a period of at least six months.

If additional space is needed, attach a word document with your entire answer.

- ii. State whether that group can hold special meetings, and if so, upon how many days' notice.

If additional space is needed, attach a word document with your entire answer.

- C. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the entity. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc.



I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity.

Name of Entity: FloridaMakes

Name and Title of Authorized Representative: Kevin Carr, CEO

Representative Signature: 

Signature Date: 11/06/2017

4C. Evidence that the undersigned has all necessary authority to execute this proposal on behalf of FloridaMakes.

2017 FLORIDA NOT FOR PROFIT CORPORATION ANNUAL REPORT

DOCUMENT# N10000000039

Entity Name: FLORIDAMAKES, INC.

Current Principal Place of Business:

800 N. MAGNOLIA AVE - STE. 1850
ORLANDO, FL 32803

Current Mailing Address:

800 N. MAGNOLIA AVE - STE. 1850
ORLANDO, FL 32803

FEI Number: 27-3518899

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

LOWMAN, JR., WILLIAM R. ESQ.
1000 LEGION PLACE - STE. 1700
ORLANDO, FL 32801 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE: _____

Electronic Signature of Registered Agent

Date

Officer/Director Detail :

Title DIRECTOR, CHAIRMAN
Name PROVITOLA, BOB
Address 2287 PREMIER ROW
City-State-Zip: ORLANDO FL 32809

Title DIRECTOR
Name ALANGADAN, ABE
Address 7500 CENTURION PARKWAY
City-State-Zip: JACKSONVILLE FL 32256

Title EXD, CEO
Name CARR, KEVIN
Address 800 N. MAGNOLIA AVE
 SUITE 1850
City-State-Zip: ORLANDO FL 32803

Title CFO
Name PANDO, ROVENA
Address 800 N. MAGNOLIA AVE
 SUITE 1850
City-State-Zip: ORLANDO FL 32803

Florida Job Growth Grant Proposal

**Advanced Manufacturing Workforce
Accelerated Talent Development Initiative**
November 6, 2017

Prepared for
Florida Department of Economic Opportunity

FloridaMakes



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FloridaMakes
Advanced Manufacturing Workforce
Accelerated Talent Development Initiative

Florida’s Manufacturing Competitiveness

In 2015, Florida’s manufacturing competitiveness ranked 38th among all U.S. states, well below both national and regional averages. Measured in terms of value-added per employee, or productivity, Florida produced \$132,906 in value (GDP) per employee as compared to a \$166,685 average for the Southeast region and a \$175,959 average for the Nation.¹ If Florida performed at either the southeast or national average, it would contribute roughly \$62B or \$65B respectively to Florida’s economy versus its 2015 level of \$45.6B; a full \$20B increase in the State’s economy at its current 2017 manufacturing employment level of 365,900.² Table 1 illustrates the top 10 most productive states as a basis for comparison to Florida’s standing in terms of manufacturing competitiveness.

2015 Rank	Area	Manufacturing GDP (\$Billions) 2015	Manufacturing Employment 2015	Value-Added Per Employee (Productivity) 2015
1	Louisiana	\$51,074	143,889	\$354,954
2	Texas	\$230,514	879,369	\$262,136
3	Oregon	\$47,759	185,647	\$257,257
4	Wyoming	\$2,264	9,765	\$231,848
5	California	\$281,099	1,294,660	\$217,122
6	North Carolina	\$100,023	461,934	\$216,531
7	Washington	\$58,681	291,104	\$201,581
8	Maryland	\$20,727	103,643	\$199,985
9	Massachusetts	\$47,879	249,631	\$191,799
10	Indiana	\$98,244	519,478	\$189,121
	United States	\$2,170,275	12,334,000	\$175,959
	Southeast	\$495,821	2,974,595	\$166,685
38	Florida	\$45,615	343,213	\$132,906

Table 1 – Ranking of Manufacturing Productivity by State
Source: U.S. Bureau of Economic Analysis

This measure of productivity is particularly relevant to any discussion over the health and welfare of Florida’s manufacturing economy. More importantly, it speaks to the sustainability of

¹ U.S. Bureau of Economic Analysis

² U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics Program, July 21, 2017

Florida's manufacturing industry and the value of its contribution to the state's economy in the long-term. More simply, it's not enough to count jobs and manufacturing establishments—both important indicators of growth—but more significant to measure Florida's success by the *value* of what we produce given the inputs—in this case, *employment*—provided.

Figure 1 further illustrates this importance of productivity, particularly as it relates to the current economy. The figure highlights the successful recovery of U.S. manufacturing since the 2009 low brought out by the recession. Overall this is good news for manufacturing in the U.S. and for Florida. However, the other key observation in the figure is how U.S. manufacturing output has significantly risen yet manufacturing employment has not nearly grown at the same rate, indicating *manufacturing productivity* has and continues to grow significantly. Meaning, in short, the U.S. is producing more valued-goods with less people.

The popular narrative of recent years has been that this is a "jobless recovery" and, more specifically within manufacturing, that "we've lost many jobs to overseas competitors." Yet Figure 1 would clearly suggest otherwise: U.S. productivity is among the highest it has ever been. This pattern of increased productivity is due in large part to advancements in technology, and can be seen across many industries.

Therein lies the challenges Florida faces in maintaining and growing a robust, vibrant and high-value manufacturing economy for the 21st century:

1. The ability to identify and incorporate advanced manufacturing technologies, as necessary, to exploit advanced materials and processes embedded in current and future manufactured goods and services.
2. The ability to develop and deploy a highly-skilled and adaptive workforce, including leadership, with the knowledge and abilities to understand, embrace, and employ ever-evolving next generation technology necessary to support their production.
3. The *speed* at which an individual firm or regional economy responds to the above challenges—continuously—will define its level and ability to participate in the future manufacturing economy.

Productivity is and will always remain the defining factor in which nations or states will truly be a competitive participant in the manufacturing economy worldwide.

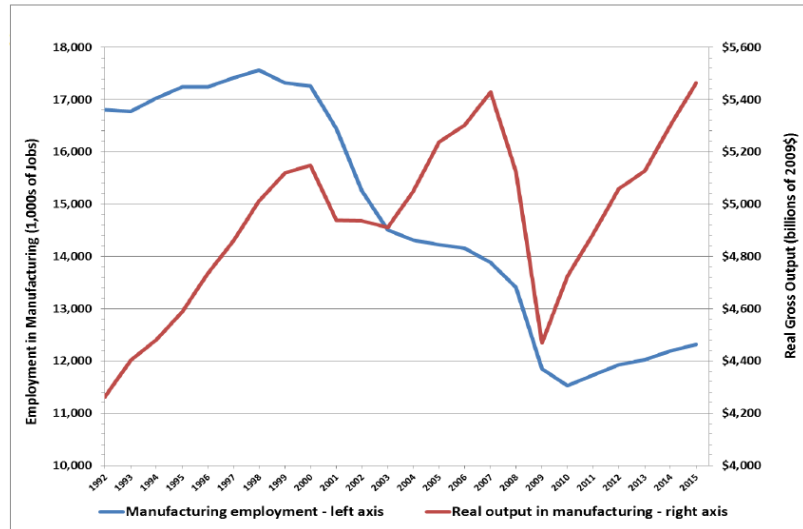


Figure 1
Trends in U.S. Manufacturing and Employment
Source: IHS Markit, 2016

Florida’s Manufacturing Workforce

Florida’s manufacturing employment has grown steadily over the last 78 months after a rapid decline in the 4 years prior.³ In June 2017, there were a total of 365,900 jobs throughout the state, an increase of 10,900 over the past year. These jobs are spread across 20,584 manufacturing establishments, also increasing steadily over the past several years.⁴ This bodes well for the State’s manufacturing economy in that Florida has slightly outpaced the rest of the nation in manufacturing job creation.

There is still, however, a high demand for additional high- and medium-skilled workers throughout the state. In Florida, like most other states, there are four primary reasons that conspire to create a lack of skilled workers and continuously expand the gap of talent needed to maintain and increase manufacturing competitiveness:

- **Limited pipeline** – There has been a decline in people pursuing Science, Technology, Engineering and Math (STEM) education as younger generations are less drawn to a career in manufacturing.
- **Retiring workforce** – As baby boomers are hitting retirement, valuable experience and skills go with them. The oldest baby boomers turned 65 on January 1, 2011. Every day since and for the next 19 years, about 10,000 more will hit that milestone nationally.

³ Florida Manufacturing Employment, Seasonally Adjusted, Florida Department of Economic Opportunity, June 2017

⁴ Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Wages and Employment Program. The most recent data available are for 2016 Q3.

- **Changing pace of technology** – At no other time has technical innovation moved so quickly. This is great news for growing companies, but it can be a challenge for workers who are unable to keep pace and fall behind.
- **Reshoring** – This movement to bring manufacturing back to the U.S. creates an even bigger demand for jobs.⁵

Proposed Initiative

This proposal intends to accomplish the following objectives:

1. Deploy a statewide network of manufacturing business advisors collocated with the state’s regional manufacturing associations and/or economic development organizations to *engage* the state’s 20,584 manufacturing establishments and *accelerate* the adoption of advanced manufacturing methods, technologies, and business best practices which, in turn, *accelerates* the development of leadership and workforce talent necessary to do so.
2. Develop, engage and exploit the state’s talent development infrastructure—career academies, state colleges and training centers, manufacturing associations, universities, and workforce boards—to deliver relevant and responsive core programs and corporate training reflective of the needs of a particular firm or regional sub-sector, and for the manufacturing business advisor to identify, cultivate and accelerate those engagements.
3. Deploy commercially available, self-paced, on-line educational and training curricula in advanced manufacturing, which is widely used by large manufacturing firms, and promote their accessibility and expanded use by smaller manufacturing establishments.
4. Transition and maintain the Florida Advanced Technological Education Center (FLATE) within FloridaMakes as a means of maintaining its core mission as the go-to organization for manufacturing and advanced technical education, best practices and resources supporting the high-performance skilled workforce for Florida’s manufacturing sectors.

About FloridaMakes

FloridaMakes is a statewide, industry-led, public-private partnership with the sole mission of strengthening and advancing Florida’s economy by improving the productivity and technological performance of its manufacturing sector, with an emphasis on small- and medium-sized firms. It accomplishes this by providing services focused on three principle value streams: technology

⁵ Using Competency Models to Drive Competitiveness and Combat the Manufacturing Skills Gap, Society of Manufacturing Engineers/Tooling U, Cleveland, OH

adoption, talent development, and business growth. In Florida, 80% of all manufacturing firms employ less than 20 people, over 99% are classified as small businesses.

FloridaMakes accomplishes its mission by:

- Delivering customer-centric services driven by the specific challenges and opportunities of a particular firm, sub-sector, or region; not as a hammer looking for a nail.
- Leveraging and accelerating the use of the state's public and private assets including research, educational and training institutes, private-sector training providers, workforce development boards, and economic and business development programs and providers.
- Contributing to the accessibility and performance of Florida's manufacturing ecosystem.
- Focusing on firms that are willing to invest in themselves.

FloridaMakes operates principally as a network of the state manufacturing associations and other local providers and deploys in these locations manufacturing business advisors who engage directly with regional firms. These advisors typically provide business assessments that benchmark organizational excellence and business value in an attempt to identify opportunities and challenges particular to that firm.

Contextual Learning

First among those challenges, broadly, is the ability to attract and retain highly-skilled leaders and workers. As such, the vast majority of client services provided involves skill-development (i.e., training). However, more often than not, this training is provided "in-factory" within the context of the company's particular operation. That said, the vast majority of this training is in highly transferable skill sets. For example, a lean manufacturing implementation or ISO 9000 certification requires training and development of the leadership and workforce, delivered in the context of that firm, but yielding highly transferable skill sets. This yields training that is more relevant, rapidly applied, and highly impactful.

Leveraged Training Assets

All FloridaMakes training is provided by local public and private organizations at an expense to the firm. The role of FloridaMakes is to assess the needs for the firm, identify and engage the training provider, and ensure quality in the services provided. In doing this, FloridaMakes enables the marketplace as a catalyst rather than compete with it.

FloridaMakes operates with funding of \$500K per year from the Florida Department of Economic Opportunity which allows it to leverage another \$500K from the National Institute of Standards and Technology's Manufacturing Extension Partnership program (NIST MEP). Industry contributions allow FloridaMakes to leverage additional NIST MEP funds. However, all combined these funds are insufficient to leverage the full NIST MEP funding of \$3.5M

available. FloridaMakes is the official representative of the MEP National Network™ for the State of Florida.

Performance History

FloridaMakes is driven entirely by the economic impact it achieves serving manufacturing firms in Florida. Performance is measured through a third-party process, administered by NIST, where FloridaMakes clients are surveyed 6-12 months after each engagement to determine the impact. Core measures include increased and retained sales, cost savings, client investment (capital equipment, training, etc.), and jobs created and retained. Table 2 provides FloridaMakes performance resulting from surveys from 82 companies completing engagements since FloridaMakes began delivering service in 2016.

Impact	FloridaMakes Impacts To Date	Goal at Full State Funding of \$3.5M
Total Sales (new/retained)	\$63.3M	\$175M
New Investment	\$34.5M	\$52.5M
Cost Savings	\$13.1M	\$24.5M
Totals	\$110.8M	\$252M
Average impact per client	\$1.4M	\$0.98M
Jobs created and retained	1462	1750
Average jobs per client	17.8	6.8

Table 2 – 2016 Performance Results
Source: National Institute of Standards and Technology

As can be seen in the table above, FloridaMakes is achieving significant impacts, which validate its approach to the marketplace. These figures, however, fall short of the expectations by NIST commensurate with their \$3.5M annual investment. This is entirely an issue of capacity and not performance, per se, due to the limited number of manufacturing business advisors FloridaMakes has been able to field. The current industry cost share is comprised of sunken industry expenses, allowable as cost share but not fungible in terms of its ability to increase business advisor field capacity. NIST recognizes the growth and performance of FloridaMakes and anticipates either increased State funding or continued, yet slower, organic growth over time.

Most notable in the table above is the fact that both the Average Impact and Average Jobs per client FloridaMakes has been achieving using its business model are significantly higher than the expectations of NIST, which are based on national averages. Therefore, conclusion by both FloridaMakes and NIST is that the FloridaMakes shortfall is a matter of scale, not an issue related to quality of service.

To conclude, the performance history indicates that FloridaMakes is a high-speed, lower-cost jobs producer than most alternatives in the business retention and expansion space, with significant and measurable economic impact. It simply needs to be brought to scale.

Objectives 1 & 2

1. The Catalyst: Increase Field Training Capacity
2. Accelerate Access to Talent Development Infrastructure

The nature and composition of current funding requires that placement of a business advisor is dependent on the strength and size of each regional manufacturing association. Of the 14 associations in existence today, only 5 are of the scale capable of providing cost share to field agents. Those include First Coast (5 counties), South Florida (8 counties), Central (5 counties), Volusia-Flagler (2 counties), and Northwest (12 counties). The remainder of the state is comprised of very small associations with fragmented capacity, particularly in rural areas, yet still have demand for business advisors to serve these regions. These associations are unable to provide the necessary cost share for a variety of reasons which include: (1) a lower population density of manufacturers; (2) widely geographically dispersed, limiting aggregation and networking; and (3) still in early stages of development, not to scale.

Rural/Low-Density Regions

Many regions in the state, particularly rural, have no access to a manufacturing association because either they do not exist, do not have a large enough population of firms, or their business location is prohibitive distance-wise from the nearest association. In areas where associations do not exist, FloridaMakes will work with the Florida Economic Development Council and the Rural Areas of Opportunity (RAOs) to identify local economic development offices to collocate a business advisor for that region.

FloridaMakes is proposing that the Job Growth Grant Fund provide additional funding to allow for the placement and availability of a manufacturing business advisor within an hour's drive of any manufacturer throughout the state. In doing so, every firm will have access to the expertise, assistance, and training afforded in the more densely populated areas. Further, service capacity in higher density areas will increase to better reflect the needs of those regions. For example, the Miami-Dade region alone has a higher population of manufacturers than most states.

The proposed request would distribute additional business advisors with anticipated performance results as follows:

Region	Current FTE	Proposed Total FTE
Northeast (JAX-Flagler)	1	3
Southeast (Miami-Dade) (Treasure Coast)	1	3
Central (Brevard-Volusia) (Lake)	1	3
Polk	0	1
Sara-Manatee	1	1
Southwest (Ft. Myer)	0	1
Tampa (Hillsborough) (Pinellas)	2	2
Mid-Florida (Marion region) (Gainesville)	0	2
North Central (NC RAO)	0	1
North West (Ft. Walton) (Panama City)	2	2
Capital Region (NC RAO)	0	1
South Central (SC RAO)	0	1
Total	8	21

Table 3
Distribution of FloridaMakes Business Advisors

Impact data are available 6-12 months after completion of a project. Average impact per client is estimated at approximately \$1M and at 7 jobs created or retained.

In summary, the development of a statewide capacity will:

- **Capacity.** Allow FloridaMakes to exceed NIST expectations both in terms of advanced manufacturing job creation or retention and to provide a significant, measurable, and reportable economic impact to Florida’s manufacturing economy.
- **Coverage.** Provide for the accessibility of service within one-hour’s driving distance to all of Florida’s 20,584 manufacturing establishments.
- **Quick Results.** Accelerate the rate, ensure the relevance, and provide contextual learning, developing advanced manufacturing skills which are adaptable and transferable.
- **Cost Effective.** Provide for a most cost-effective means of talent development in advanced manufacturing.

Objective 3

The Content: On-line Skills Training

As a result of its partnership with NIST, FloridaMakes is entering into an agreement with the Society of Manufacturing Engineers (SME) Tooling University to distribute the entire Tooling U catalog of nearly 500 courses through FloridaMakes’ partner organizations. These courses will be offered through a portal on the FloridaMakes website and delivered through access on partner websites at a discounted price. Once in place, this course catalog will be the largest

collection of advanced manufacturing courseware available throughout the state. Furthermore, it may be the most accessible training asset to the more rural areas of the state that are largely underserved by Florida’s talent development infrastructure.

Competency Framework

The Boston Consulting Group (BCG) report, “Made in America Again: The U.S. Skills Gap, Could it Threaten a Manufacturing Renaissance?”, has among its many recommendations that “manufacturing companies should return to the historical practice of investing in *internal* training programs in order to build the capabilities they will require to remain competitive.”⁶

Internal training is the basis for how FloridaMakes approaches skill development of the manufacturing leadership and workforce. While these skills are largely transferable, they are developed within the context of a given manufacturing environment or position rather than in abstract in a classroom setting. Furthermore, FloridaMakes leverages the existing talent development infrastructure—state colleges, technical centers, and private providers—to deliver the training, thereby enabling greater access and connectivity to those resources. The role of FloridaMakes in this model is to develop the training requirements within the firm, identify the most appropriate training provider for delivery, and ensure the training is conducted on-time, in context, and satisfying the intended objectives and goals.

Employing Competency Models

Tooling U-SME employs a “Competency Model” approach to skill development created by a cross-section of manufacturing experts. The tool is made up of more than 60 job role competency models, each outlining knowledge and skill objectives for job roles in production, technician, lead technician/technologist, and engineer levels. Appendix B provides a greater detail of the 60 models and courseware available through the Tooling U-SME suite of offerings.

Competency Models are a structured system to develop the required knowledge, skills and abilities for specific jobs to build the high-performance teams they need to meet the demands of their current business environment as well as in the future. In 2012, the U.S. Department of Labor issued a report, “Technical Assistance Guide for Developing and Using Competency Models: One Solution for the Workforce Development System,” describing these models as “a collection of competencies that together define successful performance in a *particular* work setting.” Further adding that “competency models are the foundation for important human resource functions such as recruitment and hiring, training and development, and performance management. Competency models can be developed for specific jobs, job groups, organizations, occupations or industries.”⁷

⁶ Made In America Again, The U.S. Skills Gap, Could it Threaten a Manufacturing Renaissance?, The Boston Consulting Group, August 2013

⁷ Technical Assistance Guide for Developing and Using Competency Models – One Solution for the Workforce Development System, Department of Labor, Employment and Training Administration, January 2012.

This particularly rings true when considering the diverse range of industries in Florida’s manufacturing sector, and the variance and uniqueness in sub-clustering depending on the region within the state. In many regions, both metropolitan and rural, state and local training institutes must invest their scarce resources in training infrastructure, at best, in support of subsectors with the highest concentrations, leaving behind underserved ones where economies of scale do not exist. In a state with as diverse and dispersed a manufacturing industry as Florida, emerging yet less dominant or concentrated industries will need to fend for themselves in terms of available training resources.

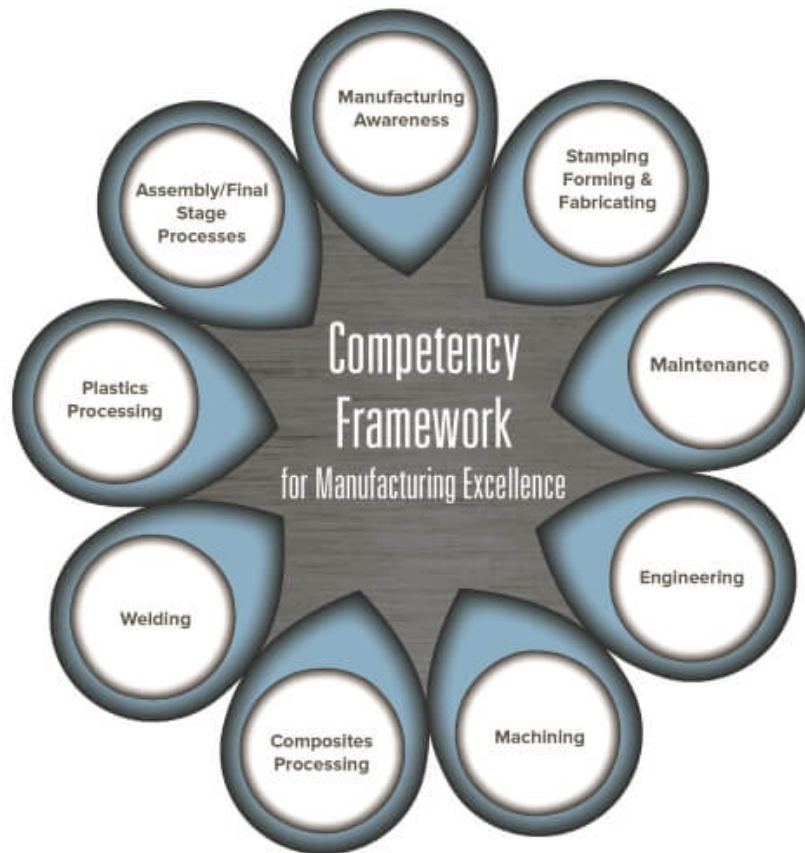


Figure 2
Tooling U Competency Framework

Certifications. Finally, it is essential that the courseware provided is aligned with recognized professional and industry certifications. Tooling U-SME courses are not only recognized by a number of these certifying bodies, but also provide the underlying learning requirements to attain such certifications from organizations such as the National Institute of Metalworking Skills (NIMS), the Manufacturing Skills Standards Council (MSSC), the Society of Manufacturing Engineers (SME), and the American Welding Society (AWS).

In summary, the deployment of on-line, competency model-based skills training will:

- **Streamline the training process** and cut costs by eliminating unnecessary/redundant training to allow for more training on true needs.
- **Enable access and uniform availability** to a broad suite of competency training throughout the entire state of Florida, across multiple industry subsectors, and especially in remote locations where advanced manufacturing training maybe largely inaccessible.
- **Provide Career Pathways.** Defines and explains to an average performer what they need to attain in order to become a superior performer.
- **Accelerate Talent Development.** Provides a rapid-response, on-location access to the best available training material to even the smallest of Florida’s manufacturing businesses. Florida’s larger manufacturing firms already utilize Tooling U-SME materials for their in-house training programs.
- **Provide Certification.** Provides access to materials necessary to achieve industry recognized credentials and certifications, and continuing education.

Objective 4

The Pipeline: Transitioning the Management and Operation of Florida Advanced Technological Education Center (FLATE) to FloridaMakes

In 2017, Florida can consider itself both blessed and cursed by achieving what could essentially be seen as full employment, with an unemployment rate of 4 percent. Other than the many new citizens moving into Florida on a daily basis, manufacturers and workforce training boards struggle to find the people to train. Most of the available unemployed or underemployed (1) have criminal records, (2) are unable to pass drug screening, (3) lack the basic skills, hard and soft, to successfully complete basic training, or (4) are unable to obtain security clearances. Combine that with a retiring workforce and the workforce skills gaps widen even farther.

Technology can and will buffer the widening availability of skilled workers, but to exploit those technologies requires an ever-increasing demand for STEM-related skill development in Florida’s middle- and high-schools. As well as, a constant and continuous refresh of the curricula at Florida’s career academies, state technical centers, and state colleges is absolutely necessary.

The Florida Advanced Technological Education Center (FLATE), a National Science Foundation (NSF) Center of Excellence in high-technology manufacturing, is the go-to organization for manufacturing and advanced technical education, best practices and resources supporting the high performance skilled workforce for Florida’s manufacturing sectors, and a driving force behind the State’s Career and Technical Education (CTE) curricula in manufacturing.

Nationally, FLATE is a recognized leader among NSF’s Advanced Technological Education (ATE) Centers and is widely regarded in the manufacturing community. However, base funding

for an NSF ATE Center is not allowed beyond ten years, and base funding to FLATE will not continue beyond December 2018. Current funding is targeted toward a transition of core mission functions into other organizations, such as FloridaMakes. It was anticipated because of the critical role that FLATE has played within the CTE community in the state, that state funding would likely be made available through resources such as the Florida Department of Education. However, no such funds have been made available.

Developing and Maintaining the Engineering Technology Curriculum

FLATE provides exemplary industry partnerships, workforce opportunity, and educational synergy throughout the state of Florida by connecting industry and workforce needs to targeted educational endeavors at 19 community and state colleges across Florida. The Engineering Technology (ET) degree and certificate programs conceived, engineered, and coordinated by FLATE are the first of their kind to offer a cohesive, comprehensive, fully articulated inter-institutional program. They focus on a set of core courses covering introductory computer-aided drafting, electronics, instrumentation and testing, processes and materials, quality and safety. These core skills support the Florida workforce, and align with the national Manufacturing Skill Standards Council (MSSC) Certified Production Technician certification, providing value-added benefits to industry. The Engineering Technology Core coupled with a second-year degree specialization prepares students for jobs in manufacturing and high-technology industries.

Developing the Pipeline

Among FLATE's most significant functions is the role it plays in providing an effective outreach and dissemination platform for Florida's high school, community college, industry and legislature for information related to the requirements for and impact of manufacturing education. Critical to that success is the promotion of manufacturing careers throughout Florida through *Made in Florida* outreach initiatives which have reached over 47,000 middle- and high-school students. And supporting that function, FLATE provides professional development opportunities for technical faculty and educators in STEM curriculum to develop, refine or certify their knowledge base within manufacturing and/or its related enabling technologies and educational pedagogies.

No other entity in Florida is tasked with the specific mission of paving the way upstream for the advanced manufacturing workforce of tomorrow. This may, in fact, be the most significant function FLATE performs.

All of the technical facilities constructed, course offerings available, and high-tech manufacturing equipment procured is all for nothing if there is not an inspired next generation of students interested in manufacturing careers.

FLATE and FloridaMakes have been strategizing over the deposition of FLATE's core functions post NSF funding. Given the core mission of FloridaMakes and that developing a skilled

workforce is a priority challenge, we believe that the absorption of FLATE's core functions are fully compatible with our funding from NIST. However, the necessary state cost share to applied NIST funds have yet to be identified.

FLATE is unquestionably the leader in implementation of a statewide unified education system which positions manufacturing education as a convergent curriculum optimizing technician preparation in manufacturing and its enabling technologies. FLATE has driven the Engineering Technology curriculum to 19 of the State's community and two-year colleges. It remains a backbone in the coordination of that curriculum and in maintaining its currency.

Many consider FLATE a national asset and, at the very least, it is critical to Florida's talent development infrastructure in advanced manufacturing. FloridaMakes is committed to allocating half of the necessary cost share from its base NIST funding to ensure:

- Continued coordination and maintenance of Florida's Engineering Technology curriculum.
- Continued maintenance of the "Made in Florida" outreach campaign to students, parents, STEM educators at the middle- and high-school level, and high-school counselors.
- Continued leadership, coordination and execution of Manufacturing Day/Month for the state of Florida, a yearly national campaign in which FLATE and Florida's regional manufacturing associations has continually outperformed all other states in the Nation.

BUDGET

BUDGET TABLE

		JOB GROWTH GRANT FUND PROPOSAL	DEO CURRENT GRANT	NIST MEP FEDERAL MATCH	PROJECT
LINE ITEMS		AMOUNTS	AMOUNTS	AMOUNTS	TOTALS
I. PERSONNEL SERVICES					
(a)	SALARIES	\$1,372,901	\$328,049	\$1,700,950	\$3,401,900
(b)	FRINGE	\$349,787	\$75,451	\$425,238	\$850,476
	TOTAL PERSONNEL	\$1,722,688	\$403,500	\$2,126,188	\$4,252,376
		=====	=====	=====	=====
II. EXPENSES					
(a)	PROFESSIONAL SERVICES	\$125,000	\$30,000	\$155,000	\$310,000
(b)	TRAVEL	\$218,022	\$-	\$218,022	\$436,044
(d)	SUBCONTRACTED SERVICES	\$653,500	\$66,500	\$720,000	\$1,440,000
(e)	OPERATING SUPPLIES	\$78,290	\$-	\$78,290	\$156,580
(f)	MARKETING MATERIALS	\$-	\$-	\$-	\$-
	TOTAL EXPENSES	\$1,074,812	\$96,500	\$1,171,312	\$2,342,624
		=====	=====	=====	=====
III. EQUIPMENT					
(a)	EQUIPMENT	\$-	\$-	\$-	\$-
	TOTAL EQUIPMENT	\$-	\$-	\$-	\$-
		=====	=====	=====	=====
IV. ADMINISTRATION (not to exceed ___% of grant total, if applicable)					
	<i>(Identify the costs included in Admin, such as Office supplies, postage, rent)</i>				
(a)*	Office Rent, Software Subscriptions, Audits _____	\$202,500	\$-	\$202,500	\$405,000
(b) *	_____				
(c) *	_____				
	<i>*Insert additional items, if necessary</i>				
		=====	=====	=====	=====
	GRAND TOTALS	\$3,000,000	\$500,000	\$3,500,000	\$7,000,000
		=====	=====	=====	=====

BUDGET NARRATIVE

The total budget for this project is \$7,000,000 for a one year period. Cost share at 50% is budgeted on this project by leveraging the current State DEO funding (\$500,000) and Federal NIST MEP funding (\$3,500,000), as detailed in the above table.

The request for the Job Growth Gant Fund as presented is \$3,000,000, which funds 43% of the total operations of FloridaMakes.

Personnel & Fringe

The total Personnel costs are budgeted at \$4,252,376 including associated fringe benefits (payroll taxes, pension contributions, medical benefits). These costs will fund 21 Business Advisors throughout the state and 12 other FTEs functions of FloridaMakes HQ staff to provide project direction, oversight, business operations, marketing, financial management, compliance, reporting and administrative requirements.

The request for the Job Growth Grant Fund is \$1,722,688.

Professional Services

The Total Professional Services costs are budgeted at \$310,000. These costs include professional accounting, legal, HR, payroll, marketing, website, CRM system, technical assistance and webinar costs.

The request for the Job Growth Grant Fund is \$125,000.

Travel

The Total Travel costs are budgeted at \$436,044. These costs include local and statewide travel for all the Business Advisors and HQ Staff, conferences, professional development and training travel costs, Sterling Manufacturing Business Excellence event costs and Manufacturing Summit. The travel costs elements are mileage, airfare if applicable, tolls, parking, transportation, hotels, meals and incidentals. FloridaMakes has developed and implemented a travel policy and these costs have been calculated using that policy and the federal and state travel requirements.

The request for the Job Growth Grant Fund is \$218,022

Subcontracted Services

The Total Subcontracted Services costs are budgeted at \$1,440,000. These costs include third party independent consultants and other agencies that provide actual project delivery. These are the subject matter experts that will be engaged by FloridaMakes to assist a manufacturing company with their specific need as identified by our thorough business assessment.

The request for the Job Growth Grant Fund is \$653,500

Operating Supplies

The Total Operating Supplies costs are budgeted at \$156,580 which includes computers, printers and peripherals, office supplies, postage, shipping, marketing materials and so forth for the headquarter office and the field staff throughout the state.

The request for the Job Growth Grant Fund is \$78,290

Administration

The Total Administration costs are budgeted at \$405,000. These costs include internet and phone services, software subscriptions, membership dues, audits, office rent, conference registration fees, trade shows fees, meeting registrations etc.

The request for the Job Growth Grant Fund is \$202,500

APPENDIX A
Support Letters



State Board of Education

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John R. Padget, *Vice Chair*
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Gary Chartrand
Rebecca Fishman Lipsey
Michael Olenick
Andy Tuck

Pam Stewart
Commissioner of Education

Rod Duckworth, Chancellor
Division of Career and Adult Education

Marilyn Barger, Ph.D, P.E., CPT
Florida Advanced Technological Education Center of Excellence
10414 East Columbus Drive
Tampa, Florida 33619

September 8, 2017

Dear Dr. Barger,

A cornerstone of the Florida Department of Education mission is to accomplish Florida's intent to create a seamless education system that delivers quality education and training to Florida's citizens for Florida's needs. As this intent shifts to reality, the challenge for Career and Technical Education (CTE) is its additional requirement to tangibly blend industries workforce requirements with the State's general education expectations. The Florida Advanced Technological Education Center, FLATE, is a major contributor to FDOE's mission by its extensive statewide contributions to manufacturing supportive technician skills and knowledge integration into our CTE platform.

FLATE's constructive contributions at the state level seem almost endless; the Florida State College System articulated A.S. Engineering Technology degree (ET) program, articulation of nationally recognized industry credentials to the ET program, proactive facilitator for FLDOE State Framework required program reviews, intense and focused professional development workshops for CTE faculty throughout Florida, the Florida ET Forum, Statewide summer camps for underrepresented students, unifying activities to promote A.S. degree programs with regional manufacturing associations and the State's 67 school districts. Each of these standalone efforts have had a statewide impact on technician education in Florida. Collectively, they represent a major CTE unification factor that is exactly in line with FLDOE's mission. Thus, the FLDOE Division for Career and Technical Education will continue its long time participation in FLATE's National Visiting Committee. We appreciate FLATE's work and recognize that FLATE driven activities must continue.

Placing FLATE's current and impressive accomplishments aside for a moment, the nature of technician education in support of a global manufacturing sector is dynamic. New technologies that support automation and systems integration are continually entering Florida's workplace with corresponding new and or revised knowledge and skills expectations for technicians in this sector. New technology is, by its nature, disruptive and drives the lag between the skills and knowledge technicians have and need. The Florida State Framework structure pushes CTE education toward identified industry needs however, new skills and knowledge sets must be identified and verified before that framework structure can serve its purpose. FLATE's demonstrated successes as well as its extensive technical and education systems expertise is an essential assist for Florida to identify the key new skills and knowledge that produce this new statewide technician workforce and reduce the current skilled jobs gap Florida manufactures currently face.

In addition to this clear trend toward a robotic and automation based manufacturing floor environment, Florida CTE will also have to address workforce issues that are triggered by the new manufacturing technologies that will emerge from the federal government supported National Network for Manufacturing Innovation. This 10 year national initiative will certainly alter Florida manufacturing and its supportive technician requirements in a currently unpredictable fashion. FLATE has the statewide credentials to effectively help Florida community colleges address this technician education challenge in the most timely manner possible. In summary, it is important to Florida CTE for FLATE to continue. Succinctly stated, FLATE listens to industry and we listen to FLATE.

Sincerely

Eric Owens Senior Education Program Director
Career and Technical Education Programs
Division of Career and Adult Education



State Board of Education

Marva Johnson, *Chair*
Andy Tuck, *Vice Chair*
Members
Gary Chartrand
Ben Gibson
Tom Grady
Rebecca Fishman Lipsey
Michael Olenick

Pam Stewart
Commissioner of Education

Rod Duckworth, Chancellor
Division of Career and Adult Education

Marilyn Barger, Ph.D, P.E., CPT
Florida Advanced Technological Education Center of Excellence
10414 East Columbus Drive
Tampa, Florida 33619

September 6, 2017

Dear Dr. Barger,

A fundamental foundation of the Florida Department of Education mission is to accomplish Florida's intent to create a seamless education system that delivers quality education and training to Florida's citizens. The challenge for Registered Apprenticeship is its additional requirement to tangibly blend workforce requirements with the State's general education expectations. The Florida Advanced Technological Education Center (FLATE), has proven itself time after time to be an extremely valuable contributor to Florida's advanced manufacturing industry sector.

The role of Registered Apprenticeship in support of advanced manufacturing is dynamic. New technologies that support automation and systems integration are drastically influencing Florida's workplace which demand new and revised skills expectations. FLATE's demonstrated successes as well as its extensive technical and education systems expertise is essential for assisting Florida's Registered Apprenticeships in identifying new skills and knowledge that produce a skilled workforce and reduce the current jobs gap Florida manufactures currently face.

FLATE has the statewide credentials to effectively help Florida's Registered Apprenticeship programs with collaborative efforts and strategies that include state community colleges, school districts, and employers in order to address workforce challenges. The Florida office of Registered Apprenticeship values the work FLATE has done and looks forward to continued collegial collaboration.

Regards,

Richard "Ted" Norman, Ed.S
Director of Apprenticeship
Division of Career and Adult Education

September 30, 2017

Kevin Carr
President & CEO
FloridaMakes
800 N. Magnolia Avenue
Orlando, FL 32803

Dear Kevin;

The workforce landscape in the United States clearly transmits the message that today's manufacturing workforce is changing in a trajectory that requires a well-organized long-term response plan. 95% of the new jobs since the start of the Great Recession, 2008, require skills beyond those typically defined by a high school diploma¹. Nation Science Foundation Centers like FLATE represent one set of vehicles that address this skills gap challenge. However, it is the inherent finite characteristics of all NSF funding that demands that these Centers establish a mechanism that will transfer their resources into larger relative entities with a resource stream that can continue the NSF Center's mission.

FloridaMakes' dedication to manufacturing in Florida includes the total commitment to building a high tech supportive manufacturing workforce. The combination of FloridaMakes and FLATE demonstrated skills and success working directly with the current manufacturing workforce and technician education programs within the Florida College System represents the integration of manufacturing workforce development that is a model for the nation. This project proposal is an excellent vehicle to combine the talents in both organizations and demonstrate the potential of this statewide manufacturing workforce development model.

In addition to the current FloridaMakes and FLATE partnership effort with the National Manufacturers Association Manufacturing Day campaign in Florida, FLATE will work directly with FloridaMakes to: develop a Florida College System faculty subject matter expert network that will strengthen your ability to meet training needs of manufacturers in every region of the State; continue working with the Florida Department of Education to identify/include industry recognized credentials in technician education; and strengthen manufacturing related apprenticeship programs; and promote and support Florida School District Manufacturing Academy Programs. All of these efforts are focused on workforce development in manufacturing which impact manufacturing companies bottom line.

In summary, FLATE is extremely enthusiastic about your project to accelerate advanced manufacturing workforce development in Florida. FLATE will direct its available resources to support this proposal. This is an exciting opportunity to support manufactures and place people in manufacturing jobs that are just waiting for people that have the appropriate skill set to meet high tech manufacturing needs.

Sincerely



Marilyn Barger



Richard Gilbert

A National Science Foundation Regional Center of Excellence for Technological Education

Marilyn Barger, Ph.D. PE.
Executive Director
Principal Investigator, HCC
(813) 259-6578

*Florida Impact
National Influence*

Richard Gilbert, Ph.D.
Principal Investigator, USF
(813) 974-2139
gilbert@fl-ate.org



September 8, 2017

Marilyn Barger, Ph.D., P.E.
Executive Director & Principal Investigator
Florida Advanced Technological Education Center (FLATE)
Hillsborough Community College
Brandon
10414 E Columbus Dr.
Tampa, FL 33619

Dear Dr. Barger,

We at ToolingU-SME are honored to write in support of *FloridaMakes* application to the **Florida Job Growth Grant Fund**, and strongly endorse the proposed transition of FLATE to *FloridaMakes*. *FloridaMakes*, an exceptional Manufacturing Extension Partnership (MEP), is one of TU-SME's strongest national partners. FLATE, a National Science Foundation Advanced Technological Education (NSF ATE) Center, is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida Community College System is an innovative workforce development approach that will be a model for others states to follow.

As you know, for over 80 years Tooling U-SME a division of the Society of Manufacturing Engineers has delivered versatile, competency-based learning and development solutions to the manufacturing community; working with more than half of all Fortune 500® manufacturing companies, as well as over 600 educational institutions across the country. For many of those years, Tooling U-SME's extensive library of on-line courses has been utilized to supply the related instruction that is a required portion of all registered apprentice programs.

Recently, Tooling U-SME created a work-based learning model to help more manufacturers and educators build successful apprenticeship programs tailored to meet specific job needs at their companies, and align with the on-the-job-learning component of registered apprenticeship programs. In addition to the TU-SME contributions already detailed in Objective 3 of the proposal, we are prepared to contribute in-kind technical expertise and resources to add a registered apprenticeship component to further strengthen this state-of-the-art proposal.

As we understand it, the proposal consists of four objectives:

1. **Increase Field Training Capacity**
2. **Accelerate Access to Talent Development Infrastructure**
3. **On-line Skills Training**
4. **Transition the Management and Operation of FLATE to *FloridaMakes***

The additional proposed enhancements would consist of the following:

Increase Field Training Capacity

Utilizing our Subject Matter Experts (SME) we could provide the *FloridaMakes* Business Advisors and the Regional Manufacturing Associations (RMA) with technical expertise to establish registered apprenticeship programs as needed. Registered apprenticeship programs are a time tested and highly successful means of providing a skilled workforce. Many small and medium sized manufacturing firms do not possess the time or resources to create their own programs. Working with the business advisors and the RMAs we could assist in



this effort. Apprentices are employed by the companies, earn increased wages as they successfully progress through the program, and are awarded a nationally recognized industry credential upon completion.

Accelerate Access to Talent Development Infrastructure

TU-SME has a national agreement with all the MEPs to provide resources and technical assistance. We also have a long history of working with technical and community colleges to provide workforce development including many in Florida. Adding our expertise in registered apprenticeship would further enhance the ability of *FloridaMakes* to offer the most options to develop the talent needed for Florida's manufacturing workforce. America's skilled workers are aging out and retiring. We must preserve their expertise through apprenticeship before they leave the workforce. Apprenticeship also aligns with many national efforts that are now receiving bipartisan support and grant dollars to expand the country's skilled workforce.

On-line Skills Training

In addition to the contributions already detailed in the proposal, it is important to point out that both TU-SME's educational materials and FLATE's Engineering Technology Degree (used extensively throughout the Florida Community Colleges) are based on the National Association of Manufacturers Skills Certification System. This assures that the curriculum used in this project is aligned with industry need and leads to industry recognized credentials. Adding registered apprenticeship provides an additional career pathway, as well as a nationally recognized credential. To support registered apprenticeship, TU-SME has detailed training outlines, an on-line learning management system (LMS), training for journey-level instructors, pre-and post-assessment devices, and pre-apprenticeship models to assure that Florida's manufacturers will have the resources they need to succeed.

Transition the Management and Operation of FLATE to *FloridaMakes*

The NSF ATEs and the MEP System are federally backed programs that have contributed significantly to the health of the manufacturing sector. Bringing these two entities together to create a sustainable system wide resource for the State of Florida is a unique and game changing idea. More than just a one-off temporary solution, this partnership is a long term coordinated approach to connect Florida's educational resources to the manufacturing community in an integrated manner. FLATE, for well over a decade, has been a leader not only in Florida but nationally in providing cutting edge practices to educational institutions and industry. To enable it to continue its mission and work with the statewide MEP truly sets a standard for others to follow.

We believe Florida has an opportunity to take leadership position in positioning multiple partners to work together to strengthen the education and workforce system. We are proud to play a small part in that effort. We urge you to support this proposal and are willing to assist the you and the partners in that endeavor. If you would like further information or have questions, I may be reached at chad.schron@toolingu.com or 866.706.8665. Toolingu's website is <http://www.toolingu.com>

Sincerely,

A handwritten signature in blue ink, appearing to read "Chad Schron".

Chad Schron
Senior Director, ToolingU-SME

November 3, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803



The Gadsden County Development Council (GCDC) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to GCDC and will allow the expansion of FloridaMakes services into the Opportunity Florida Rural Area of Opportunity region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes' client firms realize accelerated growth in value, job creation and talent development, and greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

Gadsden County partnered with FloridaMakes and CareerSource Florida in a recent evaluation of the talent needs of manufacturers in Northwest Florida. Participating firms produce food, electronic components and advanced materials. This research is an input to the ongoing Sector Strategies implementation occurring across Florida.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerates technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from the GCDC expresses our enthusiastic support for FloridaMakes application to the Job Growth Grant Fund. We believe their initiative will benefit Florida's manufacturing ecosystem by creating job opportunities and economic value for the state of Florida.

Sincerely,

A handwritten signature in black ink that reads "Beth Kirkland".

Beth Kirkland, CEcD



October 24, 2017

Mr. Kevin Carr, CEO
FloridaMakes
800 N. Magnolia Ave. Suite 1850
Orlando, Florida 32803

Dear Mr. Carr:

I am writing this letter in support of the Florida Jobs Growth Grant program that FloridaMakes is requesting to provide additional business advisors throughout the State. I believe this initiative will address the current and future business needs of local manufacturers by providing them with full-time, dedicated technical and business assistance. FloridaMakes and the Polk Manufacturing Association will support the advancement of Central Florida by helping companies identify their strengths and opportunities to refine operations. With the focus on consulting, international market development, process improvement, and supply chain optimization, this effort has the potential to positively impact virtually all target industries of Polk County and Central Florida region, including manufacturing, logistics and Agritechnology.

The mission of the Central Florida Development Council is to grow Polk County, Florida's economy based on high-skill, higher-wage sustainable businesses. The CFDC is a private, not-for-profit organization responsible for recruiting new businesses to Polk County and helping existing businesses expand. We focus on domestic and international business recruitment and expansion, business advocacy and global trade development in Central Florida's Polk County.

We are confident that the initiative to provide full-time, dedicated business advisors throughout Polk County and Florida will result in an increase of high growth companies that create jobs and build more economic value. We fully support this effort and look forward to working collaboratively with Polk Manufacturing Association representatives in supporting growth for our local businesses.

Sincerely,

Sean Malott
President/CEO
Central Florida Development Council, Inc.

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October 19, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Economic Development Council of St. Lucie County, Inc., (EDC) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since it's establishment, FloridaMakes has succeeded at accelerated at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the EDC and will allow the expansion of FloridaMakes services into the Treasure Coast region.

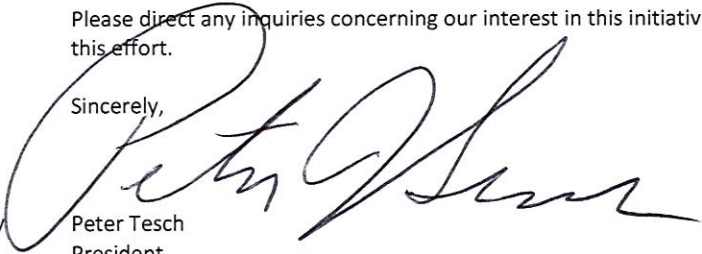
We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerates technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from the EDC expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to [name] as our representative to this effort.

Sincerely,


Peter Tesch
President



110 East Broward Blvd.
Suite 1990
Fort Lauderdale, FL 33301

954.524.3113 | local
954.524.3167 | fax
800.741.1420 | toll free

October 23, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Greater Fort Lauderdale Alliance is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at accelerated at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the Greater Fort Lauderdale Alliance and will allow the expansion of FloridaMakes services into the South Florida region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

As the primary economic development organization for Greater Fort Lauderdale/Broward County, the Greater Fort Lauderdale Alliance focuses on creating, attracting, expanding and retaining high-wage jobs and capital investment in high value targeted industries, such as the manufacturing sector, developing more vibrant communities, and improving the quality of life for our area's citizens.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerates technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development.

FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from the Greater Fort Lauderdale Alliance expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to Jack Bennings, Director Workforce Services/Board member, South Florida Manufacturers Association as our representative to this effort.

Sincerely,

A handwritten signature in blue ink, appearing to read 'David Coddington', written in a cursive style.

David Coddington
Vice President Business Development



October 30, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue
Suite 1850
Orlando, FL 32803

Dear Kevin:

The Economic Development Commission of Florida's Space Coast (EDC) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. The mission of the proposed endeavor is of direct interest to the EDC and will allow the expansion of FloridaMakes services into the Brevard County region.

Since its establishment, FloridaMakes has contributed to accelerating business expansion and retention of manufacturing firms throughout Florida. FloridaMakes takes an integrated approach to talent development, technology adoption and business growth.

Florida's manufacturing employment and the number of manufacturing establishments has grown steadily over the last few years. However, increases in productivity and labor skills in Florida lag behind. Expansion of the FloridaMakes effort to support manufacturers through the proposed coordinated and innovation workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem.

The EDC serves Brevard County Florida and is instrumental in assisting companies wishing to relocate to Brevard County, as well as those companies looking to expand their operations in Brevard County. The EDC also has several programs that support local businesses with a focus on manufacturing companies. Assisting manufacturers in addressing the manufacturing skills gap is a priority of the EDC and our organization looks forward to further engagement with partners such as FloridaMakes in this effort.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

Kevin Carr
Page 2
October 30, 2017

This letter of support from the EDC expresses our support for FloridaMakes taking a leading role in workforce development in the State of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to Elizabeth Huy as our representative to this effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Weatherman', with a long, sweeping horizontal line extending to the right.

Lynda Weatherman
President & CEO

Chairman's Council

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Palm Beach County's
Economic Development Resource

October 23, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

Business Development Board (BDB) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since it's establishment, FloridaMakes has succeeded in accelerating and measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to BDB and will allow the expansion of FloridaMakes services into the Southeast Florida region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

The mission of the BDB is to stimulate economic energy, promote business diversity and enrich the vitality of Palm Beach County through the relocation, retention and expansion of companies to our area.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerates technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from BDB expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate

October 23, 2017

Page 2

Mr. Kevin Carr

workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to Mr. Brian Cartland, Vice President, Business Recruitment at the address and telephone number on page 1.

Sincerely,

A handwritten signature in blue ink that reads "Gary Hines". The signature is written in a cursive style with a long horizontal stroke at the end.

Gary Hines
Senior Vice President, Administration

Cc. Brian Cartland



October 31, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

JAXUSA Partnership fully endorses your application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. JAXUSA is a seven county Regional Economic Development organization representing Baker, Clay, Duval, Flagler, Nassau, Putnam, and St Johns counties with a labor force of 800,000. We are currently managing over 25 active Manufacturing projects that are considering the Northeast Florida region and a trained labor force is a mandatory requirement for any of them choosing our region.

JAXUSA firmly believes that as technology continues to dominate the growth in manufacturing that the needs of a highly trained and adaptable workforce will outpace our ability to supply the demand. It will be critical that efforts such as Florida Makes be the conduit between the workers and the industries. We are currently seeing some significant re-shoring of US manufacturers and also an intense effort from International manufacturing companies considering the United States.

We are standing by to assist in any way possible once you receive the grant and look forward to introducing you to existing and perspective manufacturing clients in northeast Florida.

Sincerely,

A handwritten signature in black ink, appearing to read "A. Bowman", with a long horizontal line extending to the right.

Aaron Bowman
SVP, JAXUSA Partnership



Kevin Carr
President & CEO - FloridaMakes

Dear Mr. Carr,

Lake County's Agency for Economic Prosperity is pleased to support FloridaMakes's application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. The mission of the proposed endeavor is of direct interest to Lake County and will allow the expansion of FloridaMakes services into the Central Florida region and will specifically help the recently formed Lake County Chapter of MACF and more importantly, our local manufacturers.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. Lake County has always had a strong manufacturing heritage, and manufacturing will continue to play a vital role in Lake County's economic development strategy. We are aware that increases in productivity and labor skills in Florida still need improvement. We believe that FloridaMakes can play a key role in accelerating growth, increasing job creation and talent development, and facilitating the adoption and use of advanced technology in manufacturing firms. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will be a strong move towards ensuring the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

This letter of support from Lake County's Agency for Economic Prosperity expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development. Doing so will accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, creating job opportunities and economic value for the state of Florida.

Sincerely,

Robert L. Chandler IV, CEcD
Executive Director - Agency for Economic Prosperity

AGENCY FOR ECONOMIC PROSPERITY
P.O. BOX 7800 • 315 W. MAIN ST., TAVARES, FL 32778 • P 352.742.3918 • F 352.742.3906
Board of County Commissioners • www.lakecountyfl.gov



November 3, 2017

Nicole Gislason
UWF FloridaMakes Principal
212 Church Street
Pensacola, FL 32502

Dear Nicole,

The Economic Development Council of Okaloosa County (EDC) is pleased to support FloridaMakes' application for the Florida Job Growth Grant Fund Workforce Training Grant. FloridaMakes' proposal complements the UWF submission, titled: "Generating Manufacturing Talent" submitted by UWF on behalf of the manufacturing businesses in our region. The EDC is a public-private partnership serving Okaloosa County and its nine municipalities. As the community's lead economic development organization, the EDC is committed to fostering economic diversification through comprehensive strategies and initiatives that include talent supply and workforce development. The EDC has been working with education partners to build the talent pipeline for manufacturing. Investments in upskilling the manufacturing workforce will significantly impact training in our region. It will also stimulate our manufacturers' ability to expand employment to a level that will increase output to meet growing demands for products produced in Florida, thereby having a substantial positive impact on our regional economy.

Our key partner in the manufacturing talent pipeline, UWF along with FloridaMakes, has succeeded at measurably expanding the capacity of manufacturing firms throughout Northwest Florida. We are aware that Florida's manufacturing employment and the number of firms has grown steadily over the last few years and has outpaced the rest of the nation in manufacturing job creation. We are also in agreement that increases in productivity and labor skills in Florida lag behind. We believe that UWF and FloridaMakes play a key role in accelerating business value by advancing job skills and encouraging greater adoption and use of advanced technology. Expansion of the FloridaMakes through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem.

This letter of support expresses my enthusiastic support for FloridaMakes application. Together, we support Florida's manufacturing ecosystem by improving the skilled talent in the state. Like the EDC, FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector.

Please contact me if I can be of further assistance.

Sincerely,

Nathan Sparks, CECD
Executive Director



Economic Development Council, Inc.

OFFICERS

November 2, 2017

PAUL MCGEHEE
President
Glades Electric Co-op

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

JOHN AHERN
Vice President
Glades County Commission

Dear Kevin,

ANDREW COUSE
Treasurer
First Bank of Clewiston

The Glades County Economic Development Council is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, Florida Makes has succeeded at measurably effecting the expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the Glades County Economic Development Council and will allow the expansion of FloridaMakes services into the South Central Rural Area of Opportunity region and the other two RAOs around the state.

DIRECTORS

TOMMY PERRY
Johnson-Prewitt
Associates, Inc.

SHANNON HALL
Glades Electric Co-op.

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FL Community
Health Centers

MIKE PRESSLEY
Glades County Schools

PAUL CARLISLE
Glades County Manager

JACOB EIGNER
Moore Haven City Council

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

The mission of the Glades County Economic Development Council is to create jobs for Glades County residents, their children and grandchildren. We believe that the best way to accomplish this is to continue to diversify our primarily agricultural economy into manufacturing and distribution. Because agriculture has a long history of processing crops like sugar cane and oranges into foodstuffs, our workforce has the necessary transferable skills to transition to advanced manufacturing, not only in food processing but a variety of industries where skills like welding, machining and mechanics are necessary.

Today's agricultural companies use robotics, programmable logic controls and other state of the art technologies. But like other manufacturers, these companies are seeing the continued "graying" of their workforce and will need continuing training programs to ensure that the pipeline of talent continues to grow. For that reason, the Glades County Economic Development Council partnered with businesses throughout the Florida Heartland to develop the Glades County Regional Training Center.



Economic Development Council, Inc.

OFFICERS

PAUL MCGEHEE
President
Glades Electric Co-op

JOHN AHERN
Vice President
Glades County Commission

ANDREW COUSE
Treasurer
First Bank of Clewiston

DIRECTORS

TOMMY PERRY
Johnson-Prewitt
Associates, Inc.

SHANNON HALL
Glades Electric Co-op.

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Gatorama

JOSEPH T. CHARLES
River Forest Yachting Center

TERESA BISHOP
Waste Management

JOE COLLINS
Lykes Bros. Inc.

KEVIN HATFIELD
Gilbert Chevrolet

TRACI THOMAS
FL Community
Health Centers

MIKE PRESSLEY
Glades County Schools

PAUL CARLISLE
Glades County Manager

JACOB EIGHNER
Moore Haven City Council

Rural Florida is the key to continued manufacturing growth in Florida, as our plentiful, affordable land, combined with lower overall operating costs when compared to urban Florida and the work ethic inherited by young people whose families have earned a good living in manufacturing are critical if Florida is to grow its manufacturing base and so its exports to other states and other countries.

As a successor to the Florida Advanced Technology Education Center when its base funding ends in December 2018, Florida Makes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth.

We look forward to partnering with Florida Makes as they take a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to myself at the address and phone number below.

Sincerely,

Tracy Whirls
Executive Director

October 26, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Orlando Economic Partnership is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the Orlando Economic Partnership and will allow the expansion of FloridaMakes services in the Orlando region.

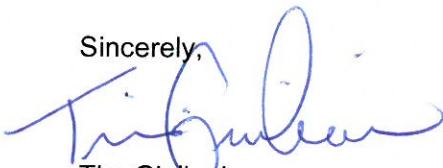


We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also acutely aware that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth, increasing job creation and talent development, and facilitating the adoption and use of advanced technology in manufacturing firms. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

The Orlando Economic Partnership works to provide the Orlando region with quality jobs, economic growth, broad-based prosperity and a sustainable quality of life. It is a not-for-profit, public/private partnership representing Central Florida's seven counties – Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia – as well as the City of Orlando. The region employs more than 92,000 people in the manufacturing sector. There are numerous diverse manufacturing companies including, Mitsubishi Hitachi Power Systems Americas, Lockheed Martin, Northrop Grumman, Bridg and many more that contribute significantly to the health and welfare of our regional economy.

This letter of support from the Orlando Economic Partnership expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, creating job opportunities and economic value for the state of Florida.

Sincerely,



Tim Giuliani
President & CEO

Wednesday 25 October 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The University of West Florida (UWF) Office of Career and Professional Education is pleased to support FloridaMakes' application for the *Florida Job Growth Grant Fund Workforce Training Grant*. FloridaMakes' proposal complements the UWF submission, titled: "*Generating Manufacturing Talent*" submitted by our university on behalf of the Northwest Florida Manufacturers Council. UWF is one of 12 public universities in the state of Florida. Innovative content, thoughtful faculty, industry-qualified SMEs, combined with state-of-the-art facilities result in excellent value for all customers we serve. UWF has been working with education partners to build the talent pipeline for manufacturing. Investments in upskilling the manufacturing workforce will significantly impact training in our region. It will also stimulate our manufacturers' ability to expand employment to a level that will increase output to meet growing demands for products produced in Florida, thereby having a substantial positive impact on our regional economy.

Our key partner in the manufacturing talent pipeline, FloridaMakes, has succeeded at measurably expanding the capacity of manufacturing firms throughout Florida. We are aware that Florida's manufacturing employment and the number of firms has grown steadily over the last few years and has outpaced the rest of the nation in manufacturing job creation. We are also in agreement that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating business value by advancing job skills and encouraging greater adoption and use of advanced technology. Expansion of the FloridaMakes through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem.

This letter of support expresses my enthusiastic support for FloridaMakes application. Together, we support Florida's manufacturing ecosystem by improving the skilled talent in the state. Like UWF, FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector.

Please contact me if I can be of further assistance 850-637-3831.

Warm regards,



Nicole Gislason
Director, UWF Office of Career and Professional Education



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Orange County Government

Kevin Carr
 President & CEO
 FloridaMakes
 800 North Magnolia Avenue, Suite 1850
 Orlando, FL 32803

Dear Kevin,

The Manufacturers Association of Central Florida (MACF) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at accelerated at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the Manufacturers Association of Central Florida and will allow the expansion of FloridaMakes services into the Orange, Seminole, Lake & Osceola region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement increases in productivity and labor skills in Florida lag. We believe that FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

For more than twenty-six years The Manufacturers Association of Central Florida (MACF) has worked as a not-for-profit organization to elevate the image of local manufacturing by putting on plant tours/shop talks, workforce development, educational trainings, and workshops, grant opportunities, assist with supply chain and work with local/state legislators on issues facing our Central Florida manufacturers. Through its ties to local educational institutions, MACF also encourages students educated in the area to remain in our community and join with local manufacturers to strengthen and enhance our economy.

The Manufacturers Association of Central Florida (MACF's) goal is to build a sustainable strategic model to provide training, jobs, careers, and pathways for developing skilled/talented people for our manufacturing partners.

The Central Florida region include several diverse manufacturers including; Lockheed Martin, Correct Craft, Northrop Grumman, Regal Boats, Mitsubishi Hitachi Power Systems Americas, Inc., and many more midsize manufacturing firms.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerates technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Collaborating these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from the Manufacturers Association of Central Florida (MACF) expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to FloridaMakes as our representative to this effort.

Best regards.

Sherry L. Reeves
 Executive Director
 October 25, 2017



THE #1 RESOURCE FOR SOUTH FLORIDA MANUFACTURERS

October 23, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The SFMA is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to the SFMA and will allow the expansion of FloridaMakes services into the South Florida region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also acutely aware that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth, increasing job creation and talent development, and facilitating the adoption and use of advanced technology in manufacturing firms. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

The SFMA has held the distinction of being the #1 resource for manufacturers in South Florida since 1961 saving its members time and money through advocacy, networking and resources. SFMA prides itself on being member driven – creating new products and services as members' needs change. The mission of the SFMA has remained constant though out its history: **To Serve Manufacturers.**

The SFMA advocates for manufacturers across the South Florida Region covering 8 counties that include: Indian River, Okeechobee, Martin, St. Lucie, Palm Beach, Broward, Miami-Dade, and Monroe. This territory serves 5,000 manufacturers with the majority of companies employing 50 employees or less. There are a number of diverse manufacturing subsectors including aviation, medical device, pharmaceutical, design and packaging, and military defense - to name a few - that contribute significantly to the health and welfare of our regional economy.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and contributions to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.



THE #1 RESOURCE FOR SOUTH FLORIDA MANUFACTURERS

This letter of support from the SFMA expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative personally to me as our representative to this effort.

Sincerely,

A handwritten signature in blue ink, appearing to read "M. Rocco", is placed below the word "Sincerely,".

Matthew Rocco
President, South Florida Manufacturers Association
1000 W. McNab Road
Pompano Beach, FL 33069
mrocco@sfma.org
954-682-7355



11/1/2017

President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Sarasota Manatee Area Manufacturers Association (SAMA) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. FloridaMakes has had a measurable effect on the business expansion and retention of manufacturing firms throughout Florida.

As a regional manufacturers association, SAMA appreciates their integrated approach. The mission of the proposed endeavor is of direct interest to the Sarasota Manatee Area Manufacturers Association. We believe this Workforce Training Grant will allow the expansion of FloridaMakes services into our region which consists of Sarasota and Manatee counties.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also acutely aware that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth, increasing job creation and talent development, and facilitating the adoption and use of advanced technology in manufacturing firms. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. Florida Makes is a natural ally and supporting partner for all regional manufacturing associations like our own.

As the "voice of manufacturing" in our region since 1971, SAMA is committed to creating an environment in which manufacturing can thrive. One key component to the success of our mission is a continued effort in developing a highly skilled workforce for our immediate and future needs. SAMA represents the interests of 600 manufacturers and manufacturing related businesses in our region who employ over 10,000 citizens.

We strongly urge that Florida Job Growth Grant Fund Workforce Training Funds be awarded as applied for by FloridaMakes.

Sincerely,

Peter D. Straw
Executive Director
Sarasota Manatee Area Manufacturers Association
Serving industry & community since 1971



MANUFACTURING & SUPPLY CHAIN
ALLIANCE
OF
MID-FLORIDA

4798 South Florida Ave #200
Lakeland, FL 33813
Phone: 863-614-1077

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Manufacturing Supply Chain Alliance (MSCA) is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to MSCA and will allow the expansion of FloridaMakes services into the mid-Florida/Polk County region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also acutely aware that increases in productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth, increasing job creation and talent development, and facilitating the adoption and use of advanced technology in manufacturing firms. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

MSCA serves our members by providing a platform to promote and support the growth of manufacturers and their suppliers in Polk, Highlands, Hardee, and Eastern Hillsborough Counties, and the State of Florida. Our objectives are to:

- Cultivate and maintain strong working relationships with local and state economic development agencies to support and promote the growth of manufacturing and supply chain logistics companies.
- Create a unified voice to influence legislative matters that affect the economic welfare and growth of manufacturers and their supply chain partners.
- Provide forums to facilitate the professional development of members and to exchange best practices regarding human resource administration, safety, quality, productivity, and sustainability.
- Partner with workforce education and training organizations to define, develop, and obtain funding for education and training programs that are relevant to the needs of manufacturers and their suppliers.

The MSCA region has a diverse manufacturing and supply chain sector. Manufacturers in this region such as Mosaic, Publix, Coca-Cola, and Pepperidge Farms contribute significantly to the health and welfare of the region's economy.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and contributions to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from MSCA expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to Larry Bull as our representative to this effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'Larry Bull', written in a cursive style.

Larry Bull
President, MSCA Board
President / CEO Createch Machine and Design
October 24, 2017



October 13, 2017

Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

The Mid-FL Regional Manufacturers Association, MRMA, is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably affecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to MRMA and will allow the expansion of FloridaMakes services into the Levy, Marion, Citrus, Sumter, Alachua, and northern Lake Counties of Florida.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement that productivity and labor skills in Florida lag behind. We believe that FloridaMakes plays a key role in accelerating growth and value to client firms, increases job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

MRMA is the advocate for manufacturing and logistics companies in six counties in Central Florida which are experiencing a serious shortage of trained and trainable applicants for a growing number of positions in our industries. We are deeply involved in the schools in one of the counties that we serve and are making significant improvements to the future pipeline of employees. Assistance is needed however to duplicate these successes in the other counties that we serve. This employee shortage can also be addressed in some cases, with more automation and technology. Having FloridaMakes Business Advisors available to help companies, particularly small manufacturers, implement these tools would sustain these companies as well as to allow them to grow. Our area is largely rural. Manufacturing and Logistics companies are in some cases the only businesses that are paying a living wage in these rural areas. This makes the success and growth of these companies extremely important to the local and state economies.

FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from the Mid-FL Regional Manufacturers Association expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the state of Florida to accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem creating job opportunities and economic value for the state of Florida.

Please direct any inquiries concerning our interest in this initiative to myself through the contact information given on our letterhead.

Sincerely,

A handwritten signature in cursive script that reads "Rob Adamiak".

Rob Adamiak
Executive Director and CEO
Mid-FL Regional Manufacturers Association



Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Kevin,

First Coast Manufacturers Association is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has been a tremendous resource for manufacturers across the State with measurably programs effecting business expansion and retention of manufacturing firms. Their programs are effective using an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is a part of the First Coast Manufacturers Association (FCMA) fundamental goals, which will support the expansion of FloridaMakes services into the Northeast Florida region.

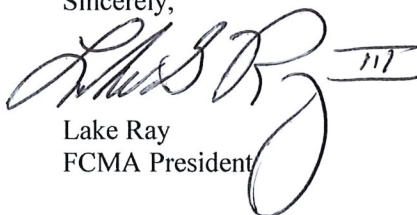
We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily in recent years, outpacing the rest of the nation in manufacturing job creation. We also concur that increases in productivity and labor skills in Florida are behind the industry's needs. FloridaMakes plays a key role in accelerating growth in value client firms realize, increases in job creation and talent development of these firms, and advances greater adoption and use of advanced technology. Expanding FloridaMakes efforts through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem for long-term value to the state's economy.

FCMA's vision is to "Strengthen and grow Manufacturing in Northeast Florida". One of our key missions for the Association is to "Create pathways for skilled workforce". FCMA serves six counties in the region with a wide range of manufactured products, including medical, eye care, beverage and food production, steel products, construction products, gypsum board, machine products, battery and energy related products and other technical goods. Our members and those in manufacturing in Northeast Florida contribute about 15% of the regions GDP and represent about 35,000 workers.

We recognize that FloridaMakes is committed to strengthening the future of manufacturing in Florida through improving productivity and technological performance. FloridaMakes maintains and supports a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. FLATE is known throughout the country for its expertise and the contributions it has made to manufacturing education. Partnering these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states.

Please accept the letter of support to express our support for FloridaMakes in taking a leading role in workforce development in the state.

Sincerely,



Lake Ray
FCMA President



Mr. Kevin Carr
President & CEO
FloridaMakes
800 North Magnolia Avenue, Suite 1850
Orlando, FL 32803

Dear Mr. Carr:

The Gainesville Area Chamber of Commerce is pleased to support FloridaMakes application for the Florida Job Growth Grant Fund Workforce Training Grant Proposal. Since its establishment, FloridaMakes has succeeded at measurably effecting the business expansion and retention of manufacturing firms throughout Florida through an integrated approach of talent development, technology adoption, and business growth. The mission of the proposed endeavor is of direct interest to The Gainesville Area Chamber and will allow the expansion of FloridaMakes services into the greater Gainesville region.

We are aware that Florida's manufacturing employment and the number of manufacturing firms has grown steadily over the last few years and has largely outpaced the rest of the nation in manufacturing job creation. However, we are also in agreement that increases in productivity and labor skills in Florida lag behind other states. We believe that FloridaMakes plays a key role in accelerating growth which results in increases in job creation and talent development, and advances greater adoption and use of advanced technology. Expansion of the FloridaMakes effort through the proposed coordinated and innovative workforce initiative will ensure the sustainability and health of Florida's manufacturing ecosystem and provide long-term value to the state's economy.

The Gainesville Area Chamber has a vision for our region to be a global hub of talent, innovation and opportunity. Our mission is to facilitate economic opportunity, business success and community progress. Our five-year economic development strategy lists five target sectors which are key to our metrics for job creation and increased capital investment. We place great emphasis on advanced manufacturing in regard to this strategy and are working diligently with our companies through both a manufacturing council as well as individual opportunities to further the growth and success of our regional manufacturers. We are also working diligently to recruit new manufacturers to the region. This opportunity through FloridaMakes would provide great value to these efforts.

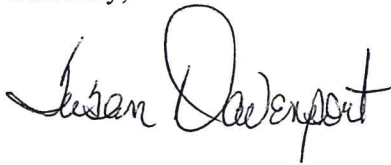
FloridaMakes is committed to shaping the future of manufacturing in Florida by improving the productivity and technological performance of the state's manufacturing sector through resources that accelerate technology adoption, talent development and business growth. They maintain and support a well-developed statewide network uniquely positioned to promote and support manufacturing workforce development. The Florida Advanced Technology Education Center (FLATE) is known

throughout the country for its expertise and the contributions it has made to manufacturing education in Florida and beyond. Partnering with these two organizations to leverage the strength of the Florida College System is an innovative workforce development approach that will be a model for other states to follow.

This letter of support from The Gainesville Area Chamber of Commerce expresses our enthusiastic support for FloridaMakes taking a leading role in workforce development in the State of Florida. We believe this initiative will accelerate workforce initiatives in the manufacturing sector that will benefit Florida's manufacturing ecosystem, thus creating job opportunities and economic value for the State of Florida.

Please direct any inquiries concerning our interest in this initiative to myself as our representative to this effort.

Sincerely,

A handwritten signature in black ink that reads "Susan Davenport". The signature is written in a cursive style with a large, looped initial "S".

Susan Davenport
President/CEO
The Gainesville Area Chamber of Commerce
300 E. University, Suite #100
Gainesville, FL 32605
352-378-7300
susan@gainesvillechamber.com

APPENDIX B

Tooling U SME Catalog



CLASS CATALOG

ONLINE CLASSES | INSTRUCTOR-LED TRAINING
LEARNING SERVICES | CERTIFICATIONS

FloridaMakes

Florida Job Growth Grant Fund Application 11.06.2017



WHY DO MORE THAN 50% OF FORTUNE 500® MANUFACTURING COMPANIES CHOOSE TOOLING U-SME?

Here's why: We provide competency-based learning solutions focused on your performance outcomes. This catalog provides you with a detailed list of all our course offerings – online, instructor-led training, certification programs, books, and videos. But we do so much more. We'll analyze your needs, assess your current knowledge, and develop a program that fills the gaps. Then, we'll help you launch, track, and measure the results.

We are your training partner. With credentials.

Over the last 80 years, we've worked with hundreds of thousands of individuals, over 5,000 companies, and over 550 educational institutions. Our courses are aligned to national credentials including Lean Certification, Certified Manufacturing Engineer, and Certified Manufacturing Technologist, National Institute for Metalworking Skills (NIMS), Manufacturing Skills Standards Council (MSSC), American Welding Society (AWS), and Siemens Mechatronics certifications. Our courses can also be mapped to individual or state curriculum requirements.

TOOLING U-SME'S CUSTOMIZED TRAINING MAKES IT POSSIBLE TO:

- ◆ Develop mission critical skills
- ◆ Minimize the skills gap
- ◆ Expedite onboarding and define skills development
- ◆ Capture and standardize “tribal knowledge”
- ◆ Ensure operational excellence/world class manufacturing
- ◆ Boost operational effectiveness and productivity
- ◆ Drive continuous improvement
- ◆ Improve quality and reduce scrap
- ◆ Leverage new technologies and drive innovation
- ◆ Cross train and increase workforce flexibility
- ◆ Reduce learning curve for new technologies
- ◆ Reduce risk and exposure
- ◆ Improve safety
- ◆ Drive compliance

How can we help you? Find out how we can partner with you to develop a competency-based solution to fit your training needs and your budget. Contact us at info@toolingu.com or 866.706.8665.

COMPETENCIES

NINE OUT OF TEN MANUFACTURERS ARE STRUGGLING TO FIND THE SKILLED WORKERS THEY NEED

To address this pressing challenge, Tooling U-SME brought together a cross-section of manufacturing experts to create a new industry resource: a Competency Framework for achieving manufacturing excellence.

The Competency Framework features a comprehensive series of competency models in nine manufacturing functional areas. It is made up of more than 60 job role competency models, which outline knowledge and skill objectives for production, technician, lead technician/technologist, and engineer-level job roles.

The Competency Framework offers advantages that tie directly to business goals. For example, our Competency Framework:

- ◆ Ensures enterprise-wide consistency, making a workforce more flexible and dynamic, and ultimately reducing labor costs.
- ◆ Streamlines the training process and cuts costs by eliminating unnecessary and redundant training, allowing more training where needed.
- ◆ Helps managers easily evaluate worker performance levels defined using specific behavioral indicators, which reduces subjective assessment and increases assessment accuracy.
- ◆ Enhances employee satisfaction based on the rationality of the system.
- ◆ Explains career pathways and defines what an average performer needs to become a superior performer.

Designed to complement other competency models in the industry, the Competency Framework can be used “as is” or customized to individual work practices at your facility. Another benefit is that the knowledge objectives within the framework are mapped directly to Tooling U-SME’s extensive training resources. All this helps ensure your employees have the knowledge, skills, and abilities they need to be high performers.



Created by a cross-section of manufacturing experts, Tooling U-SME’s Competency Framework is a comprehensive series of competency models in nine manufacturing functional areas.

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■ CLASS 2.0

■ AVAILABLE IN SIMPLIFIED CHINESE

■ INSTRUCTOR-LED TRAINING

All classes available in Spanish except CLASS 2.0 courses

All classes ONLINE except where noted

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Sample of Knowledge Edge® content

- What Lean Means (video)
- Kaizen Event Fieldbook (eBook)
- Mapping Your Value Stream (video)
- Strategic Project Management (eBook)
- Managing Teams in Manufacturing (video)

Assessments

- Manufacturing Survey

■ CLASS 2.0

■ AVAILABLE IN SIMPLIFIED CHINESE

■ INSTRUCTOR-LED TRAINING

All classes available in Spanish except CLASS 2.0 courses

All classes ONLINE except where noted

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Sample of Knowledge Edge® content

High-Speed Machining (eBook)
Cutting Tool Geometries (video)
Milling and Machining Centers (video)
Parametric Programming for Computer Numerical
Control Machine Tools and Touch Probes (eBook)
Precision Machine Design (eBook)

Assessments

CNC Operator: Lathe
CNC Operator: Mill
CNC Programmer
Machinist/Machine Setter
Machinist: Tool Room
Production Grinder

 AVAILABLE IN SIMPLIFIED CHINESE

 INSTRUCTOR-LED TRAINING

All classes available in Spanish except CLASS 2.0 courses

All classes ONLINE except where noted

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Sample of Knowledge Edge® content

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TPM: Total Productive Maintenance
Industrial Robotics (video)
Autonomous Activities (video)
Die Maintenance Handbook (eBook)

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Sample of Knowledge Edge® content

- Chapter 13: Welding Process (eChapter)
- Advanced Robotic Welding
- Chapter 26: Welding/Joining (eChapter)
- Chapter 10: Estimating Welding Costs (eChapter)
- Welding Introduction

Assessments

- Arc Welder

AVAILABLE IN SIMPLIFIED CHINESE

All classes available in Spanish except CLASS 2.0 courses
All classes ONLINE except where noted



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Sample of Knowledge Edge® content

Advanced Additive Manufacturing Materials (tech paper)
Metal Powders for Additive Manufacturing
Rapid Prototyping (video)
Medical Applications of Rapid Prototyping (video)
Advances and New Technologies in Additive
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Sample of Knowledge Edge® content

Press Brake Technology (eBook)
Punch Presses (video)
Quick Die Change (eBook)
Laser Cutting Guide for Manufacturing (eBook)
New Technologies in Forming and Fabricating
(tech paper)

Assessments

Press Brake Operator
Press Operator

■ INSTRUCTOR-LED TRAINING

All classes available in Spanish except CLASS 2.0 courses
All classes ONLINE except where noted

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Sample of Knowledge Edge® content

Introduction to Composites Technology (eBook)
Automated Composite Layup and Spray Up (video)
Filament Winding (video)
Successful Composites Technology Transfer: Applying
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Composites Post Fabrication and Joining (video)

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Sample of Knowledge Edge® content

Successful Assembly Automation (eBook)
Plastics Machining and Assembly (video)
Fastening and Assembly (video)
Brazing and Soldering (video)
Design for Manufacture and Assembly
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Assessments

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Assembler: Electrical

DESIGN & ENGINEERING

Design & Engineering

Concurrent Engineering ▾
Design for Manufacturability and Assembly (DFM/DFA) ▾
GD&T for DFM ▾
Measurement Inspection and Gaging Level 1 ▾
Measurement Inspection and Gaging Level 2 ▾
Precision Machine Design ▾
Practical Applications of Machine Tool Metrology ▾
Lean Product Development ▾
Tolerance Stack-Up Analysis ▾

Sample of Knowledge Edge® content

Lean Product Development (video)
Measurement and Gaging (video)
Gaging and Inspection Tool Design (video)
Design for Manufacture and Assembly (DFMA) (video)
DFM: Design for Manufacturing (video)

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Industrial Engineering Fundamentals ▾
Manufacturing Technology Fundamentals ▾
Strategic Project Management ▾
Project Risk Management ▾
Rapid and Accurate Cost Estimating and Quoting ▾
Walking the Talk Certificate Series ▾

Sample of Knowledge Edge® content

Strategic Project Management (eBook)
Realistic Cost Estimating for Manufacturing, Third Edition (eBook)
Walking the Talk: Moving into Leadership (eBook)
Managing Teams in Manufacturing (eBook)
From Concept to Customer: Portfolio, Pipeline, and Strategic Project Management (eBook)

Assessments

Industrial Sales
Quality/Lean Manager

▾ INSTRUCTOR-LED TRAINING

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All classes ONLINE except where noted

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Establish requirements necessary to assure work is performed accurately and safely.

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Seasoned experts are ready to take on the most challenging issues and/or single projects.



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FORWARD-THINKING ORGANIZATIONS INVEST IN CUSTOM PROGRAMS

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- ◆ Establish performance goals
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- ◆ Align learning plans
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- ◆ Connections with community colleges for training partnerships

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UPLOAD SERVICES FOR PRE-DEVELOPED CONTENT

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REVIEW PROGRAMS

Our online review programs provide a comprehensive review of key concepts for the Certified Manufacturing Technologist (CMfgT) and the Lean Bronze Certifications. Each one provides vocabulary and definitions, interactive exercises, pre- and post-course tests, and a downloadable PDF of each course.

CERTIFICATIONS

Lean Certification

This industry-leading program provides individuals, companies, and educators with a comprehensive and effective roadmap for professional and workforce development that aligns with industry-recognized standards. The program is the result of a partnership among four leading non-profit organizations — the American Society for Quality (ASQ), the Association for Manufacturing Excellence (AME), the Shingo Institute, and SME — that work together as the Lean Certification Alliance to set the standard for operational excellence and workforce improvement. Lean Certification not only helps individuals attain the knowledge, it validates it. Find out more at sme.org/leancert.

Lean Certification is pursued at the level most appropriate to your participants' career, knowledge, and experience.

- ◆ Lean Bronze Certification focuses on the fundamentals of lean from a tactical perspective.
- ◆ Lean Silver Certification integrates lean knowledge with leadership experience.
- ◆ Lean Gold Certification focuses on the strategic transformation of an entire enterprise.

Certified Manufacturing Technologist (CMfgT)

The CMfgT is an entry-level certification that benefits new manufacturing engineers and experienced manufacturers without other credentials. Pursuing a CMfgT Certification requires a minimum of four years combined manufacturing-related education and/or work experience. Learn more at sme.org/CMfgT.

Certified Manufacturing Engineer (CMfgE)

Professionals seeking a CMfgE Certification have advanced manufacturing engineering experience, with a minimum of eight years of combined manufacturing-related education and/or work experience, including a minimum of four years of work experience. A professional seeking a CMfgT can qualify with a minimum of seven years of combined manufacturing-related work experience or education. Details available at sme.org/CMfgE.

Certified Additive Manufacturing

The Certified Additive Manufacturing Fundamentals is the first and only certification validating an individual's knowledge of industry-standard concepts in additive manufacturing, aligning to the updated Body of Knowledge. The additive manufacturing industry is expected to increase exponentially and the certification prepares individuals for success in this rapidly growing field. Learn more at sme.org/additivemfg.

ASSESSMENTS

CLOSE THE SKILLS GAP TO STAY COMPETITIVE

Effective assessment of knowledge is a critical first step in your overall training plan.

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