

Budget

Tri-Rivers (065268) - Marion County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (168)

U.S.A.S. Fund #:

Plus/Minus Sheet ([opens new window](#))

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	3,316,800.00	28,800.00	11,648,181.00	0.00	14,993,781.00
Support Services		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	3,316,800.00	28,800.00	11,648,181.00	0.00	14,993,781.00
							Adjusted Allocation	0.00
							Remaining	-14,993,781.00

Application

Tri-Rivers (065268) - Marion County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (168)

Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:

RAMTEC Statewide Advanced Manufacturing STEM/CTE Consortium

2. Executive summary: Please limit your responses to no more than three sentences.

The United States and Ohio, in particular, face a skills gap. A 2011 Manpower survey found the number of employers struggling to fill positions is at an all-time survey high. The survey documented that 52 percent of U.S. employers are experiencing difficulty filling mission-critical positions, up from 14 percent in 2010. Skilled trade jobs, which require more than a high school diploma but not a four-year degree, featured prominently among the top ten "hardest to fill" jobs of 2011, with skilled trades topping the list. Taking immediate steps to address the skills gap is an educational and economic necessity for Ohio. Many emerging jobs in critical sectors such as health care, clean energy, and advanced manufacturing will require higher math and analytical skills than the trade jobs of the past. States that adopt policies that expand access to education and training for workers at all levels will be positioned to meet the growing demand for higher skills and credentials. If Ohio wants to be at the forefront of innovation, it must foster a transition from traditional manufacturing as the foundation of their economy to new high-tech advanced manufacturing. These are the forgotten skilled trade careers that are often the overlooked STEM careers. This grant would expand and replicate RAMTEC (Robotics & Advanced Manufacturing Technology Education Collaborative), an existing advanced manufacturing "Best Practice" initiative, across the state in each region with the highest concentration of manufacturing jobs as identified by JobsOhio. A total of nine RAMTEC Centers will be established as a result of the grant that will also serve the 161 school district partners. They will share a unique new Ohio instructional delivery model that involves STEM/CTE industry credentialed skilled training that teams middle school, secondary, adult education, and post-secondary educators in the cooperative conveyance of instruction for grades 6-16 and Industry.

This is an ultra-concise description of the overall project. It should not include anything other than a brief description of the project and the goals it hopes to achieve.

28118 3. Total Students Impacted:

This is the number of students that will be directly impacted by implementation of the project. This does not include students that may be impacted if the project is replicated or scaled up in the future.

4. Please indicate which of the following grade levels will be impacted:

- | | |
|--|--|
| <input type="checkbox"/> Pre-K Special Education | <input type="checkbox"/> Kindergarten |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 5 | <input checked="" type="checkbox"/> 6 |
| <input checked="" type="checkbox"/> 7 | <input checked="" type="checkbox"/> 8 |
| <input checked="" type="checkbox"/> 9 | <input checked="" type="checkbox"/> 10 |
| <input checked="" type="checkbox"/> 11 | <input checked="" type="checkbox"/> 12 |

5. Lead applicant primary contact: - Provide the following information:

First Name, last Name of contact for lead applicant
Charles Speelman

Organizational name of lead applicant
Tri-Rivers Career Center

Address of lead applicant
2222 Marion-Mt. Gilead Road, Marion, Ohio 43302

Phone Number of lead applicant
740-361-2910

Email Address of lead applicant
cspeelman@tririvers.com

6. Are you submitting your application as a consortium? - Select one checkbox below

- Yes
 No

If you are applying as consortium, please list all consortium members by name on the "Consortium Member" page by clicking on the link below. If an educational service center is applying as the lead applicant for a consortium, the first consortium member entered must be a client district of the educational service center.

[Add Consortium Members](#)

7. Are you partnering with anyone to plan, implement, or evaluate your project? - Select one checkbox below

Yes

No

If you are partnering with anyone, please list all partners by name on the "Partnering Member" page by clicking on the link below.

[Add Partnering Members](#)

B) PROJECT DESCRIPTION - Overall description of project and alignment with goals

8. Describe the innovative project: - Provide the following information

The response should provide a clear and concise description of the project and its major components. Later questions will address specific outcomes and the measures of success.

The current state or problem to be solved; and

The problem is Ohio is short 60,000 manufacturing workers for its advanced manufacturing workforce. (www.ohiohired.org). The key to student achievement innovation in this model is a focus on individual competency mastery, rather than typical "seat time". The RAMTEC model delivers high school graduates with industry recognized credentials and certifications in the area of advanced manufacturing, along with dual enrollment opportunities and stackable certificates that lead to post-secondary attainment in order to provide them with the academic rigor necessary to compete and thrive with the demand of these new high skilled jobs. Ongoing industry pre-apprenticeship and job placement opportunities benefit students directly from ongoing mentoring guidance with educational and business team leaders. Through proximity and new learning modalities, students are challenged and prepared academically and are technically knowledgeable in their chosen career field. The instructional delivery model assures an ever-growing student base through the incorporation of middle school units of foundation skills and career exploration instruction to introduce students to the growing manufacturing career pathways at an earlier age and transitions to a competency based model using industry-certified demonstrations of STEM knowledge that can be applied in real-world settings. Our CTE programs will use authentic applications of content and/or work based learning, to help inspire students to future STEM careers. This expanded STEM knowledge and understanding is necessary to make the STEM fields more inclusive to all students. When we begin to purposefully connect the wide range of STEM/CTE career pathways that link industry sectors, these pathways will help create project-based, real-world applications for rigorous and relevant curriculum and instruction that will allow students to thrive within these new and expanded STEM/CTE related careers.

The proposed innovation and how it relates to solving the problem or improving on the current state.

Rubric1: Bold/Innovative Solutions/Rubric 2: describe innovative project and the response to the problem: We will develop a statewide response to credentialed future workers for advanced and specialized manufacturing jobs and provide career pathways for students in grades 6-16 to explore and thrive within their chosen path. This grant will address competency-based training through the following: E learning, hands-on learning, authentic based learning, STEM and blended learning. A partnership between industry, our community college partners, career centers, and home schools will develop career pathways for students. All of this will be driven by industry to provide students with the resources they need to be successful. Ohio's existing infrastructure of its current career centers have succeeded in training Ohio's students competitively in the multiple career fields. The infrastructure and the facilities are solid, but have not been able to adequately keep pace with changing technology and high tech industrial equipment required to train students for high paying, higher skilled jobs in the manufacturing industries. RAMTEC will lead the expansion of 6th, 7th and 8th grade career exploration, 9th and 10th grade PLTW "Project Lead the Way" manufacturing programs through blended E-learning experiences and "hands-on" activities correlated to Common Core Standards. RAMTEC will continue in the 11th and 12th grade with a competency based curriculum model tied to advanced manufacturing certifications adding STEM based activities to all students taking RAMTEC programs throughout Ohio. It is imperative that every RAMTEC partner replicates the same best practices of the existing RAMTEC center to provide for efficiency and effectiveness. Industry must drive the curriculum, the facilities, the equipment and the selection of instructional personnel, thus keeping the centers current. The grant will allow us to distribute E-learning resources to all students in Ohio wishing to explore the careers in the manufacturing sector. It will also provide all professional development to allow the instructors to obtain industry certifications so they have the ability to train students to be successful in earning certifications, and provide guidance to replicate programs currently being used to allow career tech students the ability to obtain community college credits for high school programs and push towards best practices like the "College Now" program that actually allows a high school student to earn a high school diploma and two year associate degree at the completion of the high school program. Students will be able to earn stackable credentials under the National Association of Manufacturers (NAM) - endorsed Manufacturing Competency Based Skills Certification System to earn up to 30 hours of college credit at a number of the partner post-secondary institutions that lead to an Associate's Degree in a manufacturing pathway. All college credits earned in high school will be earned at no cost to the student. Current research shows that students who graduate high school having already obtained college credit have a nearly 30% greater chance of graduating from college compared to their peers, who have not earned college credit before graduating from high school. The RAMTEC initiative fosters statewide agency engagement and supports a holistic approach to economic and workforce development by allowing students to demonstrate skills and objectives they have learned by authenticating these mastery skills on equipment identical to that being used in Ohio manufacturing industries. The initiative collaborates among the Ohio Board of Regents, the Ohio Department of Education, Career & Technical Education, Adult Education, Ohio Office of Workforce Transformation, Ohio ACTE, Ohio Manufacturer's Association, JobsOhio, and many others

9. Which of the stated Straight A Fund goals does the proposal aim to achieve? - (Check all that apply)

Applicants should select any and all goals the proposal aims to achieve. The description of how the goals will be met should provide the reader with a clear understanding of what the project will look like when implemented, with a clear connection between the components of the project and the stated goals of the fund. If partnerships/consortia are part of the project, this section should describe briefly how the various entities will work together in the project. More detailed descriptions of the roles and activities will be addressed in Question 16.

Student achievement (Describe the specific changes in student achievement you anticipate as a result of this innovation (include grade levels, content areas as appropriate) in the box below.)

Goal #1- RAMTEC statewide consortium will increase student achievement in the following areas: Four-Year Graduation Rate Baseline: Average consortium 4 year graduation rate (FY2013 Report Card) is 94.69% Short Term: By 6/30/3015, all consortium schools will have a plan in place to ensure each school exceeds Ohio's 4- year graduation rate benchmark Long Term: By 6/20/2020, the average consortium 4 year graduation rate (FY2013 Report Card) will increase by 3% Goal #2- Post-Program Placement Baseline: Average consortium Post-Program Placement (FY2013 Report Card) is 89.77% Short Term: By 6/30/3015, all consortium schools will have a plan in place to ensure each school exceeds Ohio's Post-Program Placement benchmark Long Term: By 6/20/2020, the average consortium Post-Program Placement (FY2019 Report Card) will increase by 6% Goal #3- Industry Credential Baseline: Total # Industry Credentials receive across the consortium (FY2013 Report Card) is 32.53% Short Term: By 6/30/3015, all consortium schools will have a plan in place to ensure each school exceeds Ohio's Industry Credential benchmark Long Term: By 6/20/2020, the # Industry Credentials receive across the consortium (FY2019 Report Card) will increase by 30% Goal #4- Dual Enrollment Baseline: # students across consortium who earned 3 or more college credits before HS graduation (HS transcripts Class of 2013) is 52.11% Short Term: By 6/30/3015, all consortium schools will have a plan in place to ensure each school exceeds Ohio's dual enrollment benchmark (ODE to set benchmark in summer 2014) Long Term: By 6/20/2020, all consortium schools will meet or exceed Ohio's dual enrollment benchmark as defined by ODE. Currently working with the Board of Regents in the development of college course(s) to be offered and awarded statewide through the RAMTEC industrial curriculum offering. Goal #5- PLTW Implementation Baseline: Identify # of 9-10 graders earned credits in CTE funded PLTW or other similar manufacturing/engineering foundation courses. By 2015: Develop best practice guidance for implementation plan to expand and develop the # of 9-10 graders in consortium districts will be registered to participate in CTE funded PLTW or other similar manufacturing/engineering foundation courses By 2020: Increase baseline by 20% the # of 9-10 graders earned credits in CTE funded PLTW or other similar manufacturing/engineering foundation courses. Goal #6- Baseline: Develop a plan of implementation for using mobile trailers to engage and expose MS students to the pathways that exist within the advance manufacturing sector and develop MS CTE programs to assist districts with the funding, development and implementation By 2015: Provide all MS with career exploration curriculum, software and opportunity to enhance programs through the use of the mobility equipment and trailers. By 2020: Increase by 50% the number of MS students exposed to STEM/CTE career pathways through CTE funded programs being offered at the local district level.

Spending reductions in the five-year fiscal forecast or positive performance on other approved fiscal measures (Describe the specific reductions you anticipate in terms of dollars and spending categories over a five-year period in the box below or the positive performance you will achieve on other approved fiscal measures. Other approved fiscal measures include a reduction in spending over a five-year period in the operating budget approved by your organization's executive board or its equivalent.)

Total five year savings - \$33,834,941.00 Reduction #1. \$14,650,415 for five years - The consortium has determined that there will be a natural attrition of teachers and classified staff in each year, the salary difference will be used to sustain this program (FY '16 - \$2,427,422, FY '17 - \$2,710,865, FY '18 - \$2,636,078, FY '19 - \$3,404,847, FY '20 - \$3,471,203) Reduction #2. \$150,000 for five years - Additional savings will accrue from a Shared Services agreement with Marion Technical College whereby Marion Tech has off-hour access to the RAMTEC Tri Rivers site in exchange for dual enrollment credit for RAMTEC student at no charge to Tri Rivers (\$30,000 per year). Reduction #3. \$19,034,526 for five year - Tri Rivers Career Center negotiated significant discounts for the purchase of equipment and software (FANUC Robotics Corporation - \$14,469,084, Motoman Robotics Corporation - \$2,763,000, FANUC CNC Machining - \$1,802,442. The RAMTEC Consortium will also produce significant savings by eliminating duplication related to facility management and maintenance and sharing best practices with each of its members throughout Ohio.

Utilization of a greater share of resources in the classroom (Describe specific resources (Personnel, Time, Course offerings, etc.) that will be enhanced in the classroom as a result of this innovation in the box below.)

Implementing a shared services delivery model (Describe how your shared services delivery model will demonstrate increased efficiency and effectiveness, long-term sustainability, and scalability in the box below.)

The RAMTEC centers will implement and/or enhance exploration of career pathways starting with middle school students that are not currently being offered. The grant provides for mobile trailers to transport the equipment to the 161 member school districts that will be part of the 9 RAMTEC CTPD districts. In addition the grant will provide mobility trailers to transport equipment, software, eLearning and other support material to expose middle school students to the career pathways that exist within the advanced manufacturing sector. In addition the Vex robotic kits will be in each trailer to introduce the Vex robotic hands-on curriculum and online assessment tools. Follow-up teacher PD training sessions will be provided for any teachers/schools wishing to start Vex robotics teams/clubs. Summer Vex camps will follow at each regional site to promote and grow the interest in the STEM/CTE related careers. The RAMTEC partnerships will provide opportunities for students to earn "stackable" certificates and college credits while in high school at no cost to the student. Currently, all dual enrollment costs which would be due to Marion Tech are waived for allowing them to use the RAMTEC space and equipment in the off hours rent free. Next year's savings to the district is projected to be at least \$30,000 for the year and a similar MOU will be sought for the other locations. Students will be able to select their pathway for education. No matter if a student chooses to stay at their home district, or attend their local career center full time, each student will have the ability to authenticate learning and receive work-based industry training and certification at the local RAMTEC center -- all centers will have some evening and weekend hours to support this goal. The RAMTEC centers will provide and expand on the early exploration activities of grades 6--8 through the use of project based learning activities, robotic and CNC simulators, and 3D printer technologies. Students will have the ability to create real life activities based on the needs of their local industries and share these ideas across Ohio with each of their RAMTEC partners by the using the digital resources made available through RAMTEC centers. RAMTEC has partnered with world's largest robotic and advanced manufacturing companies to provide students with industry credentialing using the equipment used in industry today. Real workforce application activities utilizing industry sponsored equipment are now available to students

at the Tri-Rivers RAMTEC Campus. FANUC Robotics and Motoman Robotics supply more than 80% of industry robotic equipment to our industries in Ohio. Articulations and pathways have been formed between the Career Center's 11th and 12th grade students and its local Community College's giving Ohio's students access to an education with a pathway starting in the 6th grade and following them all the way to a job within Ohio's manufacturing community. Current research shows that students who graduate high school having already obtained college credit have a nearly 30% greater chance of graduating from college compared to their peers, who have not earned college credit before graduating from high school. It is these agreements which allow for the biggest return on investment and brings everyone into a true shared services model.

10. Which of the following best describes the proposed project? - (Select one)

New - never before implemented

Existing: Never implemented in your community school or school district but proven successful in other educational environments

Mixed Concept: Incorporates new and existing elements

Established: Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

11. Financial Documentation: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 11-14.

* Enter a project budget in CCIP (by clicking the link below)

[Enter Budget](#)

* If applicable, upload the Consortium Budget Worksheet (by clicking the link below)

* Upload the Financial Impact Table (by clicking the link below)

* Upload the Supplemental Financial Reporting Metrics (by clicking the link below)

[Upload Documents](#)

For applicants without an ODE Report Card for 2012-2013, provide a brief narrative explanation of the impact of your grant project on per pupil expenditures or why this metric does not apply to your grant project instead of uploading the Supplemental Financial Reporting Metric.

The project budget is entered directly in CCIP. For consortia, this project budget must reflect the information provided by the applicant in the Consortium Budget Worksheet. Directions for the Financial Impact Table are located on the first tab. Applicants must submit one Financial Impact Table with each application. For consortium applications, each consortium member must add an additional tab on the Financial Impact Tables. Partners are not required to submit a Financial Impact Table.

Applicants with an "Ohio School Report Card" for the 2012-2013 school year must upload the Supplemental Financial Reporting Metrics to provide additional information about cost savings and sustainability. Directions for the Supplemental Financial Reporting Metrics are located on the first tab of the document. If your organization does not have an "Ohio School Report Card" for the 2012-2013 school year, please provide an explanation in the text box about how your grant project will impact expenditures per pupil or why expenditure per pupil data does not apply to your grant project.

Educational service center, county boards of developmental disabilities, and institutions of higher education seeking to achieve positive performance on other approved fiscal measures should submit the budget information approved by an executive board or its equivalent on the appropriate tabs of the Financial Impact Table. Educational service centers should use the "ESC" tab and county boards of developmental disabilities and institutions of higher education should use the "non-traditional" tab.

12. What is the total cost for implementing the innovative project?

Responses should provide rationale and evidence for each of the budget items and associated costs outlined in the project budget. In no case should the total projected expenses in the budget narrative exceed the total project costs in the budget grid.

14,993,781.00 State the total project cost.

* Provide a brief narrative explanation of the overall budget.

Because Ohio wants to be at the forefront of innovation, it must foster a transition from traditional manufacturing to new high-tech advanced manufacturing as the foundation of its economy. These new high-tech advanced manufacturing jobs are the forgotten STEM/CTE careers that need addressed. Currently, career centers do not have the equipment to teach the advanced manufacturing skills needed to fill the employment opportunities available. There are pockets of good things going on, but statewide response to the high need skilled trade positions needs to improve. After the economic downturn and manufacturing layoffs of the last 20 years, many programs were closed or barely running. Now that manufacturing is back and going strong, it is essential that we retool and invest in the modern equipment. Manufacturing procedures have changed dramatically in Ohio. These investments will pay for themselves many times over in economic growth and retaining local industries. Needed equipment is not cheap, but at the same time we have received many in-kind donations of software packages and free upgrades to keep the equipment current. Equipment suppliers realize the need to support worker training programs. We are not asking for any additional personnel because we currently have employees who can be trained to operate this equipment, as well as, adult education instructors who have already received training. We currently employ one of only two FANUC Robotic

certified trainers in the state of Ohio. This instructor is also in the process of becoming a certified train the trainer for each of the other areas which we will be providing industrial certifications. RAMTEC will take the lead to ensure all other consortium member schools have teachers fully trained on the operation of the new equipment. In order to operationalize this plan the attached budgets are submitted for your consideration: 1. PURCHASED SERVICES: \$3,316,800 146,800 - For Robotics Camps 8 - 5 day camps 8 - 3 Vex day camps 5 - 4 day RAMTEC Professional development Supplies for RAMTEC camps 2,800,000 - Construction/Renovation Cost. Each of the nine RAMTEC partners receive \$250,000.00 for renovation of existing labs. The existing RAMTEC center will renovate existing classrooms to become RAMTEC training classrooms at a cost of \$850,000 \$244,000 - Initial On-Site installation/instructor training, -\$26,000 x 8 sites= \$208,000.00, RAMTEC upgrades- \$36,000.00 \$126,000 - Instructor Travel, substitutes for Certification courses- up to five Instructor's per site at \$2,800.00 per day x 5= 14,000 x 9 sites 2. SUPPLIES: \$28,000 \$3,200 per site to be used for CNC materials, Welding materials, textbook print CD from FANUC 3. CAPITAL OUTLAY: \$11,648,181: \$9,404,752 - Each partnering school shall receive the following: (1,175,594.00 X 8) FANUC Robotics and Mechatronics- \$577,144.00, Yasawka/Motoman robotics and welding- \$180,700.00, FANUC CNC Machining- \$125,961.00, Mobile Trailer- \$23,400.00, VEX/PLTW- \$45,169, 3D printers- \$4,800.00, Industrial Maintenance Equipment (Amatrol)- 162,930.00, Assessment & Evaluation system- \$2,800.00, Computers and Internet upgrades- \$52,690.00 \$2,243,429 - The existing RAMTEC center located at Tri-Rivers shall receive the following: FANUC Robotics and Mechatronics- \$583,144.00, Yasawka/Motoman robotics and welding- \$218,600.00, FANUC CNC Machining- \$165,958.00, Mobile Trailers- \$46,800, VEX/PLTW- \$90,338, 3D printers- \$9,600.00, Industrial Maintenance Equipment (Amatrol)- \$162,930.00, Assessment & Evaluation system- \$2,800.00, Computers and Internet upgrades- \$73,035.00, Yasawka/Motoman Training Room- \$232,500.00, FANUC Robotics training room- \$236,370.00, CNC training room- \$421,364.00. Total capital outlay to upgrade the existing RAMTEC to become a statewide training center for all 9 centers for professional development of Instructors and provide local support.

13. Will there be any costs incurred as a result of maintaining and sustaining the project after June 30th of your grant year?

Sustainability costs include any ongoing spending related to the grant project after June 30th of your grant year. Examples of sustainability costs include annual professional development, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in the narrative section should be consistent and verified by the financial documentation submitted and explained in the Financial Impact Table. If the project does not have sustainability costs, applicants should explain why.

Yes - If yes, provide a narrative explanation of your sustainability costs as detailed in the Financial Impact Table in the box below.

Sustainability costs are estimated at \$4,000 per site (which we believe to be an overestimation) based upon the increase in utilities and insurance at the site to power the robots that will be purchased and operated as a result of this grant. Though difficult to predict, those costs would cover the operation of the robots on a daily basis for a much longer time period than what the activities of the grant will require. This grant is heavy on equipment and professional development which are all part of the initial purchase and contracted service agreements. Equipment maintenance and software upgrades were also included in the initial purchase agreements as to lower any reoccurring cost and sustainability issues.

No - If no, please explain why (i.e. maintenance plan included in purchase price of equipment) in the box below.

14. Will there be any expected savings as a result of implementing the project?

Yes

No

Applicants with sustainability costs in question 13 or seeking to achieve significant advancement in spending reductions in the five-year forecast must address this response. Expected savings should match the information provided by the applicant in the Financial Impact Table. All spending reductions must be verifiable, permanent, and credible. Applicants may only respond "No" if the project will not incur any increased costs as a result of maintaining and sustaining the project after June 30th of your grant year. The Governing Board will use the cost savings as a tiebreaker between applications with similar scores during its final selection process. Cost savings will be calculated as the amount of expected cost savings less sustainability costs relative to the project budget.

33,834,941.00 If yes, specify the amount of annual expected savings. If no, enter 0.

If yes, provide details on the expected savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If no, please explain

The RAMTEC Consortium will also produce significant savings by eliminating duplication related to facility management and maintenance and sharing best practices with each of its members throughout Ohio. Total five year savings - \$33,834,941.00 Reduction #1. \$14,650,415 for five years - The consortium has determined that there will be a natural attrition of teachers and classified staff in each year, the salary difference will be used to sustain this program (FY '16 - \$2,427,422, FY '17 - \$2,710,865, FY '18 - \$2,636,078, FY '19 - \$3,404,847, FY '20 - \$3,471,203) Reduction #2. \$150,000 for five years - Additional savings will accrue from a Shared Services agreement with Marion Technical College whereby Marion Tech has off-hour access to the RAMTEC Tri Rivers site in exchange for dual enrollment credit for RAMTEC student at no charge to Tri Rivers (\$30,000 per year). Reduction #3. \$19,034,526 for five year - Tri Rivers Career Center negotiated significant discounts for the purchase of equipment and software (FANUC Robotics Corporation - \$14,469,084, Motoman Robotics Corporation - \$2,763,000, FANUC CNC Machining - \$1,802,442. The RAMTEC Consortium will also produce significant savings by eliminating duplication related to facility management and maintenance and sharing best practices with each of its members throughout Ohio.

15. Provide a brief explanation of how the project is self-sustaining.

All Straight A Fund grant projects must be expenditure neutral. For applications with increased ongoing spending as documented in question 11-14, this spending must be offset by expected savings or reallocation of existing resources. These spending reductions must be verifiable, permanent, and credible. This information must match the information provided in your Financial Impact Table. Projected additional income may not be used to offset increased ongoing spending because additional income is not allowed by statute. Please consider inflationary costs like salaries and maintenance

fees when considering whether increased ongoing spending has been offset for at least five years after June 30th of your grant year. For applications without increased ongoing spending as documented in questions 11-14, please demonstrate how you can sustain the project without incurring any increased ongoing costs.

For educational service centers and county boards of developmental disabilities that are members of a consortium, any increased ongoing spending at the educational service center or county board of developmental disabilities may also be offset with the verifiable, permanent, and credible spending reductions of other members of the consortium. This increased ongoing spending must be less than or equal to the sum of the spending reductions for the entire consortium.

Explain in detail how this project will sustain itself for at least five years after June 30th of your grant year.

This grant request is very heavy on cost of the initial equipment essential to teach and train students to step into the shortage of skilled trade jobs in Ohio. The RAMTEC grant is supported by existing infrastructure of instructional staff that already possesses the basic resources available to them to provide industry certifications in advanced manufacturing. In the case of RAMTEC, we have the availability to share these resources with our existing Adult Education and Workforce Development departments in the evenings outside of regular school hours to extend the learning day and provide outside training. The fees that are generated from doing workforce adult training will be returned to the RAMTEC center to continually provide dollars to maintain equipment and purchase any new equipment needed in the future, to keep staff certified on future equipment and maintain any new software licenses that may be needed. This year's projected adult workforce training should generate in excess of \$200,000 in additional revenue. This is a unique advantage. We will develop a statewide RAMTEC STEM Academy, which will allow students from anywhere in the state to enroll in a blended competency based learning model that will allow them to obtain industry certifications through the combined E-learning activities followed by the students having the opportunity to authenticate their learning by performing Industry based assessments at the closest local RAMTEC center. In addition, we will also start recruiting and exposing younger students by holding STEM camps along with local, regional and state robotic competitions and professional development for CEUs that allows students to experience the new and exciting aspect of the RAMTEC centers in our 6-10 grades. This exposure will improve the enrollment in the Advanced Manufacturing Programs in the Career Centers and thus provide funding to support future costs. As you can see, career centers by their design are well equipped to handle the sustainability after the grant dollars are gone. The ability to provide a revenue stream through workforce development training is the career center advantage and will ensure the industry equipment is maintained and updated. This grant money will go a long way in assisting the State of Ohio in its struggle to bridge the skilled trades gap.

D) IMPLEMENTATION - Timeline, scope of work and contingency planning

16. Please provide a brief description of the team or individuals responsible for the implementation of this project, including other consortium members and/or partners.

This response should include a list of qualifications for the applicant and others associated with the grant. If the application is for a consortium or a partnership, the lead should provide information on its ability to manage the grant in an effective and efficient manner. Include the partner/consortium members' qualifications, skills and experience with innovative project implementation and projects of similar scope.

Enter Implementation Team information by clicking the link below:

[Add Implementation Team](#)

For Questions 17-19 please describe each phase of your project, including its timeline, scope of work, and anticipated barriers to success.

A complete response to these questions will demonstrate specific awareness of the context in which the project will be implemented, the major barriers that need to be overcome and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be outlined, including coordination and communication in and amongst members of the consortium or partnership (if applicable). It is recognized that specific action steps may not be included, but the outline of the major implementation steps should demonstrate a thoughtful plan for achieving the goals of the project. The time line should reflect significant and important milestones in an appropriate and reasonable time frame.

17. Planning - Activities prior to the grant implementation

* Date Range 1/1/2012 - current

* List of scope of work (activities and/or events including project evaluation discussions, communication and coordination among entities).

1. Met with the original consortium group which consisted of The Ohio State University - Marion, Marion Technical College and Tri-Rivers Career Center to discuss the development of a new advanced manufacturing program to meet the needs of Education and Industry within our economic region. 2. Completed site visits to Alabama, Michigan, Kentucky, Wisconsin to identify "best practices" in their advanced manufacturing programs. 3. Met with local industries such as Honda of America, Robotworx, Whirlpool, Houser Racing, US Yaschio to assess exactly what type of training they needed and determined we had to form partnerships with FANUC Robotics, Motoman Robotics, Mazak CNC Machining, Lincoln Electric and FANUC CNC that met 90% of industry's training needs. 4. Formed partnership with FANUC, Motoman & Lincoln 5. In September 2013, the RAMTEC Center opened its doors for training and started visitations of local industry, community college and high school students to expose each constituent group what the Center offered in terms of training. 6 At the same time, site visits were conducted with Ohio Senator Beagle and Representative Romanchuk, who are the Governor's Chair and Co-chair of Workforce Development and Manufacturing. Also visiting the center has been Lieutenant Governor Mary Taylor, Superintendent of Public Instruction Richard Ross, Ohio Board of Regents John Carey, Jobs Ohio Kristi Tanner, US Senator Rob Portman, and US Congressman Tibery along with many other state and industry leaders (a complete list found at www.ramtecohio.com) 7. Training began in January 2014 and RAMTEC has completed industry certification for over 60 incumbent workers. 8. Of the students who participate in the high school program, we have graduated the first set of industry certified students in Ohio who have been offered positions with pay rates ranging from \$14 - \$28 per hour and guaranteed post-secondary education at no cost from Marion Technical College.

* Anticipated barriers to successful completion of the planning phase

1a. Barrier - Achieving "buy-in" from leading equipment manufacturers, such as FANUC and Motoman, and to reach equipment price points that are affordable for the education sector. 1b. Solution - We so impressed the equipment manufacturers with our proposed program that not

only did they agree to make equipment that costs industry \$350,000 available to us for \$35,000, but they also designated our center as the only center certified to conduct training outside of their facilities and are allowing us to replicate the model throughout Ohio. 2a. Barrier - Convincing state legislative leaders that a consortia of Career-Technical Centers could band together to address Ohio's shortage of 60,000 Advanced Skilled Manufacturing Workers. 2b. Solution - Through invitation, the State legislators came to see the RAMTEC Center for themselves and were so impressed that they have now written letters of recommendation for the program on behalf of this grant implementation. 3a. Barrier - How to identify and engage Career-Technical Centers and Post-Secondary Educational Institutions and to convince them of the importance of their participation as a consortium member and the potential impact of a RAMTEC Center located in their region. 3b. Solution - We partnered with JobsOhio to conduct a needs assessment to validate the perceived need for the program provided those studies to each region. The expansion of the RAMTEC Center to nine regions encompasses 96.4% of Ohio's manufacturing sector.

18. Implementation - Process to achieve project goals

* Date Range July 2014 - June 2015

* List of scope of work (activities and/or events, including deliverables, project milestones, interim measurements, communication, and coordination).

July: Contact Consortium members to set-up instructor certification to be held at RAMTEC Center, Marion, Ohio; Contact Superintendents and proceed with all renovations to house RAMTEC infrastructure; Contact equipment vendors to identify delivery schedules of each piece of equipment; Commission the design of state-wide consortium website that will host weekly consortium webinar; Continue the creation of articulation agreements with Community Colleges to ensure that dual-enrollment agreements are initiated; Kick-off comprehensive marketing campaign in all regions; Initiate weekly webinar for Project Steering Committee; August: Continue lead instructor training at RAMTEC; Host consortium member meeting; September: Career Centers and Community College Articulation Agreements signed and executed; Host consortium member meeting; October: FANUC Certification Training at RAMTEC; FANUC Certification CERT Cards delivered to career centers; Deliver VEX Training Equipment to Consortium Centers; Continue to identify middle partners; Host consortium member meeting; November: VEX Lead Teacher Two-Day Training at RAMTEC; Host consortium member meeting; December: Host consortium member meeting; Initiate training for Motoman Robotics; Deliver STEM cart to each participating Career Center; Delivery and install of FANUC and Motoman Robotic Equipment; January: Host consortium member meeting; Host open houses at all RAMTEC centers statewide; Delivery of the 7th and 8th grade mobile training units; February: Host consortium member meeting; VEX Lead Teacher Training at RAMTEC Tri Rivers; Host open houses at all RAMTEC centers statewide; March: Host consortium member meeting; Finalize marketing and recruitment efforts; Planning meetings for summer camps; Plan summer PD; April: Host consortium member meeting; May: Host consortium member meeting; Finalize summer camps and PD; June and July: Host consortium member meeting; Conduct summer camps and professional development;

* Anticipated barriers to successful completion of the implementation phase.

1a. Barrier - Attracting qualified instructors from lucrative private sector jobs to train in Career-Technical Centers; or, conversely, losing school-based educators to lucrative private sector jobs for which their new certification would qualify them to pursue... positions offering far more pay than on the teacher pay scale; 1b. Solution - This grant allows us to equip state-of-the-art labs, increase enrollments, and be part of a solution to the manufacturing/engineering skills gap which makes the teaching position far more secure and attractive to current and potential teachers who are passionate about this career field; 2a. Barrier - Convincing parents and students that manufacturing jobs of today are not leaving Ohio and do not fit the stereotypes (being a dirty, out-dated, low-skill, low-paying) commonly associated with manufacturing positions; 2b. Solution - This grant allows us to create career pathways and manufacturing exploration that start as young as seventh grade. Each location will be conducting a series of camps to spur interest and then will host the mobile labs throughout the year to engage students in hands-on inquiry-based projects that will immerse them in all aspects of STEM-related career pathways including, but not limited to, Engineering and Advanced Manufacturing, Welding, Automotive, Precision Machining, Computer Networking and Electronics;

19. Summative Evaluation - Plans to analyze the results of the project

* Date Range August 2014 - May 2015

* List of scope of work (activities and/or events, including quantitative and qualitative benchmarks and other project milestones).

A competency based educational model has been developed and integrates pre/post assessments as embedded measurements for curriculum objectives that RAMTEC centers will assess with e- assessment management systems that: 1) (August 2014) identify instructional competencies required for students in specific manufacturing pathways; 2) (September 2014) pre-assess student knowledge and prescribe effective training based on the competencies required of the Advanced Manufacturing model being used; 3) (on-going) formative assessments provide data analysis of both individual and class results that identify instructional areas that are weak and need additional teaching; 4) (May 2015) post-testing will occur upon completion of the program and before industry certification tests are taken. Training effectiveness will be dramatically improved as this assessment system constantly measures student progress with the end result being high school graduation, community college credits, passage of industrial certifications, and job placement. Performance and satisfaction data collected from students and employers within each region, serviced by an Advanced Manufacturing and Robotic training site, will be used to determine instructional effectiveness. Best practices from each center will be shared and used to enhance statewide manufacturing centers' instruction. Performance data will concentrate on passage rates for industrial certifications, college credits earned, and percent of students who are ready to pursue further education, training, or employment. Satisfaction data includes site visits, business oversight, and employer evaluations of student interns and adult employees who are graduates and trained in one of the RAMTEC centers. Specific needs of manufacturers will be continually assessed and responses from the manufacturers will be used to adjust instruction and to improve student learning.

* Anticipated barriers to successful completion of the summative evaluation phase.

1a; Barrier: Keeping learners "on-time" in the curriculum to ensure that all learning objectives are mastered in time for industry assessment for credentialing. 1b: Solution: On-going issue, however, regular formative assessments and intervention efforts help to address individualized needs in the classroom. 2a: Barrier: Keeping up with the speed of manufacturing 2b: Solution: Education is notoriously slow to react to the demands of industry. Because of the constant attention to the needs of manufacturers, and the consistent engagement of industry partners in the process, RAMTEC has a resilience that many programs lack and have the ability to react quickly to industry demands. 2a: Barrier: Students enter the program with ascertainable academic abilities, often times, however, students enter programs without foreknowledge of required aptitudes in order to complete the tasks associated with jobs related to the skills for which they are training (I.E.

eye-hand coordination, color discrimination, finger dexterity, etc). 3b: Solution: RAMTEC constantly evaluates student performance in all areas of required skills and aptitudes. We are confident that if indeed a student in the program is lacking the requisite aptitudes, that the need will be deciphered and corrective measures prescribed (E.G. vocational rehabilitation assessments, aptitude testing, or utilization of contracted services through ESC) to ensure that an appropriate job within the pathway may be pursued.

20. Describe the expected changes to the instructional and/or organizational practices in your institution.

The response should illustrate the critical instructional and/or organizational changes that will result from implementation of the grant and the impact of these changes. These changes can include permanent changes to current district processes, new processes that will be incorporated or the removal of redundant or duplicative processes. The response may also outline the expected change in behaviors of individuals (changes to classroom practice, collaboration across district boundaries, changes to a typical work day for specific staff members, etc.). The expected changes should be realistic and significant in moving the institution forward.

Please enter your response below:

The RAMTEC centers are committed to changing the way we teach the students of today. Students today engage in technology as early as two years old. Education still tends to look much like it did in the 1960's. The RAMTEC centers will enable our instructors to teach in a blended learning manner using E-learning materials with real life simulators and authentic activities by using hands- on learning to build & operate robots, design & build parts and share these ideas with each of the other centers through the web. These activities will be STEM related and address math and science Common Core standards. We will provide RAMTEC students the ability to do hands on, real life activities in the classroom using the identical equipment used in Industry. Professional Development will be provided to each RAMTEC instructor to make sure they are Industry Certified. Cross training with be integrated for career pathway instruction in Welding, Engineering & Advanced Manufacturing, Automotive, Precision Machining, Computer Networking, and Agriculture Mechanics. The students in these program will be offered welding certification, robotics CNC certification and industrial maintenance certification. This will allow the existing programs to utilize the RAMTEC centers equipment to cross train students and offer them stackable certifications and post-secondary college credits. Each pathway program currently has an advisory committee made up from people from Industry and Post-Secondary education to make sure the program is meeting the guidelines of the state and local Industry. The advisory committees will be updated with the new certifications being offered and make sure they directly correlate to the needs of the job market. Post-Secondary education will continue to work with each pathway instructor to ensure dual enrollment opportunities continue to build. Instructor's in the 7th,8th, 9th and 10th grades will be given Carnegie Mellon University Robotics training that will allow them to become certified that enables their students to earn Robotics college credit. This will then allow the instructors to expose students to a career pathway in Advanced Manufacturing to help drive more interest to student to enroll in RAMTEC certification programs.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

The responses in this section are focused on the ability to design a method for evaluating the project's capacity for long-term sustainable results. Therefore, the questions focus on the method of defining the problem(s) the project hopes to solve and the measures that will determine if the problem (s) have been solved.

21. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The response should provide a concise explanation of items which provide rationale that will support the probability of successfully achieving the goals of the project. Answers may differ based on the various levels of development that are possible. If the proposal is for a new, never before implemented project, the response should provide logical, coherent explanations of the anticipated results based on some past experience or rationale. For projects that have been implemented on a smaller scale or successfully in other organizations, the response should provide the quantifiable results of the other projects. If available, relevant research in support of this particular proposal should also be included.

Please enter your response below.

To foster innovative education systems that support and grow Ohio's economy, investments in training and education are targeted to meet the full range of skills needed by local industries, and that all stakeholders connected to those industries are engaged to ensure the greatest return for local workers and firms. Sector partnerships do this by creating capacity to organize key stakeholders connected to an industry bringing labor, education, training providers, trade associations and manufacturers to develop customized solutions for that industry at the regional and statewide workforce development level. Rather than one company and one educational institution forming a partnership with limited returns, we can engage industries by developing immediate strategies to fill pressing skilled workforce needs, as well as long-term plans to grow the industry with a better trained and more productive workforce. These partnerships improve worker training, retention and advancement by developing cross-firm skill standards, career pathways, job redefinitions, and support capacities that facilitate the advancement of workers at all skill levels. Manufacturing is a major part of Ohio's economy as 95% of all Ohio's exports are manufactured goods. The new robotic and automation technologies are significantly impacting all sectors, yet there is a great shortage of skilled workers with certifications and training within Ohio to take the thousands of job openings that currently exist. CTE centers, and their corresponding K-12 districts along with the community colleges and Ohio's 4-year college and universities must join forces to meet regional industry training demands in order to retain and expand Ohio's manufacturing workforce. The Tri--Rivers RAMTEC was not driven by educational leaders but was developed by partnering with business and industry. Its success is predicated on asking industry what they needed and then delivering on it. The RAMTEC has received statewide attention and this proposal seeks to replicate the existing model in Ohio with the collaboration of business and educational leaders to form a statewide response to the skilled trade shortage that exists. For the first time this year, 100% of students enrolled in a manufacturing pathway program at Tri-Rivers, in addition to graduating from high school, will also have an industry recognized industrial certification and earn the corresponding college credit associated with the certification through RAMTEC. Students will benefit from a required work-based experience-apprenticeship, mentorship or internship at a local manufacturing facility. Students will receive stackable credentials under the National Association of Manufacturers (NAM)-endorsed Manufacturing Competency Based Skills Certification System that earn up to 30 hours of college credit at a number of the partner post-secondary institutions; these lead to Associate Degrees in the manufacturing/engineering pathway. All college credits earned in high school will be earned at no cost to the student. Further, current research shows that students who graduate high school having already obtained college credit have a nearly 30% greater chance of graduating from college compared to their peers, who have not earned college credit before graduating from high school. Train the trainer PD

will be offered by current RAMTEC trainers in order to provide the teachers from each CTE district to become certified to provide the industrial certification training to students. Also, as the lead district the RAMTEC teachers and industrial training staff will provide assistance in training all associate district personnel at the lower grades by holding ongoing PD for new and existing staff. In addition, the lead district will assist each regional RAMTEC center in starting their local robotic camps and leagues for students to insure a statewide response to developing interest and knowledge in the career pathways.

22. Describe the overall plan to evaluate the impact of the concept, strategy or approaches used in the project.

This plan should include the methodology for measuring all of the project outcomes. Applicants should make sure to outline quantitative approaches to assess progress and measure the overall impact of the project proposal. The response should provide a clear outline of the methods, process, timelines and data requirements for the final analysis of the project's progress, success or failure. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio.

* Include the name and contact information of the person who will be responsible for conducting the evaluation and whether this will be an internal or external evaluation.

Greg McMahon OH! Manufacturing 155 Commerce Park Dr., Suite 8 Westerville, Oh 43082 614-776-5265 gmcmahon@polymerohio.org
External evaluation conducted by a member of MEP (Manufacturing Extension Partnership), National Institute of Standards and Technology (US Department of Commerce), and Ohio Department Services Agency.

* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be collected, the formative outputs and outcomes and the systems in place to track the project's progress).

OH! Manufacturing has a Five Step Process to evaluate the key areas of Advanced Manufacturing Growth: 1. Technology Acceleration - Events of emerging technologies, Innovation management, Collaborative development opportunities, Product design and development, Modeling and Simulation Portal, and Testing and validation services; 2. Continuous Improvement - Process efficiency, ISO certification, Productivity assessment, Process control and automation, Statistical process control, Assist in freeing up capacity for growth; 3. Sustainability -we will develop and evaluate goals, such as regional economic development, recognize social benefits, collaborative and resource asset development; 4. Workforce - Linkage to universities, community and technical colleges, government agencies, and adult education institutions to provide appropriate skills, Connections with experts in workforce development, Communicate industry needs to education community, Board of Regents study; created program to develop critical thinking, problem solving and teaming skills for manufacturing personnel; 5. Educational Development - Identification of resources, Networking assistance to broaden to enhance educational training, Development of expanding RAMTEC partnerships, development - quality, performance, benchmarking of progress of each RAMTEC center. 6. Establish surveys to do a needs analysis that verifies that the RAMTEC training centers are meeting the needs of local business and industry needs.

* Include the method, process and/or procedure by which the project will modify or change the project plan if measured progress is insufficient to meet project objectives.

The project implementation team will be meeting on a monthly basis to track and evaluate all evaluative feedback regarding the implementation of the project. The natural and inherent flexibility built into the program's provides an ability to adapt to changing industry needs. It will have has the ability to transfer those reactions to address internal program needs as well. This project anticipates cognitive dissonance and has assembled an implementation team and cadre of partners who stand ready to develop new program objectives, incorporate new strategies, or to engage other corrective measures to ensure the success of the program.

23. Describe the substantial value and lasting impact which the project hopes to achieve.

The response should provide specific quantifiable measures of the grant outcomes and how the project will lead to successful attainment of the project goals. Applicants should describe how the program or project will continue after the grant period has expired.

Please enter your response below.

The need for qualified skilled trade workers today has never been greater. According to Deloitte and the Manufacturing Institute, two million job openings in manufacturing are expected through 2018, when you factor both expected retirements and new growth. Investments in an innovative economy will pay off only if a base of skilled trade talent is in place to meet projected demand for skills in new innovation industries. Businesses can not forget existing industries that have traditionally served as the backbone of their economies, as states focus on growing the skilled trade workforce to support new innovative industries. A 2011 report on Ohio's workforce found that the recession accelerated the state's shift to a knowledge based economy. Industries that traditionally have relied on a large available low-skilled labor pool will need more highly skilled workers to survive. The report found that many Ohio workers are simply not prepared for the transition. What will set Ohio apart is how it responds to these challenges. States that make targeted investments and policy reforms aimed at closing the skilled trade gap will be in the best position to survive the innovation transition in old industries, grow new innovation industries, support job creation, and prepare the state for better times ahead. In the current fiscal climate, it is more important than ever for Ohio to allocate education and training resources to achieve better outcomes for workers, industries, and the economy as a whole. While public policy tracks attainment of traditional high school and college degrees, it tends to ignore most of the skilled trade credentials required for the majority of skilled occupations in today's economy. Some states have begun to track such credential data, and therefore know the skills they are producing with their workforce investments. Without this information, policymakers cannot set targets for raising the skills of a state's workforce or provide critical and persuasive information about the skills of the workforce to businesses considering locating in the state. As states are being called to do more with less, it is more important than ever for state leaders to support stronger collaboration across their education and training systems to collect credential data and use this data to set goals and measure progress to strengthen the workforce. Ohio currently has one RAMTEC center. The center houses state of the equipment and is supported by industry partnerships with Robotworx, Honda of America, U.S. Yachiyo, FANUC Robotics, FANUC CNC, Lincoln Electric and Motoman Robotics, who are combining forces and talent to operate as an industrial robotics and advanced manufacturing center in the Marion area. Each entity has a role in the development and production of training tailored to employer specifications. The facility will provide a technically trained, highly skilled, and educated workforce for current and future automation, robotics, mechatronics, CNC (computer numerical control), welding and industrial maintenance to promote the growth and expansion of companies throughout the state. The impact of the RAMTEC initiative is very important. We not only need to make our students aware of advanced manufacturing careers in Ohio in the early grades, but we need to retain them in the career pathways that lead to the high skill, high demand jobs that exist. So this is a simple solution - if Ohio manufacturing jobs make up 16.7% of the GDF at 80.7 billion dollars

and we don't address this problem of a trained workforce in Ohio when opportunities exist, we have no one to blame except ourselves.

24. Describe the specific benchmarks, by goal as answered in question 9, which the project aims to achieve in five years. Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

The applicant should provide details on the quantifiable measures of short- and long- term objectives that will be tracked and the source of benchmark comparative data points. Responses should include specified measurement periods and preliminary success points that will be used to validate successful implementation of the project. If a similar project has been successfully implemented in other districts or schools, identification of these comparable benchmarks should be included.

*** Student Achievement**

Significantly Improve Student Achievement across the consortium by replicating RAMTEC advanced manufacturing centers and demonstrating success through Ohio's already established Career Tech Benchmarks. The goals that we express are based on an average of the averages for each of the nine members of the consortium. It will therefore become the responsibility of each site to develop its own individual targeted goals to ensure that the five year benchmark is met or exceeded as part of the consortium. We plan to increase: 1. Graduation rate from its current 94.69% by at least 3% by creating a four year program of studies with three career pathway options including Dual Enrollment, Job Placement, and Internships; 2. Increase Post-program placement rates from its current 89.77% by at least 6%; 3. Increase Industry Credentialing from its current 32.53% by at least 30%; 4. Increase Dual Enrollment that is currently 55.11% by at least 20% and or hit the state benchmark or which even % is higher based on Ohio's Dual Enrollment as defined by ODE and yet to be determined.

*** Spending Reduction in the five-year fiscal forecast**

Total five year savings - \$33,834,941.00 Reduction #1. \$14,650,415 for five years - The consortium has determined that there will be a natural attrition of teachers and classified staff in each year, the salary difference will be used to sustain this program (FY '16 - \$2,427,422, FY '17 - \$2,710,865, FY '18 - \$2,636,078, FY '19 - \$3,404,847, FY '20 - \$3,471,203) Reduction #2. \$150,000 for five years - Additional savings will accrue from a Shared Services agreement with Marion Technical College whereby Marion Tech has off-hour access to the RAMTEC Tri Rivers site in exchange for dual enrollment credit for RAMTEC student at no charge to Tri Rivers (\$30,000 per year). Reduction #3. \$19,034,526 for five year - Tri Rivers Career Center negotiated significant discounts for the purchase of equipment and software (FANUC Robotics Corporation - \$14,469,084, Motoman Robotics Corporation - \$2,763,000, FANUC CNC Machining - \$1,802,442. The RAMTEC Consortium will also produce significant savings by eliminating duplication related to facility management and maintenance and sharing best practices with each of its members throughout Ohio.

*** Utilization of a greater share of resources in the classroom**

*** Implementation of a shared services delivery model**

The intention of the consortium is to develop Memorandum of Understandings between member schools and corresponding community colleges where Dual Enrollment fees are held in abeyance as a shared service agreement. An example of this scenario is the current agreement between Tri-Rivers RAMTEC and Marion Technical college. The agreement allows high school students to receive dual enrollment credit with no fees to Tri-Rivers in exchange for Marion Technical College using the RAMTEC facilities. This agreement has projected a \$30,000 dollar savings during the 2014/2015 school year. Nine Mobility Trailers will allow the consortium members to share state of the art manufacturing equipment and resources to middle school & high school students within and between the 161 school districts represented in this grant. These trailers will help students to understand the career opportunities in advanced manufacturing to hopefully encourage them to help fill the needs of Ohio's skill gap of 60,000 workers. Furthermore, manufacturing agreements allow the consortium members to share software and curriculum that leads to additional savings. The consortium members will share personnel between the centers until all centers are able to obtain credentialed instructors. This will enable the consortium members to meet the needs of their existing student populations and local industries while equipment, curriculum and instructor certification is being established.

*** Other Anticipated Outcomes**

25. Is this project able to be replicated in other districts in Ohio?

Yes

No

If the applicant selects "Yes" to the first part of the question, the response should provide an explanation of the time and effort it would take to implement the project in another district, as well as any plans to share lessons learned with other districts. To every extent possible, applicants should outline how this project can become part of a model so that other districts across the state can take advantage of the learnings from the proposed innovative project. If there is a plan to increase the scale and scope of the project within the district or consortium, it should be included here.

*** Explain your response**

Rubric Item 18. How well does the proposed work lend itself to become part of a model so that schools across the state can take advantage of the learnings created through this proposal? Not only is the project able to be replicated in other districts in Ohio, but the proposal is specifically designed to replicate an existing innovative Advanced Manufacturing training model (RAMTEC) within eight additional CTPD's and that encompass 161 K-12 school districts. The Ohio Association of Community Colleges stated, "We must create a network of education, training, and research to develop a highly-skilled workforce". RAMTEC has responded to this need by spending two years collaborating with industry, state, and educational leaders to identify and obtain the training equipment and facilities to meet the needs of Ohio's Manufacturing community. RAMTEC was designed and built to answer exactly what industry was saying they needed, and as a result, interest is high to find a way to replicate RAMTEC in other counties in Ohio. Replication of the RAMTEC facility is the centerpiece of this grant proposal. Post-Secondary institutions, Career & Technical Centers, and business leaders have been identified to join in a collaborative partnership to plan and implement the development of eight additional advanced manufacturing centers in areas identified as having the highest number of manufacturing jobs by the latest JobsOhio information. The identified career centers will share certified trainers for specialized instruction

while quickly expanding the pool of trained staff by being able to certify additional instructors on the equipment and providing on-going professional development. Much of the initial training will be provided at the Tri-Rivers RAMTEC center in Marion, until the other centers are brought online with the equipment and getting current staff members certified to provide the training. The collaborative partners in these eight regions will study what has already been accomplished and will use grant dollars to make equipment, training, and facilities operational in less than six months. RAMTEC has successfully done what no other facility in the United States has succeed in doing by bringing together both Industry and Education partnerships with the largest suppliers of equipment to Industry. These companies have worked with RAMTEC to offer Industry certifications for Robotics, CNC Machining, Welding, Industrial Maintenance, and Mechatronics under one roof. These companies are giving us the financial support and proprietary curriculum to replicate the RAMTEC centers across Ohio. With Ohio having an immediate need for 60,000 workers in advanced manufacturing , we must take advantage of this offer before we lose the opportunity to anyother state and must keep Ohio a leader. RAMTEC has closely selected its consortium partners working with JobsOhio to identify the highest concentration of Manufacturing throughout Ohio. The RAMTEC consortium partners currently have the exisitng facilities, administration, instructional and curriculum staff to replicate the RAMTEC philosopy. RAMTEC will share its 2 years of experience to help the consortium members achieve the same goals in six months.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation time frame. The Governing Board of the Straight A Fund reserves the right to conduct an evaluation of the project and request additional information in the form of data, surveys, interviews, focus groups and other related data on behalf of the General Assembly, Governor and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant, and any or all identified consortium members or partners, that all supporting documents contain information approved by a relevant executive board or its equivalent and to abide by all assurances outlined in the Straight A Assurances (available in the document library section of the CCIP).

I accept. Charles A. Speelman, SuperintendentTri-Rivers Career Center - Lead Consortium District 4/17/2014

Consortium

Tri-Rivers (065268) - Marion County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

Consortium Contacts

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Partnerships

Tri-Rivers (065268) - Marion County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Partnerships

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Implementation Team

Tri-Rivers (065268) - Marion County - 2015 - Straight A Fund - Rev 0 - Straight A Fund

Sections

Implementation Team

First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Delete Contact
Charles	Speelman	Superintendent	As lead district superintendent in the consortium, Mr. Speelman will be responsible for the communication of the overall vision and expectations held within the grant. He will be responsible for the scheduling of the quarterly and bi-annual advisory meeting and oversee the data collection of the performance measures.	Mr. Speelman has over 12 plus successful years as a superintendent in Ohio public schools. In 2005 the district in which he was superintendent for the previous four years was name on of the top ten most improved school districts in the state by ODE, based on the previous two year performance measures. He was recently name as one of the board of directors on the Ohio Association of Career Tech Superintendents.	For the past two year Mr. Speelman has led the vision to build the current RAMTEC center located at Tri-Rivers Career Center in Marion, OH. He also led the district construction team, which served as the construction managers for the project. The project came in under budget and on-time and has been identified as a "best practice" training site by many of the manufacturing partners.	
David	Wagner	Dean of Engineering, Marion Technical College	Dean Wagner will facilitate the creation and execution of all articulated credit courses associated with the RAMTEC state-wide consortia.	Dean Wagner is currently the Dean of Engineering at Marion Technical College. He has served as an Engineering instructor for 35 years. He has a BS in Mechanical Engineering Technology and a Masters of Construction Management. He has taught more than 30 different engineering related courses. He is a certified plant engineer and has served on the RAMTEC Advisory Board for two years	As a college instructor with 35 years of experience, Dean Wagner has the relevant prior experience to assist in navigating the process of creating articulated credit. He is serving in this capacity already as a member of the advisory committee.	
Mark	Edington	Certified Robotics Instructor	Conduct all certification training for consortium members. He will be the lead instructor at RAMTEC Tri Rivers to conduct training for industry incumbent workers. He will market, recruit and conduct open houses for industry partners at RAMTEC Tri Rivers.	FANUC Robotics Certification. Fully certified on Motoman Robots. One of two instructors for FANUC and is the only Motoman certified instructor. 25 years experience in industry building robotic equipment and maintaining its operation. He has been to Japan to visit FANUC Corporation and to see first hand how robotics can help to improve the efficiency of today's manufacturing environment.	Has successfully trained more than 60 local incumbent workers and has successfully certified them in FANUC Robot Operations. He has worked in conjunction with Ritch Ramey, daytime instructor, to certify the first students in high school in Ohio with FANUC Robot Operations.	

Larry	Hickman	Executive Director, Tri Rivers Career Center	Coordinates all district level compliance documentation and works closely with fiscal office to insure the local district director has a work knowledge of the program alignment and crosswalk opportunities that exist in aligning training. Mr. Hickman will sit on the core RAMTEC planning team and provide guidance to the team on opportunities to support and expand project based learning for students and develop new opportunities for students to be engaged and innovate.	Highly skilled school leader that currently serves as the State President of Ohio's largest Career Tech organization (Ohio ACTE). Mr. Hickman has 28 years in CTE and has been recognized for his innovation and ability to develop programs meeting the needs of all students.	Mr. Hickman was a member of the planning and design team that build the first RAMTEC center.
Ritch	Ramey	RAMTEC Coordinator	Coordinate the development and implementation of the statewide RAMTEC Advanced Manufacturing and Robotics training program. Oversee the state wide advisory committee. Collaborate with RAMTEC facility and industrial partners to implement and develop professional development and certification programs for instructors. Direct, develop and implement student work based robotics camps. Develop and oversee certification process for RAMTEC facilities coordinators and staff.	Bachelor of Science in Advanced Technology Education from Bowling Green State Associates of Applied Science in Engineering from Marion Technical College Ohio Vocationally Certified Engineering instructor Certified Project Lead the Way (PLTW) Digital Electronics, Computer-Integrated-Manufacturing (CIM) and Engineering Design and Development instructor	Developed Marion Area Tech Prep Partner's nationally certified Project Lead the Way Engineering program for nine area schools. Successfully awarded more than \$800,000 for STEM grants. Director of Outreach for the SME EF National Robotics Challenge STEM grant Coordinator for TRECA DA Ohio State Event Coordinator for Vex Robotics contests RAMTEC Advanced Manufacturing and Engineering instructor Current RAMTEC Tri-Rivers Career Center Coordinator Marion Technical College Computer-Aided-Design (CAD) Computer-Numerically-Control (CNC) Digital Electronics, Blueprint Reading and Robotics instructor RAMTEC Robotics League coordinator for 81 teams from 11 regional schools. Maintenance Technician for Worthington Industries CAD Technician for Fairfield Engineering, Truss-Joist Karlesberger & Associates and Guardian Glass - CAD Operator Created Professional development for 80 area engineering, math and science teachers in collaboration with Honda, Texas Instruments, Developed training programs for Ohio teachers for Vex Robotics BOEBot Robotics and Computer-Aided-Drafting for technical engineering instructors Hosted Vex Robotics camps for more than 300 elementary, middle and high school students Coached robotic teams in local, state, national and world championships
Stephen	Earnest	Treasurer, Tri Rivers Career Center	Fiscal agent responsible for ALL financial aspects of the administration of the RAMTEC grant on behalf of all consortia	Mr. Earnest has been a school treasurer / fiscal officer for nearly 30 years. As such, Mr. Earnest has been responsible for the	Mr. Earnest has been a treasurer in five four different districts. He currently oversees all expenditures related to the RAMTEC Tri Rivers. He understands the nature of the project and the tight timelines in which fiscal

			members.	oversight of billions of school revenues. He is a CPA, and a BS in Business Administration and an MBA from Ashland University.	operations operate in the program.	
John	Burkhart	IST Ohio, President	Mr. Burkhart's responsibility is to oversee the RAMTEC partnerships with Industry partners. He will coordinate the working relationships with FANUC Robotics, FANUC CNC, Motoman Robotics, and all vendors associated with RAMTEC center. He will also coordinate all the installation and training of each of the RAMTEC partners. Mr. Burkhart will oversee renovation requirements, equipment specifications for electrical requirements, room layout requirements and physical layout of equipment.	Mr. Burkhart has been working with Ohio's State Department of Adult & Career Technical education for over 25 years. He has correlated and performed skills needs analysis on equipment needed to operate career pathway programs across the state. Mr. Burkhart has been a past Career & Adult education hall of fame inductee as well as being inducted into the North Central State College entrepreneur where he was a graduate in 1975 in engineering electronics.	Mr. Burkhart worked with the development of curriculum and equipment to meet the outcomes of Ohio IT2000 standards for computer maintenance, web page design and multimedia. He has worked with over 100 school districts throughout Ohio to implement curriculum standards and make sure students are prepared for the job market or post-secondary education. Mr. Burkhart is instrumental in the developing the first RAMTEC center located in Marion Ohio. He coordinated the partnerships between four companies that are leaders in advanced manufacturing within Ohio Industries. Each of these companies are now partnering with RAMTEC and offering industry certifications in the areas of Robotics, Precision Machining, Welding and Industrial maintenance.	