## Budget

**TriRivers (065268) - Marion County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (408)**

### U.S.A.S. Fund #:

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

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### Adjusted Allocation

| Remaining   | -15,000,000.00 |
8. Please provide a brief description of the team or individuals responsible for the implementation of this project including relevant experience in other innovative projects. You should also include descriptions and qualifications of the project team. If a partnership or consortium will be established, please include the signed Straight A Description of Nature of Partnership or Description of Nature of Consortium Agreement.

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

- Student achievement
- Spending reductions in the five-year fiscal forecast
- Utilization of a greater share of resources in the classroom

8) PROJECT DESCRIPTION - Overall description of project and alignment with Outcomes
11. Describe the innovative project.

The statement of the problem: Ohio faces a skilled trade gap, and if it wants to be at the forefront of innovation, it must foster a transition from traditional manufacturing to the new high-tech advanced manufacturing. The problem: The workforce is preparing students 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 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. These resources are an opportunity for the state to partner with us in the development of statewide RAMTEC centers to help meet the needs of students and industry. RAMTEC will make available through RAMTEC centers.

The RAMTEC centers will offer exploration of career pathways to middle school students that are not currently being offered. The RAMTEC centers will allow students to demonstrate skills and objectives they have learned by authenticating these mastered skills on equipment identical to that being used in Ohio manufacturing industries. The RAMTEC initiative fosters statewide agency engagement and supports a holistic approach to economic and workforce development. The initiative collaborates among the Ohio STEM, Ohio Department of Education, Ohio Department of Development, Ohio Department of Jobs and Family Services, Ohio Department of Higher Education, the 10 Regional Planning Commissions, and the 27 Boards of Regents.

The RAMTEC centers will offer exploration of career pathways to middle school students that are not currently being offered. Through a blended learning model, using E-learning and hands-on training students will be exposed to manufacturing careers while continuing to identify pathways toward industrial credentialing and certifications that lead to the skilled trade careers that are in high demand. The RAMTEC partnerships will provide opportunities for students to earn “stackable” certificates and college credits. In addition, each RAMTEC partner will be provided with a mobile equipment trailer to transport the mobile trainers and provide increased STEM based hands-on training to middle school students, which will be complemented with on-line curriculum and assessments. Students will be able to select their pathway for education.

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 hands-on training and certification at the local RAMTEC center. Each school district will have training and support coordinated through the RAMTEC centers.

The instructor will also provide guidance on the additional language and math science instruction to each of its participating local districts. After the economic downturn and the high need for skilled trades positions needs to improve. The economic downturn and manufacturing layoffs of the last 20 years, many programs were closed or rarely been run. Now that manufacturing is back and going strong, it is essential that we retool and invest in the modern manufacturing. 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 hard to come by and the costs of training is high. We are able to train our students to stay with the companies and earn a good living.

12. Describe how it will meet the goal(s) selected above. If school/district/receive school improvement funds/support, include a brief explanation of how this project will advance the improvement plan.

The RAMTEC centers will offer exploration of career pathways to middle school students that are not currently being offered. Through a blended learning model, using E-learning and hands-on training students will be exposed to manufacturing careers while continuing to identify pathways toward industrial credentialing and certifications that lead to the skilled trade careers that are in high demand. The RAMTEC partnerships will provide opportunities for students to earn “stackable” certificates and college credits. In addition, each RAMTEC partner will be provided with a mobile equipment trailer to transport the mobile trainers and provide increased STEM based hands-on training to middle school students, which will be complemented with on-line curriculum and assessments. Students will be able to select their pathway for education. 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 hands-on training and certification at the local RAMTEC center. Each school district will have training and support coordinated through the RAMTEC centers.

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13. Financial Documentation - All applicants must enter or upload the following supporting information. Responses should refer to specific information in the financial documents when applicable:
   a. Enter a Project budget
   b. Upload the Straight A Financial Impact Template forecasting the expected changes to the five-year forecast resulting from implementation of this project. If applying as a consortium or partnership, please include the five-year forecasts of each school district, community school or STEM school member for review.
   c. If subsection (b) is not applicable, please explain why, in addition to how the project will demonstrate sustainability and impact.

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

15. What new/recurring costs of your innovative project will continue once the grant has expired? If there are no new/recurring costs, please explain why.

16. Are there expected savings that may result from the implementation of the innovative project?

17. The RAMTEC grant will have to maintain its certifications for instructional staff and keep equipment, computers, and software licenses updated. In knowing this fact, we have agreements in place with our vendors to receive ongoing new equipment and training services as part of the partner agreement. In addition, we have the availability to share these resources with our existing Adult Education and Workforce Development staff and students. In knowing this fact, we have agreements in place with our vendors to receive ongoing new equipment and training services as part of the partner agreement. In addition, we have the availability to share these resources with our existing Adult Education and Workforce Development staff and students.
17. Provide a brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

This grant request is very heavy on cost of the initial equipment necessary. This equipment is essential to teach and train students to step into the shortage of skilled trade jobs in Ohio. Most grants expire and the equipment becomes obsolete and the instructional resources vanish. The RAMTEC grant is supported by existing infrastructure of instructional staff that already possess 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 this year 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 camps and robotic competitions 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 in 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, communication and contingency planning

18. Fill in the appropriate dates and an explanation of the timeline for the successful implementation of this project. In each explanation, be sure to briefly describe the largest barriers that could derail your concept or timeline for implementation and your plan to proactively mitigate such barriers. In addition, the narrative should list the stakeholders that will be engaged during that stage of the project and describe the communication that occurred as the application was developed.

Describe the ongoing communication plan with the stakeholders as the project is implemented. (Stakeholders can include parents, community leaders, foundation support and businesses, as well as educational personnel in the affected entities.)

* Proposal Timeline Dates

  Plan (MM/DD/YYYY): 12/01/2013 - 07/31/2014

  * Narrative explanation

  The first RAMTEC facility is located in Marion Ohio and is complete and operational. It has taken two years to develop the education and industry partners. Visitations were made to programs in Alabama, Michigan, Kentucky and Wisconsin to establish exactly what was needed to build upon existing successes. Instructors were trained and certified and curriculum was created at Tri-Rivers Career Center and Marion Technical College to start the programs. Equipment and facilities were designed and teachers were certified so we could start running the RAMTEC advanced manufacturing program. The remaining planning time this year will be needed for equipment procurement, curriculum adjustments, professional development and renovations necessary to accept and house new equipment. That would enable all sites to be completely operational for the start of the 2014-2015 school year.

  * Narrative explanation

  In order to implement the RAMTEC program, once the facilities and equipment are completed you need to have three things. The first is trained certified instructors to teach, the second is the equipment and the third is students. The RAMTEC center at Tri-Rivers and all its Career Tech partners are currently offering some form of an advanced manufacturing program, but current student numbers are not in line with industry needs and most do not have sustainability. This year we expect to allow each of the RAMTEC centers in our 6-10 grades to allow students to participate in a one year program. For the first time we can offer students industry certifications and college credits, which will drive enrollment numbers up, provide more industry and higher education, and assist Ohio with its need to fill manufacturing jobs.

  * Narrative explanation

  The RAMTEC courses are designed to offer STEM “hands-on” blended learning activities. These activities help address the Common Core standards for math and science so that students can get a better understanding of how “real life” experiences can be applied in the world of jobs. Each of these courses has pre/post assessments along with authentic learning taking place all the time. These materials prepare them for the industry certification test that they must complete before entering employment. Industry credentialing and certifications will be offered by industry and administered at each of the RAMTEC centers for FANUC Robotics certification, AMTEC industrial maintenance certification, FANUC CNC certification, Motoman Robotics Certification and Lincoln Robotic Welding Certification, with others to follow.

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

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 1980’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 by doing. A “hands-on” approach is best and shares the basis of each of the courses that we will run. These activities will be STEM related and in the case of the core courses and AMTEC will be aligned with the current and future 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 of the RAMTEC instructors to make sure they are Industry Certified.

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

20. 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 future.

If fostering an innovative economy, Ohio must ensure that 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: multiple firms, educational institutions, community organizations, governmental bodies, etc. while capitalizing on existing training providers, facilities, and a career center/post-secondary network. This allows for the sharing of best practices, training and resources for the betterment of the overall system. By leveraging not only one company and one educational institution forming a partnership with limited resources, sector partners should grow and promote growth and competitiveness across an entire industry 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. In addition, these partnerships improve worker training, retention and advancement by developing cross-firm skill standards, career pathways, job definitions, shared training and support capacities that facilitate the advancement of workers at all skill levels, including the least skilled. Manufacturing is a major part of Ohio’s economy and robotic technology is significantly impacting our industries, yet there is a great shortage of skilled workers within Ohio. Career centers and technical colleges must join forces to meet regional industry training demands in order to retain and expand Ohio’s manufacturing workforce. This grant project hopes to capitalize on existing training providers, facilities, and a career center/post-secondary network. We need to replicate, with state resources, a model for advanced manufacturing and robotics center design in an effort to support the state’s priority to expand the concepts of world-class centers of excellence in manufacturing to Ohio. The Tri-Rivers RAMTEC center was not driven by educational leaders but was developed by partnering with business and industry to meet their needs. The Tri-Rivers RAMTEC center is successful because we asked industry what they needed and then delivered on it. The Tri-Rivers RAMTEC center’s attention and this proposal seeks to replicate the existing RAMTEC model around Ohio with the collaboration of business and educational leaders to form a statewide response to the skilled trade short that exists.

21. Is this project able to be replicated in other districts in Ohio? (Please provide supporting documentation)

Yes

22. If so, how?

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 districts in the Tri-State Region. According to the proposer, it is a highly-skilled workforce. Tri-Rivers 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. Tri-Rivers RAMTEC was designed and built to answer exactly what industry was saying they needed in the Marion, Morrow, Richland, and Union County areas. Certified trainers are available for ongoing student training and certification. Interest is high to find a way to replicate RAMTEC in other counties in Ohio. Replication of the Tri-Rivers
23. Describe the substantial value and lasting impact that the project hopes to achieve.

The need for qualified skilled trade workers that is as great as ever. As the economy recovers gathers momentum, and economic development investments pay off in new jobs, existing and emerging job vacancies will need to be filled. 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. But as states focus on growing the skilled trade workforce to support these new innovation industries, they cannot forget the "old" industries that have traditionally served as the backbone of their economies. All of these industries, including manufacturing, and others must innovate technologically to survive and their survival demands a new kind of workforce. 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. This economic reality and these skill challenges do not set Ohio apart from the region. 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 has state of the art facilities and 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 GDP 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. What are the specific benchmarks related to the fund goals identified in question 9 that 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.

Student achievement: The RAMTEC curriculum is designed to constantly track student progress with a management system that is integrated with pre/post assessment. The post assessment is then authenticated by allowing the students the opportunity to demonstrate the skill sets that they have learned by performing "hands-on" activities on the similar pieces of equipment being used by industry. The validation of all skills learned comes into place by the student passing the certification test designed by industry. Those passage rates will be reviewed by local advisory and statewide steering committees to set appropriate goals and provide individual program feedback. All program changes and curriculum adjustments must be approved by the local advisory committee before being sent as a recommendation to be considered by the statewide steering committee for consideration. A two-year benchmark goal of the program would be to double the number of students graduating with a skilled trade certification within the advanced manufacturing programs currently housed at each of the career centers. Also, through the curriculum alignment and sharing of "best practices" we will seek to increase current college articulation credits and/or transfer credits earned by graduates by at least 25% over the two-year period. Utilization of a greater share of resources in the classroom: The RAMTEC center will use this grant to obtain the necessary equipment, professional development, and certifications necessary to provide the region with a skilled trade certified training center to address the shortages that exist within the advanced manufacturing sector. As a result, we will be able to continue the program through student enrollment, dual credit funding and revenue generated by sharing the equipment with Adult Education training programs provided to industry.

25. Describe the plan to evaluate the impact of the concept, strategy or approaches used.

* 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 program's progress).

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

A competency based educational model has been developed and integrates pre/post assessments as embedded measurements for curriculum objectives. RAMTEC centers will be supported with pre-assessment management systems that 1) identify instructional competencies required for students in specific manufacturing pathways, 2) pre-assess student knowledge and prescribe effective training based on the competencies required of the Advanced Manufacturing model being used, and 3) provide data analysis of both individual and class results that identify instructional areas that are weak and need additional teaching. 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. Overall evaluative success of the grant will be demonstrated by the eight regional RAMTEC Ohio centers that have been established and exhibit successfully equipped, staffed, and operating training sites that begin receiving high marks from graduates and manufacturing partners across Ohio. The final evaluators of the RAMTEC centers’ instructional delivery success are the manufacturing companies of Ohio and those individuals finding employment as a result of the training. Are the needs of Ohio’s advanced manufacturing companies being met with RAMTEC highly skilled and qualified students? Student satisfaction surveys will be conducted with each graduate upon completion of the program and follow-up surveys will be sent to alumni of the program and the current employer one year after graduation. The results of the surveys will be reported to and analyzed by the statewide steering committee and the local advisory groups to make program adjustments. This will allow the RAMTEC centers the opportunity to identify and share "best practices", but at the same time provide for program corrections that have both data and industry input as the drivers.

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 timeframe. The Governing Board of the Straight A Fund reserves the right to conduct evaluation of the grant and request additional information in the form of data, surveys, interviews, focus groups, and any other related data to the legislature, governor, and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant agency and/or all identified partners to abide by all assurances outlined in the Assurance section of the CCIP. In the box below, enter "I Accept" and indicate your name, title, agency/organization and today’s date.

I accept, Charles A. Speelman, Superintendent Tri-Rivers Career Center - Lead District 10/25/13