

Budget

Mahoning County ESC (048280) - Mahoning County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (60)

U.S.A.S. Fund #: 466

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	0.00	140,000.00	650,000.00	0.00	790,000.00
Support Services		0.00	0.00	110,000.00	0.00	0.00	0.00	110,000.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		0.00	0.00	29,000.00	0.00	0.00	0.00	29,000.00
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	48,000.00	0.00	0.00	0.00	48,000.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indirect Cost							0.00	0.00
<b>Total</b>		0.00	0.00	187,000.00	140,000.00	650,000.00	0.00	977,000.00
							<b>Adjusted Allocation</b>	0.00
							<b>Remaining</b>	-977,000.00

Application

Mahoning County ESC (048280) - Mahoning County - 2016 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (60)

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

**A) APPLICANT INFORMATION - General Information**

1. Project Title:  
Mahoning Valley STEM/ Advanced Manufacturing Collaborative

2. Project Summary: Please limit your responses to no more than three sentences.  
K-16 Initiative including a STEM Academy & fab labs to create more critical thinkers to the advanced manufacturing industry in the Valley  
*This is an ultra-concise description of the overall project. It should only include a brief description of the project and the goals it hopes to achieve.*

3. Estimate of total students at each grade level to be directly impacted each year.

*This is the number of students that will receive services or other benefits as a **direct result** of implementing this project. This does not include students that may be impacted if the project is replicated or scaled up in the future. It excludes students who have merely a tangential or indirect benefit (such as students having use of improved facilities, equipment etc. for other uses than those intended as a part of the project). The Grant Year is the year in which funds are received from the Ohio Department of Education. Years 1 through 5 are the sustainability years during which the project must be fiscally and programmatically sustained.*

Grant Year				
0 Pre-K Special Education	168 K	158 1	158 2	180 3
145 4	242 5	239 6	442 7	433 8
0 9	0 10	0 11	0 12	

Year 1				
0 Pre-K Special Education	683 K	798 1	769 2	774 3
807 4	819 5	847 6	450 7	442 8
100 9	100 10	300 11	300 12	

Year 2				
0 Pre-K Special Education	670 K	683 1	798 2	769 3
774 4	807 5	819 6	847 7	450 8
100 9	100 10	300 11	300 12	

Year 3				
0 Pre-K Special Education	650 K	670 1	683 2	798 3
769 4	774 5	807 6	819 7	847 8
100 9	100 10	300 11	300 12	

Year 4				
0 Pre-K Special Education	649 K	650 1	670 2	683 3
798 4	769 5	774 6	807 7	819 8
100 9	100 10	300 11	300 12	

Year 5				
0 Pre-K Special Education	640 K	649 1	650 2	670 3
863 4	798 5	769 6	774 7	807 8

4. Explanation of any additional students to be impacted throughout the life of the project.

*This includes any students impacted or estimates of students who might be impacted through future scale-ups or replications that go beyond the scope of this project.*

The mission of the project is to expand learning opportunities in STEM education for students in grades K-12 across the Mahoning Valley. For this to succeed, teachers will need professional development in STEM programs, access to curriculum, and follow-up. In the initial years of the grant, the project will directly impact the districts in the consortium, including Austintown, Canfield, Struthers grades K-12 and the Mahoning County Career and Technical Center (MCCTC), which serves grades 11-12. Years 1-5 of the grant focus on providing PD to teachers in the consortium. Starting in year 5, the project will be expanded to the 17 other districts who partner with the Mahoning County ESC for grades K-8, including Boardman, Campbell, Poland, South Range, Jackson-Milton, Springfield, Western Reserve, West Branch, Southeast, Rootstown, Windham, Beaver, United, Brookfield, Youngstown Community School, Youngstown City, and Columbiana. These districts combine for a total K-8 enrollment of 7,200.

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

First and last name of contact for lead applicant  
Ronald J. Iarussi, Ed.D

Organizational name of lead applicant  
Superintendent, Mahoning County ESC/Mahoning County Career and Technical Center

Address of lead applicant  
100 DeBartolo Place

Phone Number of lead applicant  
330-965-7828 ext. 1109

Email Address of lead applicant  
r.iarussi@mahoningesc.org

*Community School Applicants: After your application has been submitted and is in Authorized Representative Approved status an email will be sent to your sponsoring entity automatically informing the sponsor of your application.*

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 (vendors, service providers, sponsors, management companies, schools, districts, ESCs, IHEs) 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. The following questions will address specific outcomes and measures of success.*

a. The current state or problem to be solved; and

Business and industry in the Mahoning Valley has voiced major concerns to local education agencies over the availability of a skilled workforce to fill the number of jobs that have been created and will be created. The Mahoning Valley Manufacturers website has the following quote on the home page, "Local manufacturers are all facing a common problem that will likely be the largest single issue in our ability to service our customers and maintain or grow our businesses". This common and pressing issue is the recruitment of qualified, new employees into the various skilled trades occupations required to operate our businesses. This issue will be further exasperated by an upcoming wave of retirements and a rapidly aging workforce. Without a qualified workforce to support area manufacturers, the Mahoning Valley economy is at risk. The Mahoning Valley Manufacturers Coalition (MVMC) formed to help regional manufacturers prosper, to help stabilize our economy and to provide opportunities for individuals and families in the Mahoning Valley to earn livable wages and advance up a

career pathway. As an industry led coalition, partnering with local school districts, works towards a single, common voice to create public awareness of the needs of the local manufacturing industry. MVMC proposes to convene, educate, charge and mobilize the region's key stakeholders to initiate actions that will stabilize our economy and provide opportunities for individuals and families in the Mahoning Valley to earn livable wages and advance up a career pathway. The Mahoning ESC works closely with all Mahoning County Schools, as well as the MVMC. Mahoning MCESC is spear heading this effort, starting with the consortium, to maximize output of highly skilled critical thinkers, thus providing a sustainable workforce in advanced manufacturing and engineering. The project will maximize problem-based learning and STEM opportunities, provide state-of-the-art equipment, and professionally develop staff.

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

This innovative program will help to increase the skills, knowledge and number of qualified candidates. The goal is to engage all area stakeholders to address this problem that cannot be solved individually. The coalition will create a demand-driven mechanism for ongoing dialogue among industry, education and the public workforce system. The Mahoning Valley has seen major economic growth through advanced manufacturing. Currently there are over 40,000 manufacturing jobs which makes up 11% of the economy in the Valley. The Gas and Oil industry has flourished through the discovery of Marcellus Shale located in the region increasing the need for workers from pipefitters to engineers. The creation of the Youngstown Edison Incubator Corporation (YBI), is a non-profit corporation has also perpetuated the need for labor. YBI focuses its marketing, portfolio company recruiting, networking and resource acquisition efforts on a larger geographic market comprised of the Cleveland to Pittsburgh corridor seeking to attract those technology entrepreneurs to the Mahoning Valley. The Mahoning Valley STEM/Advanced Manufacturing Collaborative will be a gateway for students to enter available and highly sought after careers that will pay good wages and help stimulate growth. The project is designed to provide a seamless STEM educational program for students beginning in the elementary schools with professional development for teachers in problem-based learning (PBL) that can be implemented in the regular classroom setting. Elementary students will experience PBL using the ASSET program and Defined STEM; mobile STEM labs from ASTII will be provided to each partner district elementary building that can be used for career exploration and hands on STEM experience. ASTII will provide training to teachers in the partner districts in grades K-6 on the use of the labs and how they can be integrated in those grade levels. The program continues in the 7th and 8th grades by training teachers and providing resources to allow for a completely self contained STEM classroom that can integrate 7th and 8th grade standards delivered through STEM pedagogy. The partner districts have committed to using Defined STEM in self contained classrooms with again, an emphasis on project-based learning. The Ohio STEM Learning Network will also provide professional development, based on research-based principles and prior success. A mobile fabrication lab will be used to allow the partner districts the opportunity to use equipment for middle schoolers during special periods to teach students the idea of using problem solving methods and actually building a prototype. Students will have the opportunity before their ninth grade year to attend a STEM summer camp housed at the site of the STEM + ME2 Academy. The STEM + ME2 Academy will be housed in dedicated space designed for a 21st century STEM lab at the Mahoning County Career and Technical Center. The Mahoning Valley STEM+ME2 has already been approved as a STEM designated school and will begin educating students via statewide open enrollment in the Fall of 2016. Estimated capacity is 200 students in grades 9-10. The establishment of three early college career paths with the assistance of EDWorks will occur during the 2016-2017 school year and will be ready to begin educating in the Fall of 2017. These are in addition to the 9-10 STEM school, and designed to further opportunities for STEM fields in 11th and 12th grades, The three early college career paths will be Healthcare, Engineering and Advanced Manufacturing, and Career tech. Partners in the project include, Struthers City Schools, Canfield Local Schools, Austintown Local Schools, Mahoning County Career and Technical Center, Eastern Gateway Community College, Youngstown State University, and the Mahoning Valley Manufacturers Coalition.

9. Select which (up to four) of the goals your project will address. For each of the selected goals, please provide the requested information to demonstrate your innovative project. - (Check all that apply)

a. Student achievement

i. List the desired outcomes.

*Examples: fewer students retained at 3rd grade, increase in graduation rate, increased proficiency rate in a content area, etc.*

The ultimate outcome is to provide a larger, more skilled workforce that is capable of fulfilling the needs of the economy in order to grow. The idea of a seamless STEM collaborative program will ultimately accomplish the goal. The data points that will be measured along the way to determine the successes or failures are designed to measure each level of the program. The desired outcomes for the project are increased student achievement in the areas of improved standardized test scores, increase in third grade reading guarantee, increase in ACT scores, increased graduation rate and increased college and career readiness for students in the Mahoning Valley and surrounding areas. The Common Core State Standards, and Ohio's Learning Standards, call for rigorous, higher-order thinking skills. Short term goals include training and implementing STEM-based learning, exposing students in the consortium problem-based, critical thinking skills. Medium-term goals include increased student achievement, as evident by higher test scores, in grades 3, 5, 8, and ACT. Long-term goals include providing a highly-skilled, capable, critical thinkers that will ultimately fulfill the employment needs, from entry-level to machinists and highly-skilled Engineers. Teaching content through skill application, starting in Kindergarten, will foster critical thinking skills and application. STEM education is cross-content application, and increase in depth of knowledge, which parallels how students are now tested. Teachers will have more access to STEM curriculum, equipment, and resources, and will be professionally developed in teaching the standards through STEM education. Ultimately, this program will produce a skilled labor force that can fulfill needs of the existing (and future) career opportunities. Additionally, this program's activities will encourage and support the preparation of college-ready students who will be successful in acquiring STEM degrees.

ii. What assumptions must be true for this outcome to be realized?

*Examples: early diagnosis and intervention are needed to support all children learning to read on grade level; project-based learning results in higher levels of student engagement and learning, etc.*

What assumptions must be true for this outcome (listed in i) to be realized (2000 characters)? According to the US Department of Education, the total increase for STEM-related jobs between 2010-2020 is 14%. STEM learning, which involves primarily project, problem or inquiry based learning, will result in higher levels of student engagement. This higher level of engagement, and focus on critical thinking and problem solving, will lead to increased achievement. According to a Texas high school study, early findings suggest that students in that state's 51 inclusive STEM schools score slightly higher on the state math and science achievement test. They are also less likely to be absent from school, and appear to take more advanced courses (NRC, 2011). According to Erdogan (2015), students attending specialized STEM schools are more likely to actualize college goals when compared to peers from regular schools. Research shows that hands-on,

engaging pedagogy, starting at an early age, according to Gratz & Larwin (2014) states there is evidence that a "good start" to schooling is influential in the later well-being of the child (Yoshikawa et al., 2013). School readiness is contingent, not only the children, but the school, community, and family (Hair, Halle, Terry-Humen, Lavelle, & Calkins, 2006). Investments in closing the gap made in the early years far outweigh the costly investments in the secondary years (Ohio Business Roundtable, 2010; Schweinhart, 2002). Waiting for these children to fail in school and then providing needed remediation through compensatory programs, pull-outs, or retention does not sufficiently enable these students to close the gaps and achieve at grade level (Ramey & Ramey, 2004). PBL references include George (2013), finding that through problem based approaches to learning that even math deficient students can develop the skills to be successful and outperform students who do not enter program deficient.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

Describe any early efforts you have made to test these assumptions (pilot implementation, etc.), or how these are well-supported by the literature (4000 characters). The districts involved in the consortium have each piloted components of STEM education, and are partnering through this grant in order to expand upon these programs in a way that is fiscally manageable, which is demonstrated in the financial impact table. Currently Struthers is utilizing ASSET STEM Education in grades 1-4. Asset is aligned to state standards, and utilizes STEM education across all disciplines. Professional development is available, in addition to curriculum and other customized services. Austintown currently has a self-contained STEM program for grades 7-8. Austintown Administration reports that in the initial years of its existence, the program is in high demand with a waiting-list, and the district realizes the need to increase opportunities for students both at the middle school level, and once students complete the middle school courses. There is also evidence in Austintown that students in the STEM program have out-performed students in Austintown that do not participate in the STEM program. In 2013-14, 100% of STEM students were at least proficient vs. 89.6% for the school in Reading. 100% of STEM students were at least proficient vs. 88% for the school in Math, and 100% of STEM students were at least proficient vs. 70.7% for the school in Science. The STEM students also out-performed the state averages, which were 80% proficient in math, and 68% proficient in science. Finally, in Austintown the mean scores in math (446.96) and science (445.75) for STEM students were higher than the mean scores for overall 8th grade students in math (430), and science (415). In Canfield, the elementary has implemented STEM week, where ASTII leads STEM activities daily across all contents. At the middle school, students in grades 5-8 have access to STEM-based courses such as Lego Robotics, Virtual Science Lab, STEM, Engineering, Robotics, and Bio/Nanotechnology. Defined STEM was available to all middle school teachers as a way to integrate STEM across contents. At the MCCTC, there is currently an engineering pathway. The MCCTC is working with the district leadership team to research, with the intent on implementing next school year, the academy model. One academy would be advanced manufacturing and engineering, and would encompass precision machining, and welding, as well as content teachers specifically assigned to that academy. In addition to the career/lab experience, teachers would utilize problem-based instructional practices to integrate the standards, teaching them through the content and skill set specific to these fields. EDWorks has had success in the Valley with its collaborative effort to open the Youngstown Early College located on the campus of YSU. The YEC has outperformed all other programs in the Youngstown City School district.

iv. List the specific indicators that you will use to measure progress toward your desired outcome.

*These should be measurable changes, not merely the accomplishment of tasks. Example: Teachers will each implement one new project using new collaborative instructional skills, (indicates a change in the classroom) NOT; teachers will be trained in collaborative instruction (which may or may not result in change).*

Year 1: In grades K-8, teachers will implement one problem-based learning theme across contents per semester, for a total of two in year 1. The problem based learning theme will integrate the use of the mobile fab lab, and/or the satellite labs housed in the schools. For grades 9-12, teachers in the STEM + ME2 Academy, then the Early College, will use problem-based learning as a means to teach content for a minimum of 50 % of the standards. STEM education will be fully implemented, and Common Core State Standards/Ohio Learning Standards will be taught using interdisciplinary themes. Year 2: In grades K-8, teachers will implement one problem-based learning theme across contents per quarter, for a total of 4 in year 2. The problem based learning theme will integrate the use of the mobile fab lab, and/or the satellite labs housed in the schools. For grades 9-12, teachers in the STEM + ME2 Academy, then the Early College, will use problem-based learning as a means to teach content for a minimum of 75% of the standards. STEM education will be fully implemented, and Common Core State Standards/Ohio Learning Standards will be taught using interdisciplinary themes. Content will be taught through a 21st Century skill set, where students receive real-world education. Years 3+: In grades K-8, teachers will implement minimum of one problem-based learning theme across contents per quarter, for a total of 4 in year 3+(minimum). Teachers will continue to explore and improve upon existing PBL themes. The problem based learning theme will integrate the use of the mobile fab lab, and/or the satellite labs housed in the schools. For grades 9-12, teachers in the STEM + ME2 Academy, then the Early College, will use problem-based learning as a means to teach content for a 100% of the standards. STEM education will be fully implemented, and Common Core State Standards/Ohio Learning Standards will be taught using interdisciplinary themes.

v. List and describe pertinent data points that you will use to measure student achievement, providing baseline data to be used for future comparison.

Baseline quantitative data will be taken from 3rd grade reading scores, 5th grade math and science scores, 8th grade math and science scores and the data gathered from the ACT QualityCore?. Qualitative data will be taken from survey results developed by the program advisory committee that will measure the degree to which implementation and effectiveness of the problem based learning strategies that were given to teachers through professional development. Karen H. Larwin, PhD, will serve as evaluator for these grant activities. Dr. Larwin will collect, record, and analyze data, both formatively and summatively, in an effort to provide consistent evaluation of program outcomes. This work will include examining outcome measures which provide evidence of program impacts on participants, one year (or assessment measure) prior to program implementation through the full programming period. Outcome measures will be compared with scores from districts not part of the consortium. This difference-in-difference (DID) approach to evaluating the measures generated across the grant activity period will (1) provide formative feedback for identifying and implementing program improvements in an ongoing and timely manner; (2) will provide data trends longitudinally, using a multiple baseline approach, across the program period for both the participant group and the non-participant group; (3) will provide a non-participating comparison group for the purpose of generating control group (absence of any intervention) measures; and (4) will provide need data for addressing potential counterfactual support / evidence regarding the causal impact of program activities. Data will be evaluated and reported quarterly, and presented to the advisory committee made up of representatives from the partner districts and the other entities involved. The cost of Dr. Larwin's service is estimated at \$8,000 and is included in the budget.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

Evaluations and analysis of the data as listed including state assessments, ACT scores and qualitative surveys developed by the program advisory committee will be conducted by Dr. Karen Larwin to measure the level to which assumptions are realized. If the evaluations prove that the assumptions are false, or outcomes are not realized, data will be further drilled down to determine where weaknesses occur. The evaluation results, including Dr. Larwin's analysis, will be reported to the advisory committee, made up of representatives from all of the partners to determine further course of action and brainstorm other alternatives. Possible alternatives to inputs include additional professional development, increased mentorship and train-the-trainer models utilized, and increased use of satellite instructors within the consortium.

b. Spending reductions in the 5 year forecast

i. List the desired outcomes.

*Examples: lowered facility cost as a result of transition to more efficient systems of heating and lighting, etc.; or cost savings due to transition from textbook to digital resources for teaching.*

The partner districts will experience cost savings over the 5 year forecasts because of the opportunities created by the grant such as curriculum savings that are now purchased by the individual partner districts. The cooperative purchase of curriculum will result in shared resources that will no longer require individual school district purchases. Much of the equipment purchased through the grant will allow for savings by individual districts that are currently budgeting for such purchases that again can be purchased and shared through the grant. The MCCTC will save costs in the engineering program that are currently accounted for that will now be purchased as part of the fab lab located in the same building and will be made available for use by the students enrolled in the engineering program. The mobile fab lab that will be purchased through the grant will help districts save by eliminating the need to replace industrial technology labs and the required consumables that accompany those labs. The ESC will reduce personnel costs by one supervisor as a result of the creation of the academy. The supervisor will assume responsibility for directing the academy and will not be replaced at the ESC. All of the partner districts will reduce textbook costs for college credit plus classes through the cooperative purchase of textbooks and technology for use in the early colleges established through the grant. A total of \$355,643.00 per year is the estimated savings for the consortium districts created by the program. These reductions will be realized in both operational and purchased services as shown in the FIT table.

ii. What assumptions must be true for this outcome to be realized?

*Example: transition to "green energy" solutions produce financial efficiencies, etc.; or available digital resources are equivalent to or better than previously purchased textbooks.*

It is assumed that shared services and shared resources will result in cost savings for each of the partner districts. The ESC model of shared services is used as the basis for this assumption. Currently districts use the ESC to manage special education classrooms and provide curriculum supervision. Partner districts send students to those classrooms in share in the total cost of that classroom, resulting in the ability of the ESC to spread costs among the participating districts. They also rely on the ESC to provide curriculum supervision that they would not individually have the capacity to provide. The program will allow the partner districts to use the same concept to provide STEM education and the costs savings realized by the partner districts and the ESC, \$355,643.00 per year, will result in the ability of the consortium to sustain the costs created by the program. Research is also available in Ohio regarding other shared service models and the potential for savings, particularly those that use ESCs as the provider. They include: The Educational Service Center of Central Ohio provides a shared substitute teacher scheduling network to 11 school districts and a substitute teacher recruitment network to three districts. Olentangy Local Schools reports an estimated savings of about \$540 per day, or \$81,000 per year. The Medina County ESC employs eight registered nurses and licensed practical nurses, and 11 part-time health aides at 20 buildings in four participating districts. The ESC says that charges to the four districts total \$270,085, or approximately 65 percent of what the districts would otherwise have to pay if these employees were on the districts' pay scales. (Beyond Boundaries, 2012).

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

The educational service centers across the state of Ohio are a model for shared services and the cost reductions that member districts save as a result of creating efficiency for programs and services that can be costly for districts to provide on an individual basis. For example, ESCs currently provide special education units that are taught and supervised by the ESC. District send pupils to the units and pay on a per pupil basis. The ESC can therefore maximize efficiencies by covering the costs of the units by placing the maximum number of students from various districts in those units, therefore allowing districts that might not otherwise be able to cover costs because of a lack of students yet are required to offer the necessary services. A specific example is the use of the Mahoning County ESC alternative program. Districts send students who would otherwise be expelled from school as a "last chance" effort to help students that face many challenges graduate on time and have a chance to become productive members of society. The alternative program accepts students from districts all over Mahoning County and beyond. Besides teachers, administrators and service personnel, the alternative program uses a resource officer to help students with that may have criminal issues pending, a social worker that may help students with family or societal issues, school psychologists that can help determine special needs and help diagnose possible learning disabilities, a truant officer to help students avoid absenteeism and a security guards that make sure the environment is safe from issues inside and outside that may put students at risk. The total cost currently for districts to send students to the alternative program is \$89.00 per day. One student costs a district \$16,000.00. Struthers City Schools, a partner district in this grant, sends 9 students to the alternative program which is the most students from any one district in the county. It costs Struthers City \$144,000.00 for those students to attend. Average salaries alone, with no other operating expenses would total over \$300,000.00 depending on salary schedules and collective bargaining agreements. Use of the shared service alternative program results in savings per year for Struthers of over \$150,000.00. The same concept holds true for the STEM academy and the early college career pathways that will be established. Districts will save costs by using the shared service model to provide the same quality program that will meet students needs for STEM education because districts do not have the capacity, enrollment or financial resources to provide the same program. In 2012, the Kasich administration ordered a study to be conducted in Ohio surrounding shared service models. The report, chaired by Randy Cole of the Office of Budget and Management concluded that "Today, the education community is served by 55 educational service centers (ESCs), 22 information technology centers (ITCs) and eight education technology centers (ETCs) that, together, have more than 13,000 employees and a combined annual budget in excess of \$1.2 billion. Together, they also retain the experience and capacity to efficiently deliver extensive shared services offerings. These centers are the logical starting place for the regional provision of shared services for schools and local governments in core areas of technology, administration and educational support (Beyond Boundaries, 2012). The report also concluded "Shared services is a collaborative strategy

designed to optimize public resources - including staff, equipment and facilities - across jurisdictions. Because of its repeated demonstrated, effectiveness in reducing costs, improving service and increasing efficiencies, shared services approaches have been gaining support among policy makers" (Beyond Boundaries, 2012)

iv. List the specific indicators that you will use to monitor progress toward your desired outcome.

*These should be specific dollar savings amounts. THESE MUST MATCH THE COST SAVINGS AS PROJECTED IN THE FINANCIAL IMPACT TABLE (FIT).*

The formative analysis that will be used to measure the indicators will include review of quarterly financial statements to determine whether the reductions are being realized and at the rate that they have been assumed. The summative analysis will include yearly reviews of the 5 year forecasts from each of the partner districts to determine the effectiveness of the program in terms of cost reduction. There is significant research that supports the program established through the grant and its impact on student achievement. The budget has been developed to include all the necessary equipment and training to provide for a qualified STEM and Early college program that will raise student achievement and prepare a more qualified, skilled workforce for the local economy. The cost savings related to the implementation of a shared service program such as the one established have been previously vetted and will realize the same effect. Specific cost savings confirmed by districts in the consortium are as follows: MCCTC \$125,000 annually (software costs, licenses, and equipment); Austintown \$168, 643 annually (STEM Services currently purchased through MCEC); Canfield \$81,000 annually (attrition and retirements, personnel net savings and fringe benefits); Struthers \$81,000 annually (attrition and retirements, personnel net savings and fringe benefits).

v. List and describe pertinent data points that you will use to measure spending reductions, providing baseline data to be used for future comparison.

Quarterly financial reports from each partner district will be reviewed to determine the cost savings realized, and what rate towards the annual costs savings goal of \$355,643.00 for the consortium districts. Data points include reduction in personnel costs, curriculum/capital outlay, and purchased services. The cost savings related to the implementation of a shared service program such as the one established have been previously vetted and will realize the same effect. Annual reports will be reviewed to ensure cost savings per FIT Table. In FY '18, FY'19, FY'20, FY'21, and FY'22, \$355,643.00 annually for a total cost savings of \$1,778,215. Progress towards the goal will be evaluated quarterly towards the annual goal. Annual summative evaluation will also occur to measure cost savings for consortium members.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

The assumptions that are made regarding cost savings include the idea that shared services and shared resources result in cost savings. Based on the evaluation of the program, and study of the summative financial reports, which include the 5-year forecasts of consortium districts, including Austintown, MCCTC, Struthers, and Canfield. Representatives from those districts will meet quarterly to determine what changes to the program would be necessary to meet stated goals and outcomes. Annual summative meetings will also occur to determine progress towards cost savings for each fiscal year. Specific cost savings confirmed by districts in the consortium are as follows: MCCTC \$125,000 annually (software costs, licenses, and equipment); Austintown \$168, 643 annually (STEM Services currently purchased through MCEC); Canfield \$81,000 annually (attrition and retirements, personnel net savings and fringe benefits); Struthers \$81,000 annually (attrition and retirements, personnel net savings and fringe benefits). If assumptions prove false, or are not realized, the consortium representatives will determine where savings are not occurring, and evaluate the need to revisit the assumptions.

c. Utilization of a greater share of resources in the classroom

i. List the desired outcomes.

*Example: change the ratio of leadership time spent in response to discipline issues to the time available for curricular leadership.*

Problem based learning used for delivering stem content will reduce the need for textbook resources in the classroom. The use of electronic devices and simulators that will be purchased will have the capability to provide necessary resources in multiple content areas. The creation of the mobile fab lab will eliminate the need for each individual school district to acquire or purchase the same equipment. The 9-10 STEM academy located at the career center will allow each of the partner districts to use their current mode of transportation without adding additional runs. Students will have a wider choice of programs to attend with the creation of multiple early college programs at partner district sites, reducing the need for additional personnel in each district. Using the MCEC and MCCTC administration for leadership positions eliminates the need for the academy to hire administrators and allows for more resources to be used directly in the classroom

ii. What assumptions must be true for this outcome to be realized?

*Examples: improvements to school and classroom climate will result in fewer disciplinary instances allowing leadership to devote more time to curricular oversight.*

The following assumptions are made: Problem Based Learning is effectively used to deliver standards based content to increase student achievement for all students, utilization of shared resources to make it feasible for local districts that may otherwise struggle financially to provide proper PD (and required follow up/evaluation) and effective resources to deliver this instruction independently. The MCCTC houses 23 CT programs designed to educate students with skills necessary to qualify them for industry credentials and opportunities to gain college credit while in high school, utilizing Problem-Based Learning as part of a competency-based learning philosophy. The Youngstown Early College is an example of how students increase the chance of graduating and continuing on to college through the attainment of college credit while completing courses in high school. Participants in the College In High School program come from a three county area in NE Ohio. From 2007-2014, 1486 students ranging in ages 15-19 participated in the College in High School Program. Data indicates that 13.7 % of participants are high school juniors while 86.2% are high school seniors. Students complete anywhere from 1 to 26 college credit hours with the average credit hours being completed 6.16 (sd = 3.14). The mean grade point average for these participants is 3.85 (sd = .75) in their college level coursework. Preliminary results indicate that 78% of the students participating in the College In High School program are continuing on to a post-secondary degree and 53% of those graduating from their programs are continuing on to graduate school. These rates of completion are significantly higher than other local transition credit options (i.e., AP/dual enrollment). Thirty percent of the students are remaining at the local state university that provides and monitors the College in High School programming (Larwin, 2014).

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, etc), or how these are well-supported by the literature.

The Mahoning County Career Center is an example of how problem based learning can impact student achievement. the MCCTC is also a model for shared services and resources. There are 23 programs that are housed at the MCCTC where students from all over Mahoning

and surrounding counties can choose to attend to fulfill their interest in career based programs. The success rate for the students that attend are noted and accounted for within the Ohio CTC report cards. Currently the CTC has a job placement rate of 94.4%. The graduation and completion rates are 93.1% and 97.7% respectively. The assumption is that the students that participate in CTC programs are successful because of the rigor and relevance of their career technical programs which implement PBL strategies on a daily basis. 11th and 12th graders participate in the programs housed at the Career and Technical center. Currently Austintown utilizes the concept of using PBL in self contained STEM classrooms in the 7th and 8th grade. Formative assessments show that students are achieving growth targets at a rate higher than they did in previous regular classrooms. According to research, PBL does increase higher-level thinking skills of eighth grade students by requiring them to think about a problem critically and analysing data to find the solution. Also, based on students' opinions, they reported that PBL students tend to work better in group and are able to do better research on a topic (Geban, et. al.,2006). Problem Based Learning references include George (2013), finding that through problem based approaches to learning that even math deficient students can develop the skills to be successful and outperform students who do not enter program deficient. Students at the career center, who start programs as deficient in one or more academic areas frequently develop the required skills and achievement levels through the practical application of academic content in their program areas.

iv. Please provide the most recent instructional spending percentage (from the annual Ohio School Report Card) and discuss any impact you anticipate as a result of this project.

*Note: this is the preferred indicator for this goal.*

The instructional expenditures for the partner districts are as follows: MCCTC = 70.5% Canfield Local = 69% Austintown Local =78.3% Struthers City = 70.4% These are yearly calculations listed on the district report card. They will be monitored each year as formative assessments to determine if districts can raise the percentage of expenditures on instruction. The assumption is that districts will be able to use more of their budgets on direct instruction due to cost reductions created by the shared service innovative program Five year forecasts will be collected on a yearly basis as a summative assessment to determine if the projected outcome of a decrease in costs per pupil relative to the program established are being realized. The current expenditures per pupil for the partner districts are as follows: Canfield Local = \$7247 Austintown Local = \$8642 Struthers City = \$7932 The MCCTC does not measure costs per pupil The costs per pupil will decrease as a result of the cost savings generated by the innovative shared service program created by the grant. Any increases in the per pupil expenditure will be a result of the sustainability to support the program beyond the grant period. This will be reviewed quarterly, to measure reduction in costs outside of instruction, and spend dollars on direct instruction due to cost reductions created by the shared service innovative program.

v. List any additional indicators that you will use to monitor progress toward your desired outcome. Provide baseline data if available.

*These should be specific outcomes, not just the accomplishment of tasks. Example: fewer instances of playground fighting.*

List and describe pertinent data points for student achievement SMART Goal from Q9 (iv). The current instructional costs are as follows for the consortium members: MCCTC = 70.5% Canfield Local = 69% Austintown Local =78.3% Struthers City = 70.4% The goal for this innovated shared service program is to allow each entity to increase the percentage of instructional costs as a part of general expenditures by 1% each fiscal year. By fiscal year '22, each consortium member will increase percentage spent on direct instruction due to cost reductions created by the shared service innovative program The districts will be able to use the increases in instructional costs to increase student achievement. The data points to measure expected increases will include the achievement tests, end of course exams and college readiness assessments. The budget established by the program is aligned to the outcomes expected and the goals as listed. The costs per pupil for the partner districts is as follows Canfield Local = \$7247 Austintown Local = \$8642 Struthers City = \$7932 Per pupil expenditures will decrease based on the costs savings generated by shared services created by the innovative program. Those savings will lower the costs per student for those districts. Any increases in the costs per pupil will be the result of sustainability costs after the grant period.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

Dr. Karen H. Larwin will conduct ongoing quarterly formative and annual summative assessments, examining all program processes towards established goals, and promised deliverables, (which are listed in the logic model). Dr. Larwin is an Associate Professor and Quantitative Methodologist at Youngstown State University. She has been working in program evaluation since 2003 and has completed in excess of one hundred and fifty program evaluations/needs assessment reports in the areas of STEM. Dr. Larwin is recognized nationally as a quantitative methodologist, and serves as the chair the American Evaluation Association's quantitative section since 2006. Larwin is currently involved in overseeing a program evaluation and needs assessment for the United Way of the Mahoning Valley, focusing specifically on the educational and social services and needs for a large local community school system. For the current project, Dr. Larwin will continually monitor data sources (reporting quarterly) in an effort to determine if the assumptions and goals are on schedule to be met and if trends in the data indicate that the outcomes are approaching stated goals. If the assumptions have not been realized or the goals are not on track to be realized, a committee made up of representatives from the partner districts and the stakeholders (that are also included as partners in the project) will be convened to determine the strengths, weaknesses, opportunities and threats of the program, based on the most currently available outcome measures. In addition to outcome measures, fidelity of deliverables, participation dosage measures, beta-site engagement will be evaluated. SMART goals may be adjusted upward or downward, based on identified threats or weaknesses. An expansion of the program may be implemented based on strengths or opportunities that are evident at the various partner schools, based on the findings of the evaluation. The cost of Dr. Larwin's services is \$10000.

d. Implementing a shared services delivery model

i. List the desired outcomes.

*Examples: increase in quality and quantity of employment applications to districts; greater efficiency in delivery of transportation services, etc.*

Districts will increase efficiency and opportunities for students by participating in this Straight A innovative project. The partnering districts can provide many more opportunities for students through a shared service model that would be too costly to provide in each individual district. For example, assuming each district were to purchase equipment for use in a fab lab, the cost per district would not be justified for the amount of use and the amount of students affected. Through shared services, the ESC will purchase and maintain the vehicle and equipment, as well as employ the person responsible for the mobile lab. The grant will fund the initial purchases and the districts will pay a yearly maintenance fee for usage beyond the grant. Any other district that would like to participate other than the partner districts will be able to participate by paying an upfront fee and a yearly maintenance fee for sustainability, after FY '22. Districts will save in personnel, training, and equipment costs by participating in shared services rather than providing their own programs for as limited number of students. There

will be an increase in the percentage of students that will have access to STEM through shared resources, such as the mobile fablab. The MCEC is currently working with the partnering districts implementing shared services in many of the areas that are listed in the grant. For example, the MCEC purchased and provided professional development for the partnering districts in a program called Defined STEM that is used to deliver STEM content through the use of electronic devices in grades 6-12.

ii. What assumptions must be true for this outcome to be realized?

*Example: neighboring districts have overlapping needs in administrative areas that can be combined to create efficiencies.*

There is currently a shortage of available licensed personnel needed particularly in the areas of math and science in Ohio, as well as nationally (US Department of Education, 2015). A shared service model will allow districts the opportunity to have access to qualified personnel that might not exist on their own, or that may not be financially feasible. For example, the ESC could employ a teacher with a degree in engineering that is willing to obtain a teaching certificate for the 9-10 academy. The assumption is that each district would struggle to find personnel that meet those requirements. Participants in the local College In High School program come from a three county area in NE Ohio. From 2007-2014, 1486 students, whose ages are 15-19 years while in the College in High School Program. Data indicates that 13.7 % of participants are high school juniors (11th grade) while 86.2% are high school seniors (12th grade). Students complete anywhere from 1 to 26 college credit hours with the average credit hours being completed 6.16 (sd = 3.14). The mean grade point average for these participants is 3.85 (sd = .75) in their college level coursework. Preliminary results indicate that 78% of the students participating in the College In High School program continue to a post-secondary degree and 53% of those graduating from their undergraduate programs are continuing on to graduate school. These rates of completion are significantly higher than other local transition credit options (i.e., AP/dual enrollment). Thirty percent of the students are remaining at the local state university that provides and monitors the College in High School programming. Noteworthy is that the majority of students who have graduated from high schools are entering the STEM disciplines (43.5%). Of the 227 of those entering STEM disciplines, 66 have graduated with their bachelor's degree. Many of those who have not graduated are early in their formal college careers.

iii. Describe any early efforts you have made to test these assumptions (pilot implementation, data analysis etc), or how these are well-supported by the literature.

The MCCTC (Career and Technical Centers) is the best example of how a shared service provides opportunities for students that would not exist if each school district were required to purchase facilities, equipment and personnel for those opportunities. The MCCTC has a budget of \$23 million. The approximately 700 11-12 grade students from 12 school districts would not have access to the 23 career technical programs provided. The 9-10 academy as well as the early college opportunities that will exist through the grant will operate in the same manner and provide more opportunities in the same manner the CTC provides other opportunities for students that otherwise would not exist. The educational service centers across the state of Ohio are a model for shared services and the cost reductions that member districts save as a result of creating efficiency for programs and services that can be costly for districts to provide on an individual basis. For example, ESCs currently provide special education units that are taught and supervised by the ESC. District send pupils to the units and pay on a per pupil basis. The ESC can therefore maximize efficiencies by covering the costs of the units by placing the maximum number of students from various districts in those units, therefore allowing districts that might not otherwise be able to cover costs because of a lack of students yet are required to offer the necessary services. A specific example is the use of the Mahoning County ESC alternative program. Districts send students who would otherwise be expelled from school as a "last chance" effort to help students that face many challenges graduate on time and have a chance to become productive members of society. The alternative program accepts students from districts all over Mahoning County and beyond. Besides teachers, administrators and service personnel, the alternative program uses a resource officer to help students with that may have criminal issues pending, a social worker that may help students with family or societal issues, school psychologists that can help determine special needs and help diagnose possible learning disabilities, a truant officer to help students avoid absenteeism and a security guards that make sure the environment is safe from issues inside and outside that may put students at risk. The total cost currently for districts to send students to the alternative program is \$89.00 per day. One student costs a district \$16,000.00. Struthers City Schools, a partner district in this grant, sends 9 students to the alternative program which is the most students from any one district in the county. It costs Struthers City \$144,000.00 for those students to attend. Average salaries alone, with no other operating expenses would total over \$300,000.00 depending on salary schedules and collective bargaining agreements. Use of the shared service alternative program results in savings per year for Struthers of over \$150,000.00. The same concept holds true for the STEM academy and the early college career pathways that will be established. Districts will save costs by using the shared service model to provide the same quality program that will meet students needs for STEM education because districts do not have the capacity, enrollment or financial resources to provide the same program. A study conducted under the Kasich administration in Ohio concluded "Shared services is a collaborative strategy designed to optimize public resources - including staff, equipment and facilities - across jurisdictions. Because of its repeated demonstrated, effectiveness in reducing costs, improving service and increasing efficiencies, shared services approaches have been gaining support among policy makers" (Beyond Boundaries, 2012)

iv. List the specific indicators that you will use to monitor progress toward your desired outcomes.

*These should be measurable changes, not the accomplishment of tasks.*

*Example: consolidation of transportation services between two districts.*

Indicators include increase in third grade reading guarantee, increased achievement in math and science in grades 5 and 8, increase in ACT scores, increased graduation rate and increased college and career readiness for students in the Mahoning Valley and surrounding areas. Average ACT scores for both end of year courses and college entrance will be collected and compared annually. It is expected that student achievement will be higher each year. In grades 9-12, students will take the ACT QualityCore exam in English, Math, and Science. The data gathered from the ACT QualityCore will show upon graduation from high school, student readiness for college or workplace training programs. The tests given at the beginning and end of each year will provide formative data needed to drive instructional practice, and identify areas of strength and weakness. In mandated test areas, end of course exams at the high school level will be used to measure achievement, and it is predicted that scores will increase annually. Students in the 9th/10th grade Mahoning Valley STEM + ME2 will take the ACT two times, once at the end of 9th grade year, and once near the end of sophomore year. It is predicted that ACT scores will rise each year. The project is sustainable due to the shared-services model between the consortium and its partners, and the train-the-trainer format of the professional development. Each year, the consortium member will increase the percentage of dollars spent on direct instruction. By fiscal year '22, each consortium member will increase percentage spent on direct instruction due to cost reductions created by the shared service innovative program. This will lead to achievement of indicators.

v. List and describe pertinent data points that you will use to evaluate the success of your efforts, providing baseline data to be used for future comparison.

*Example: change in the number of school buses or miles travelled.*

Dr. Karen Larwin, psychometrician from Youngstown State University will be hired to monitor, compile and examine data as part of the evaluation of the project. Based on her reports, adjustments will be made to improve areas that show a need for improvement in the following areas: third grade reading guarantee, increased achievement in math and science in grades 5 and 8, increase in ACT scores, increased graduation rate and increased college and career readiness for students in the Mahoning Valley and surrounding areas. Quarterly financial reports from each partner district will be reviewed to determine the cost savings realized, and what rate. Data points include reduction in personnel costs, curriculum/capital outlay, and purchased services. The cost savings related to the implementation of a shared service program such as the one established have been previously vetted and will realize the same effect. Each year, the consortium member will increase the percentage of dollars spent on direct instruction. By fiscal year '22, each consortium member will increase percentage spent on direct instruction due to cost reductions created by the shared service innovative program. This will lead to achievement of indicators.

vi. How are you prepared to alter the course of your project if assumptions prove false or outcomes are not realized?

Dr. Karen H. Larwin will conduct ongoing quarterly formative and annual summative assessments, examining all program processes towards established goals, and promised deliverables, (which are listed in the logic model). Dr. Larwin is an Associate Professor and Quantitative Methodologist at Youngstown State University. She has been working in program evaluation since 2003 and has completed in excess of one hundred and fifty program evaluations/needs assessment reports in the areas of STEM. Dr. Larwin is recognized nationally as a quantitative methodologist, and serves as the chair the American Evaluation Association's quantitative section since 2006. Larwin is currently involved in overseeing a program evaluation and needs assessment for the United Way of the Mahoning Valley, focusing specifically on the educational and social services and needs for a large local community school system. For the current project, Dr. Larwin will continually monitor data sources (reporting quarterly) in an effort to determine if the assumptions and goals are on schedule to be met and if trends in the data indicate that the outcomes are approaching stated goals. If the assumptions have not been realized or the goals are not on track to be realized, a committee made up of representatives from the partner districts and the stakeholders (that are also included as partners in the project) will be convened to determine the strengths, weaknesses, opportunities and threats of the program, based on the most currently available outcome measures. In addition to outcome measures, fidelity of deliverables, participation dosage measures, beta-site engagement will be evaluated. SMART goals may be adjusted upward or downward, based on identified threats or weaknesses. An expansion of the program may be implemented based on strengths or opportunities that are evident at the various partner schools, based on the findings of the evaluation. The cost of Dr. Larwin's services is \$10000.

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

- a. New - Never before implemented
- b. Existing - Never implemented in your community school or school district but proven successful in other educational environments
- c. Replication - Expansion or new implementation of a previous Straight A Project
- d. Mixed Concept - Incorporates new and existing elements
- e. Established - Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

### C) BUDGET AND SUSTAINABILITY

11. Financial Information: - All applicants must enter or upload the following supporting information. The information in these documents must correspond to your responses in questions 12-19.

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

[Enter Budget](#)

b. If applicable, upload the Consortium Budget Worksheet (by clicking the Upload Documents link below)

c. Upload the Financial Impact Table (by clicking the Upload Documents link below)

[Upload Documents](#)

*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 of the workbook. Applicants must submit one Financial Impact Table with each application. For consortium applications, please add additional sheets instead of submitting separate Financial Impact Tables.*

977,000.00 12. What is the amount of this grant request?

13. Provide a brief narrative explanation of the overall budget.

*Responses should provide a 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.*

\$650,000 instructional equipment/ capital outlay (7 AST2 STEM Labs, \$70,000, Mobile Fab Lab \$150,000, Buckeye Fab Lab \$400,000, Welding Simulator \$20,000, Furniture is \$10,000). This portion of the project is for the necessary equipment required to implement the seamless K-12 STEM initiative. The equipment was purposefully chosen based on needs in Mahoning Valley in each age group. In grades K-6, the use of the satellite/mobile labs in the elementary schools (7 AST2 Labs) totals \$70,000. The mobile Fab Lab, which will be available for use in all grades, will cost \$150,000, including equipment and trailer. The Buckeye Fab Lab will be housed in the 9-10 STEM Lab, and will include all equipment/machines for preparing students for Advanced Manufacturing and Engineering. The welding simulator will be in the 9-10 STEM

Academy. Furniture, including student/teacher desks, book shelves, and lab stations. \$140,000 Instructional Supplies, textbooks, software (\$10,000 textbooks, \$50,000 chromebooks, \$50,000 miscellaneous technology, \$30,000 curriculum software). ASSET Curriculum, Defined Stem Gateway Training, and Project Lead The Way. Chromebooks, and required carts, will be purchased. Computers will be purchased for the STEM lab, for installation of software on non-application based technology. Support Services/Purchased Services \$110,000 (\$100,000 EdWorks/Early College Coordination, \$10,000 Youngstown State Dr. Karen Larwin Program Evaluation) EdWorks will be hired as a consultant, to provide facilitated planning and implementation of the Early College for the members of the consortium. Dr. Larwin will be compensated for evaluation of program, and will analyze data in determining program successes and deficiencies, as well as potential altered course, if required. \$29,000 Professional Development (PBL Training \$16,000, PLTW Training \$8000, Gateway Training \$3000, Summer Institute \$2,000) Project-Based Learning Training, Project Lead The Way, Gateway, and STEM Summer Institute, are all required professional development offerings for the purposes of this project. Facilities \$48,000 (renovation of existing lab, including HVAC and Electrical Upgrades. The 9th/10th STEM Academy will be housed at the Mahoning Valley Career and Technical Center, in an existing lab, which is approximately 7200 square feet. These costs are associated with renovation, as well as upgrades to the current facility.

14. Please provide an estimate of the total costs associated with maintaining this program through each of the five years following the initial grant implementation year (sustainability costs). This is the sum of expenditures from Section A of the Financial Impact Table.

155,468.00 a. Sustainability Year 1

156,776.00 b. Sustainability Year 2

158,128.00 c. Sustainability Year 3

159,520.00 d. Sustainability Year 4

160,960.00 e. Sustainability Year 5

15. Please provide a narrative explanation of sustainability costs.

*Sustainability costs include any ongoing spending related to the grant project after June 30, 2017. Examples of sustainability costs include annual professional development, staffing costs, equipment maintenance, and software license agreements. To every extent possible, rationale for the specific amounts given should be outlined. The costs outlined in this 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.*

FY 18-22 Sustainability Costs total \$790,852. This includes shared administration for the STEM Academy. Since the MCEESC is the fiscal agent, Doug Hiscox (MCEESC) will serve as Administrative Liaison to all school districts in the consortium. This figure includes his annual salary and cost of fringe benefits per year, per consortium member. Purchased services are also included in this figure, and represent the cost per year, per member of the consortium. Purchased services include maintenance and utilities, as well as professional development. This will cost each consortium member \$12,750 annually. As documented in the the Financial Impact Table, districts have the ability to sustain costs throughout their five year forecasts. yearly sustainability totals for the MCCTC are as follows, in FY 18 \$86,133.00, in FY 19, \$85,806.00, in FY 20, \$85,468.00, in FY 21, \$85,120.00, in FY 22, \$84,760.00 (supplies and materials, capital outlay), totaling \$427,287.00. Austintown Local has sustainability totals as follows, in FY 18, \$129,776.00, in FY 19, \$129,449.00, in FY 20, \$129,111.00, in FY 21, \$128,763.00, in FY 22, \$128,403.00 (purchased services) totaling \$515,726.00. Canfield Local has sustainability totals as follows, in FY 18, \$42,133.00, in FY 19, \$41,806.00, in FY 20, \$41,468.00, in FY 21, \$41,120.00, in FY 22, \$40,760.00 (salaries, wages, fringe benefits) totaling \$207,287.00 Struthers City has sustainability totals as follows, in FY 18, \$42,133.00, in FY 19, \$41,806.00, in FY 20, \$41,468.00, in FY 21, \$41,120.00, in FY 22, \$40,760.00 (salaries, wages, fringe benefits) totaling \$169,367.00

100 16. What percentage of these costs will be met through cost savings achieved through implementation of the program?

*Total cost savings from section B of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table. If the calculated amount is greater than 100, enter 100 here.*

17. Please explain how these cost savings will be derived from the program.

*Applicants who selected spending reductions in the five-year forecast as a goal must identify those expected savings in questions 16 and 17. All spending reductions must be verifiable, permanent, and credible. Explanation of savings must be specific as to staff counts; salary/benefits; equipment costs, etc.*

The Mahoning County Educational Service Center will provide an administrator, who will serve as a liaison among all districts involved in the consortium. The cost will be shared among all 5 entities, including MCEESC, MCCTC, Struthers City Schools, Austintown Local Schools, and Canfield Local Schools. Sharing an administrator will result in overall cost reduction among these entities, and will allow for seamless coordination of efforts and sustainability during after the grant period. Currently, Austintown purchases \$168,643 in STEM services annually from the Mahoning County Educational Service Center. Consolidated efforts through the grant will lead to all districts in the consortium sharing the cost of this service. Struthers and Canfield attrition and retirements will EACH save \$81,000 annually (salaries and fringe benefits), These positions will not be replaced through attrition, and will add to the overall cost savings per the consolidated effort and shared services. The Mahoning County Career and Technical Center will save \$100,000 annually in equipment purchases. The STEM Academy will provide opportunities for the equipment to be shared. This amounts to \$25,000 supplies, consumables, technology, and software annually. These savings for MCCTC (\$125,000 annually), Austintown (\$168,643 annually), Canfield (\$81,000 annually), and Struthers (\$81,000 annually) are for FY 18-22.

0 18. What percentage of sustainability costs will be met through reallocation of savings from elsewhere in the general budget?

*Total reallocation from section C of the Financial Impact Table divided by total sustainability cost from section A of the Financial Impact Table  
Note: the responses to questions 16 and 18 must total 100%*

19. Please explain the source of these reallocated funds.

*Reallocation of funds implies that a reduction has been made elsewhere in the budget. Straight A encourages projects to determine up front what can be*

replaced in order to ensure the life of the innovative project.

Not Applicable

## D) IMPLEMENTATION

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

*This response should include a list of qualifications for the applicant and others associated with the grant. Please list key personnel only. 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 Key Personnel information by clicking the link below:

[Add Implementation - Key Personnel](#)

*For Questions 21-23 please describe each phase of your project including its timeline, and scope of work.*

*A complete response to these questions will demonstrate awareness of the context in which the project will be implemented and the time it will take to implement the project with fidelity. A strong plan for implementing, communicating and coordinating the project should be apparent, including coordination and communication in and amongst members of the consortium or partnership (if applicable). Not every specific action step need be included, but the outline of the major steps should demonstrate a thoughtful plan for achieving the goals of the project. The timeline should reflect significant and important milestones in an appropriate time frame.*

21. Planning

a. Date Range 8/2015-1/2015

b. Scope of activities - include all specific completion benchmarks.

Plan activities associated with grades, for seamless K-12 STEM Education Program; Identify and solidify members of the consortium and level of commitment, reach out to partners, define their roles, and gain formal support; plan renovation for spring 2016; plan when equipment will be ordered, and installed; plan round 1 of professional development for STEM teacher leaders; schedule visitations to STEM designated schools; develop partnership with OSLN; communicate with consortium Superintendents, Principals, and Board Members progress towards goals and planning progress; coordination of staff requirements with consortium members; market STEM school to Mahoning County Schools for operation start date of fall 2016. Barriers include different district calendars and schedules of home schools involved in consortium; Integration of curriculum requirements for grades 9-12 in differing districts, as well as coordinating testing requirements for all member schools; professional development needed for staff on project based learning, and utilization of STEM Curriculum and resources early in project; identifying appropriate staff to become teacher leaders; training staff to utilize equipment; working with local bargaining units for smooth transition. Solution: Consistent communication to all partners and consortium members, identify and train administrator and teacher leaders that will model train-the-trainer. The CTC STEM Leaders will assist in planning and implementing K-12 STEM curriculum, and guide local educators to effective STEM resources. The amount of trained teacher leaders will increase each year through this model.

22. Implementation (grant funded start-up activities)

a. Date Range 8/2015-6/2016

b. Scope of activities - include all specific completion benchmarks

Communicate, administer, and manage project. The Project Coordinator will oversee appointed administrators shared among consortium members, to work with Principals and Curriculum Directors, ensuring alignment with district initiatives, and state standards and mandates. Counselors of each consortium member will also work together to ensure seamless transition between grades, and within the consortium, as kids progress through grades. Members will share administration, curriculum, resources, and teacher leaders, to expand project based learning and STEM education K-12 each year. MCCTC will utilize its assigned Marketing Consultant to promote STEM concurrently with CTC programs. The STEM lab for grades 9-10, to be located at the CTC, will be renovated and prepared for use as the STEM Academy. All equipment for the mobile/satellite labs mobile Fab-Lab, and STEM Lab will be purchased and installed. Curriculum will be purchased, and the first round of teacher leaders and administrators will be trained. Opening a new STEM School, while training teachers in existing schools proper STEM education techniques; Proper community and stakeholder outreach to local school districts; helping schools understand data, and implications on report card, and ensuring that the benefit of providing expanded STEM offerings to students outweighs the notion that districts may send students off site starting in grade 9. In elementary grades, teacher may have not received extensive science and math training, and may be reluctant to institute problem-based pedagogy. Solutions: proactive community outreach and stakeholder communication, and early identification and training of teacher and administrator leaders to serve as leaders in a train-the-trainer format.

23. Programmatic Sustainability (years following implementation, including institutionalization of program, evaluation and communication of program outcomes)

a. Date Range 8/2016-6/2021

b. Scope of activities - include all specific completion benchmarks

The use of the shared service model will ensure that costs created by the project will be sustainable. The budget shows how districts will aid in maintaining equipment costs and personnel associated with the program. The ESC will sustain the ability to provide professional development to any new teachers or any districts that wish to join the program. No additional personnel will be necessary beyond the grant period due to the integration of MCCTC personnel to meet the needs of increased enrollment at the STEM Academy. Baseline data will be gathered at the end of fiscal year 2016 from achievement tests, end of course exams and college entrance exams to measure student

achievement which be collected and reviewed at the end of every school year. Dr. Karen Larwin will evaluate the data and test assumptions and correlations. her reports will be reviewed at the last quarterly meeting of every fiscal year by the advisory committee which will include the Mahoning Valley STEM + ME2 Board of directors. Fiscal data has been gathered for FY 16 from the partner districts. The data includes current instructional expenditures as well as per pupil expenditures. Quarterly meetings will be held to review formative assessments of financial data to monitor progress and assumptions. The last quarterly meeting will include a review of each partner districts financial forecast to evaluate the effectiveness of the cost reduction plan established by the innovative shared service program. the budget for the STEM Academy will also be reviewed at the last quarterly meeting of each fiscal year. A representative from the project leaders will attend those meetings..The ESC, the MCCTC and the partner districts have worked engaged in shared services in some capacity for over 50 years. The administration among the partner districts have been actively involved in the planning of this project and have committed to working collaboratively to ensure its success.

## E) SUBSTANTIAL IMPACT AND LASTING VALUE

24. 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 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 Mahoning Valley STEM/Advanced Manufacturing Collaborative Innovative project will have a long lasting sustainable impact of the partner district as well as the organization that will act as the fiscal agent. There exists a clearly defined economic program that exists in the Mahoning Valley. There is a lack of skilled labor for the job opportunities that exist through the advanced manufacturing growth, the oil and gas industry and the tech belt that has been created by the business/technology incubator located in Mahoning County. The Mahoning Valley Manufacturing Coalition in conjunction with YSU, Eastern Gateway Community College, the MCCTC as well as many local school districts have partnered to build a manufacturing training center centrally located to consolidate training and increase the amount of skilled labor through efficiency in providing coordinated training efforts. The partner districts for this project will aid in providing more candidates that will either attend a partner university such as YSU that has a designated STEM college or enter enroll in the one of the programs that will utilize the training center to gain industry credentials that will enable them to obtain one of the many opportunities that exist in the new industries created. In aiding the the coalition and the universities and through the creation of a seamless STEM initiative, the partner districts will be able to expand opportunities for students, increases student achievement and reduce costs to taxpayers. The shared service model used to deliver problem based learning techniques will result in higher test scores, higher graduation rate and less costs. The end result will be more qualified candidates eligible to fill the many opportunities that exist in the valley. The Mahoning County ESC, as the fiscal agent for the program will be able to expand the services offered to member districts by duplicating the efforts put forth in the creation of the program and providing the same opportunities to districts outside of the partner districts listed in this grant opportunity. The implementation of problem based learning to deliver content standards and the resulting increase in student achievement will encourage districts to use more opportunities across curriculums to implement similar models. The use of pedagogy that is based on critical thinking will be a systemic change to the districts involved. The concept of shared services in Mahoning County is not unusual and many districts already participate in shared services mainly involving the education of students with special need. The ESC has always coordinated those efforts. Shared services that involve regular education students as well as coordinated efforts to share equipment will be a relatively new concept. If the assumptions are realized and the evaluation of the program results in meeting the goals set for th, the opportunities to expand the program will be easily attainable.

25. Please provide the name and contact information for the person and/or organization who will oversee the evaluation of this project.

*Projects may be evaluated either internally or externally. However, evaluation must be ongoing throughout the entire period of sustainability and have the capacity to provide the Ohio Department of Education with clear metrics related to each selected goal.*

Please enter your response below:

(Internal) Ronald J. Iarussi Ed.D Mahoning County Educational Service Center 100 DeBartolo Pl. Youngstown, OH 44512  
r.iarussi@mahoningesc.org 330-965-7828 (External) Dr. Karen Larwin Youngstown State University 1 University Plaza Youngstown, OH  
44555 khlarwin@ysu.edu 330-509-5266

26. Describe the overall plan for evaluation, including plans for data collection, underlying research rationale, measurement timelines and methods of analysis.

*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 shortfall. The applicant should provide information on how the lessons learned from the project can and will be shared with other education providers in Ohio. Note: A complete and comprehensive version of the evaluation plan must be submitted to ODE by all selected projects.*

Dr. Larwin will collect, record, and analyze data, both formatively and summatively, in an effort to provide consistent evaluation of program outcomes. This work will include, but not be limited to, examining outcome measures which provide evidence of program impacts on participants, one year (or assessment measure) prior to program implementation through the full programming period. Additionally outcome measures will be compared with non-participating students/classes/buildings. This difference-in-difference (DID) approach to evaluating the measures generated across the grant activity period will (1) provide formative feedback for identifying and implementing program improvements in an ongoing and timely manner; (2) will provide data trends longitudinally, using a multiple baseline approach, across the program period for both the participant group and the non-participant group; (3) will provide a non-participating comparison group for the purpose of generating control group (absence of any intervention) measures; and (4) will provide need data for addressing potential

counterfactual support / evidence regarding the causal impact of program activities. A data will be evaluated and reported quarterly, and presented to stakeholders and funders. In addition to standardized measures/assessments, data for inclusion will include dosage measures, activity monitoring reports, and fidelity of implementation measures. In addition to standardized measures/assessments, data for inclusion will include dosage measures, activity monitoring reports, and fidelity of implementation measures. Baseline data will be gathered at the end of fiscal year 2016 from achievement tests, end of course exams and college entrance exams to measure student achievement which be collected and reviewed at the end of every school year. Dr. Karen larwin will evaluate the data and test assumptions and correlations. her reports will be reviewed at the last quarterly meeting of every fiscal year by the advisory committee which will include the Mahoning Valley STEM + ME2 Board of directors. Fiscal data has been gathered for FY 16 from the partner districts. The data includes current instructional expenditures as well as per pupil expenditures. Quarterly meetings will be held to review formative assessments of financial data to monitor progress and assumptions. The last quarterly meeting will include a review of each partner districts financial forecast to evaluate the effectiveness of the cost reduction plan established by the innovative shared service program. the budget for the STEM Academy will also be reviewed at the last quarterly meeting of each fiscal year. Quarterly financial reports from each partner district will be reviewed to determine the cost savings realized, and what rate. Data points include reduction in personnel costs, curriculum/capital outlay, and purchased services. The cost savings related to the implementation of a shared service program such as the one established have been previously vetted and will realize the same effect.

27. Please describe the likelihood that this project, if successful, can be scaled-up, expanded and/or replicated. Include a description of potential replications both within the district or collaborative group, as well as an estimation of the probability that this solution will prove useful to others. Discuss the possibility of publications, etc., to make others aware of what has been learned in this project.

*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 this 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 noted here.*

The likelihood for scale up, expansion, or replication is high. The Mahoning ESC and consortium members have researched other STEM programs within Ohio, including reaching out to Ohio STEM Learning Network (OSLN). OSLN has had experience in research-based implementation of STEM and Problem-Based Learning, and uses a network approach to introduce key elements and allow for change. The Mahoning County ESC is a shared-services hub, and is innovative in ways to minimize financial obligations, while maximizing output for Mahoning County schools. Strong partnerships have been developed, in favor of the goals of the proposal, in hopes of generating a skilled workforce, and students that are college-ready. The consortium will collaborate to provide relevant, sustainable professional development for local teacher-leaders, who will in-turn educate others in a train-the-trainer format. MCESC will continue to connect with other STEM school, both in Ohio and nationally MCESC and members of the consortium will become local experts, and the source of sustainable teacher leadership for STEM and PBL in the county. It is anticipated that the already strong partnerships between the MCESC and local districts will continue to expand upon STEM education efforts fostered by the grant. The Ohio STEM Learning Network will consult with project leaders and implementers to advise consortium on professional development and STEM related programs. As a result, OSLN, Akron Hub can share program results with other STEM regions across the state about similar projects and referrals for implementation. Dr. Karen Larwin and Dr. larussi have published two articles together and will publish the evaluation of the project within 5 years of implementation. Possible journals include ESC associations both statewide and nationally. Other possible journals include the Journal of Education Research and American Education Research Journal. The partners will apply to present at the Ohio School Boards Conference, the Ohio Educational Service Center annual conference, the national School Boards Conference and the National ESC conference. Information will be shared locally on a monthly basis at ESC superintendents meetings.

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).

Dr. Ronald J. larussi, Ed.D, Superintendent, MCESC/MCCTC December 1, 2015

Consortium

Mahoning County ESC (048280) - Mahoning County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

**Consortium Contacts**

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
Joseph	Nohra	330-750-1061	joseph.nohra@strutherscityschools.org	Struthers City	044859	99 Euclid Ave, Struthers, OH, 44471-1831	
Ronald	Iarussi	330-965-7908	r.iarussi@mahoningesc.org	Mahoning Co Career & Tech Ctr	051243	7300 N Palmyra Rd, Canfield, OH, 44406-9746	
Mara	Banfield	330-402-7023	mara.banfield@mahoningctc.com	Mahoning Co Career & Tech Ctr	051243	7300 N Palmyra Rd, Canfield, OH, 44406-9746	
John	Tullio	330-702-7029	jtullio@canfieldschools.net	Canfield Local	048314	100 Wadsworth St, Canfield, OH, 44406-1451	
Vince	Colaluca	330-797-3900	aust_vsc@access-k12.org	Austintown Local Schools	048298	700 S Raccoon Rd, Youngstown, OH, 44515-3536	

## Partnerships

Mahoning County ESC (048280) - Mahoning County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections

## Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
James P.	Tressel	330-941-3102	cmbell02@ysu.edu	Youngstown State University		1 University Plaza , Youngstown, Ohio, 44555	
Jessica	Borza	330-853-7906	jborza@tpma-inc.com	Mahoning Valley Manufacturer's Coalition		13520 Black Road , Lisbon, OH, 330-853- 7906	
Julie	Michael Smith	330-599-4591	jsmith@vistaast.com	ASTII		241 W. Federal Street, , Youngstown, OH, 44503	
Jimmy	Bruce, Ed.D	740-264-5591 x. 1801	jbruce@egcc.edu	Eastern Gateway Community College		4000 Sunset Blvd. , Stubenville, Ohio, 43952	
Chuck	Pollington	513-824-6016	pollingtonc@edworkspartners.org	EdWorks		1 West 4th Street Suite 200 , Cincinnati, OH, 45202	
Karen	Larwin, Ph.D	330-509-5266	khlarwin@ysu.edu	YSU College of Education		1 University Plaza , Youngstown, OH, 44555	
Aimee	Kennedy	614.424.5827	kennedya@battelle.org	BattelleEd/OSLN		505 King Ave , , Columbus, OH, 43201	

Implementation Team

Mahoning County ESC (048280) - Mahoning County - 2016 - Straight A Fund - Rev 0 - Straight A Fund

Sections 

**Implementation Team**

First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Education	% FTE	Delete Contact
Karen	Larwin, Ph.D	Professor at YSU/Psychometrician	Dr. Karen H. Larwin will conduct ongoing quarterly formative and annual summative assessments, examining all program processes towards established goals, and promised deliverables, (which are listed in the logic model). For the current project, Dr. Larwin will continually monitor data sources (reporting quarterly) in an effort to determine if the assumptions and goals are on schedule to be met and if trends in the data indicate that the outcomes are approaching stated goals. If the assumptions have not been realized or the goals are not on track to be realized, a committee made up of representatives from the partner districts and the stakeholders (that are also included as partners in the project) will be convened to determine the strengths, weaknesses, opportunities and threats of the program, based on the most currently available outcome measures. In addition to outcome measures, fidelity of deliverables, participation dosage measures,	Dr. Larwin is an Associate Professor and Quantitative Methodologist at Youngstown State University. She has been working in program evaluation since 2003 and has completed in excess of one hundred and fifty program evaluations/needs assessment reports in the areas of STEM, K-12 education, transition credits, health education, et cetera. Dr. Larwin is recognized nationally as a quantitative methodologist, and serves as the chair the American Evaluation Association's quantitative section since 2006. She is formally trained in advanced quantitative and qualitative methods, psychometrics, and measurement theory, and has taught graduate level course in these areas since 2006. Dr. Larwin is currently involved in overseeing a program evaluation and needs assessment for the United Way of the Mahoning Valley, focusing specifically on the educational and social services and needs for a large local community school system.	She serves as the REEP evaluator, and recently completed a multi-year community health education evaluation through the OCMH (PACE Akron's Way), providing quarterly formative reports and needs assessments, and summative reports annually. Dr. Larwin has also worked as a program/process evaluator for a four year Federal HRSA grant, which focused on a community-wide health education campaign. Most recently, Dr. Larwin completed a decade long county-wide study of the impact of open-enrollment services for under-served populations in Mahoning County as well as an eight year evaluation of the STEM developmental program delivery at Youngstown State University. In addition to her evaluation work, Dr. Larwin has published dozens of articles and presented both nationally and internationally the results of her work. Dr. Larwin is considered to be an expert in the use of data across all analytical levels, utilizing the full spectrum of quantitative and mixed methods approaches.	Bachelor Degree in Psychology/Minor in Math Masters in Evaluation and Measurement PhD in Evaluation, Measurement, and Statistics	5	

			beta-site engagement will be evaluated. Measures will be evaluated both holistically and for each location in order to fully understand what impacts and goals are and are not being realized, and at which locations either positive and negative outcomes are being revealed.					
Blaise	Karlovic	Treasurer, MCCTC/ESC; Project Fiscal Director	Will ensure fiscal sustainability is met. Will ensure yearly costs savings are tracked against data steps for annual sustainability costs.	Treasurer for MCCTC for 9 years; Treasurer of ESC and MCCTC combined for 3 years. 17 total years school business experience.	MCCTC, ESC, and 3 Community Schools associated with ESC, manages budget of \$80,000,000.	BSBA in Business Administration and Accounting. MBA in Finance	15	
Doug	Hiscox	Assistant Curriculum Director, MCEC	Serve as the District Administration Liaison through shared services model. Will coordinate and	Youngstown City School District - Deputy Superintendent for Academic Affairs 2011- 2015 Youngstown, Total student population - 5,400 students NewLife Academy - Chief Academic Officer 2008 - 2011 East Liverpool, Ohio Bridgeport Public School District - Assistant Superintendent 2005 - 2008 Bridgeport City Schools, Bridgeport, Connecticut Total student population - 23,742 East Liverpool City School District - Superintendent 2002 - 2005 East Liverpool, Ohio Total student population - 3,074 students Canfield Local School District - Superintendent 1998 - 2002 Canfield, Ohio Total student population - 3,120 students	Developed and/or supported, District "Choice Programs", Implemented STEM grades 6-12 and and Visual and Performing Arts grades 6-12, Directed Youngstown early College Rayen Early College and "Discovery" grade 3-8", College in High School, Supervised Choffin Career and Technical Center. Managed all operations and curriculum for all districts for which he served as superintendent.	1995 - 2002 Kent State University - Curriculum and Instruction - Ph. D. program 2010 - 2015 Youngstown State University - Education Admini	15	
Ronald	Iarussi, Ed. D	Superintendent, MCEC/MCCTC	Dr. Iarussi will handle project oversight and partnership development. As	Dr. Iarussi is currently the superintendent for the Mahoning County ESC and the	The Mahoning County Educational Service Center is used throughout the grant as a shared	Bachelors Degree in Sociology and Economics, Youngstown	25	

school's leader, Dr. larussi will ensure project aligns with school/district's overall mission and improvement plans. He will manage project budget, conduct walk-throughs and observations to continually provide formative and summative feedback for staff regarding implementation of blended instructional model. He will work closely with Project Manager to ensure all project outcomes are completed on time and within budget. He is the direct supervisor of Project Manager. They will meet regularly to review progress, address barriers and Dr. larussi will support Project Manager in ensuring project success. Dr. larussi will facilitate school/district's Project Leadership Team which includes himself, the Project Manager, and the advisory committee made up of members from the partner districts. These meetings will focus on monitoring progress and reporting outcomes. Dr. larussi will continue to reach out to new partners in Ohio and globally to provide new opportunities and experiences for collaboration for district partners and students.

Mahoning County Career and Technical Center. he was formerly the superintendent for the Columbiana Exempted Village School District. He has over 16 years of administrative experience.

service model. Dr. larussi has been the superintendent of the MCEC for 6 years. Over the 6 year period, the ESC operating budget has grown to over \$30,000,000.00. The growth in the budget is due to the expansion of shared services that include the Mahoning Valley Regional Council of Governments, a shared substitute teacher service for local school districts, ACCESS, which is the ITC that is shared by districts in both Mahoning and Columbiana County, the Mahoning County Employees Insurance Consortium which provides healthcare to employees in 11 school districts and three community schools that provide alternative education through shared resources. Included in that budget is over \$6,000,000.00 in federal, state and project based grants that are managed and reported on yearly. In 2014, Dr. larussi also was appointed as superintendent of the Mahoning County Career and Technical Center. The shared administrative model is only the second of its kind across the state of Ohio. The MCCTC has an operating budget that exceeds \$30,000,000.00 as well. Of that budget, \$360,000.00 is received from the federal Perkins grant allocated specifically for Career and Technical Programs.

State University, 1988 Masters Degree in Educational Administration, Ashland Univer

Mara	Banfield	Principal, Curriculum & Instruction MCCTC (Director of Project Curriculum and Professional Development Coordinator)	Oversee daily operations of STEM + ME2 Academy. Curriculum Director for the Academy. Coordinates all professional development, and teacher leader train-the-trainers. Tracks usage of Mobile Fab Lab among consortium members. Works directly with ESC Technology Coordinator for technical assistance and maintenance of technical resources. Assists with staff hiring and placement. Coordinator of College Credit Plus.	6 years administration experience in grades 5-12 in Mahoning County. High School Science teacher (previous). OTES State-Trainer, teaching several hundred local administrators and teachers the OTES model. Worked as Instructional Consultant for Curriculum, assisting local Superintendents and Principals in curriculum alignment and preparation for Next Generation Assessments. Currently in charge of Curriculum and Instruction for the MCCTC, including standards alignment, OTES, testing, and CT Programs. Prior to education, worked as Public Education Specialist for the Geauga Soil and Water Conservation District. In charge of all grant writing for the GSWCD.	Previous grant-writing and implementation experience, Public Relations and Outreach, Curriculum and Instruction Leader. OTES State-Trainer, teaching several hundred local administrators and teachers the OTES model. Worked as Instructional Consultant for Curriculum, assisting local Superintendents and Principals in curriculum alignment and preparation for Next Generation Assessments. Prior to education, worked as Public Education Specialist for the Geauga Soil and Water Conservation District. In charge of all grant writing for the GSWCD.	Superintendent License, Ashland University. Principal License Grades 5-12 (Ashland. Integrated Science License Grades 7-12 (Cleveland State)	25
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