

Budget

Columbiana County ESC (046417) - Columbiana County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (306)

U.S.A.S. Fund #:

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

Purpose Code	Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction		0.00	0.00	435,380.00	270,170.00	184,300.00	0.00	889,850.00
Support Services		0.00	0.00	76,200.00	0.00	0.00	0.00	76,200.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		0.00	0.00	9,200.00	0.00	0.00	0.00	9,200.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	520,780.00	270,170.00	184,300.00	0.00	975,250.00
Adjusted Allocation								0.00
Remaining								-975,250.00

Application

Columbiana County ESC (046417) - Columbiana County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (306)

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

A) APPLICANT INFORMATION - General Information

1. Project Title:

Columbiana County Schools Inspire, Innovate, and Invent (Project Inspire)

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

Project Inspire is an innovative, effective model that will provide an increase in shared STEM resources and services, as well as raise student achievement in the classrooms of the Columbiana County Consortium K-12 schools through an emphasis on teaching and learning crucial 21st century skills: creativity and innovation; critical thinking and analysis; research; identifying and solving authentic problems; working together as a team to attain a common goal; communicating effectively orally and in writing (21st Century Skills). The network based innovative program, INVENTORcloud, (IC), in partnership with Youngstown State University STEM College (YSU), Kent State Salem Campus (KSU), Eastern Gateway Community College (EGCC), and businesses including AST2 , The Mahoning Valley Manufacturer's Coalition, and the Salem Regional Medical Center will expand STEM opportunities to 7,018 students in eight county districts, including the Columbiana County Career and Technical Center, providing students a learn anywhere, anytime model to improve 21st century skills by employing design, production, and iteration now and for future generations. IC in grades K-8 will capture the attention of students with a stimulating real world problem based integrated curriculum that builds excitement, cultivates creativity and high interest in STEM content and process leading to student success across the curriculum while providing teachers with an invigorating approach to instruction.

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

7018 3. Total Students Impacted:

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

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

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

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

First Name, last Name of contact for lead applicant
Anna Marie Vaughn

Organizational name of lead applicant
Columbiana County Educational Service Center

Address of lead applicant
38720 Saltwell Rd., Lisbon, OH 44432

Phone Number of lead applicant
330-424-9591

Email Address of lead applicant
avaughn@ccesc.k12.oh.us

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

- Yes
 No

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

educational service center.

[Add Consortium Members](#)

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

Yes

No

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

[Add Partnering Members](#)

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

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

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

The current state or problem to be solved; and

Columbiana County is a rural, high poverty, Appalachian area lacking student access to state of the art technology, yet poised for marked economic growth unseen since the demise of the steel industry in the 1970s. College and Career readiness is a need identified through the high school-higher education consortium project. Less than 10% of the county has a college degree. Career training through associate degrees, certification training for skilled labor, and apprenticeships are demanding career ready high school graduates. STEM 21st Century Skills are in critical demand as the county is the epicenter for shale drilling, oil refinement to provide energy to other parts of the country, pipeline construction, and expansion of auxiliary industries. The Salem Regional Medical Center is constructing additions to serve the growing health needs and as the largest employer in the Salem area, needing STEM skilled health care workers. Project Inspire will address the critical need to improve student achievement and meet Ohio's New Learning Standards and Next Generation Assessments, as well as the CCSS anchor standards for college/career readiness. Utilizing sustainable shared resources and services in 8 consortium districts to serve 7,018 students will give small, rural K-12 district students access to a much needed STEM program that would otherwise not be possible, addressing the need for anytime, anywhere learning with Distance Learning (DL). Personalized learning based on student interest and need will increase student self-motivation, goal setting, and self-evaluation. Project Inspire will meet the needs of college-career ready students for today and tomorrow.

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

A Fall 2014 STEM pilot, implemented with the INVENTORcloud (IC) curriculum at consortium member Crestview High School has been successful in meeting the critical needs of county students within that high school. Student enrollment, interest and performance increased. Building on the success of that model, the Columbiana County Consortium of 8 small rural districts and Career Center, will implement a seamless STEM K-12 program to meet students' diverse needs with cost savings made possible only through a shared resource and service model. Students will complete high school and college dual credit at no cost to them. IC's rigorous, hands-on, project- problem-based comprehensive curriculum is aligned with Ohio and National standards, developed and updated by subject matter experts, including university educators and engineering, biomedical professionals. IC emphasizes 21st Century Skills: critical thinking, creativity, innovation and authentic problem solving. The hands-on learning engages students on multiple levels, exposing them to areas of study that they may not otherwise access, providing them with a foundation and proven path to post-secondary training and career success in STEM-related fields. IC will introduce new strategies through intensive Professional Development. Teachers will evolve as facilitators. IC will focus on Ohio's New Learning Standards with content integrated problem based learning (PBL) and modern analytical, research, and prototyping equipment in a collaborative, student centered, hands-on environment to focus on critical 21st Century Skills. Project Inspire's research based IC curriculum, an innovative, highly motivating STEM program, will provide the knowledge and skills for students to research and solve authentic problems collaboratively in class and through the network for anywhere, anytime learning. Working in teams, students employ the design process to research, investigate, and evaluate information. Critical thinking skills are used to analyze, compare/contrast, and strategize. Teams design solutions and build prototypes; test and evaluate their prototypes; refine and rebuild them with rubric scoring and instructor feedback. Teams communicate their findings and demonstrate their prototypes in their own classrooms as well as with consortium sites via Distance Learning (DL). During the build process, district teams create CAD drawings of prototypes, work with classroom teachers and lab managers at the CCCTC production lab to build prototypes on 3-D printers, laser cutters, and CNC routers. In fall of 2014, each consortium HS will enroll 15 students and more than double this number by January 2015, when a new course is added. EGCC will provide college credit at the CCCTC for a manufacturing certificate. YSU will provide college credit for IC coursework and IC PD teacher trainings. IC K-6 provides authentic problem solving in an integrated, cross-curricular model implemented by IC trained classroom teachers while MS will be a 9 week rotation course forma with all K-8 inventions produced at the hub lab. Utilizing K-8 IC will foster 21st Century skills at an early age, preparing students for robust high school and college level courses, laying a critical foundation for college/career readiness. Project Inspire will meet the needs of college-career ready students for today and tomorrow.

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

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

Student achievement (Describe the specific changes in student achievement you anticipate as a result of this innovation (include grade levels,

content areas as appropriate) in the box below.)

Goal: Students Achievement Student achievement grades K-12 will improve in the following areas: a. Through observation, teachers will document student improvement in the ability to collaborate and work together as members of a team to achieve a common goal; b. Through the implementation of individual and team journals and integrated language arts lessons within the IC curriculum, students will demonstrate the improved ability to analyze; compare/contrast; research effectively; and use details, examples, and facts/figures to reach logical conclusions; c. Through observations, models, projects, and presentations in all grade levels, students will demonstrate the ability to be creative and innovative problem solvers as they identify specific problems and investigate solutions; d. Student achievement in language arts, specifically reading and writing, will improve by a minimum of three percentage points on OAA and OGT assessments; Student achievement in science and math will improve by a minimum of three percentage points on Ohio's next generation assessments as students apply lessons in science and math that align to Ohio content standards and common core standards at each grade level

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

We will have no spending reductions.

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

Goal: Shared Resources Utilizing a greater share of resources through a consortium of 8 small rural district/CCCTC will enhance classrooms for 7,018 K-12 students. Shared resources: 1. Personnel- districts in Columbiana County will share the IC program instructor and two production lab interns working with all teachers and students in the county. Districts will share Columbiana County ESC project director, Ed. Tech and technology personnel, consultants in science, math, and language arts and evaluator services. AMI lab staff and educational consultants will support Columbiana County teachers and students with professional development and follow-up, classroom visits, support for and upgrading of equipment. 2. Time- AMI's cloud network will allow teachers and administrators to collaborate more easily and efficiently by allowing them to work together without having to travel. This has the added benefit of saving districts money. Students will be able to work collaboratively in an time efficient and effective anytime, anywhere learning environment. AMI educational consultants will provide each district with on-site visits during each quarter to observe classes, discuss ideas and concepts, and update resources. 3. Course offerings- all districts in Columbiana County will have access to: a. Exploring the Engineering Way Gr.3 b. Problem Solving Through Design Gr.4 c. The Science In Energy Gr.5 d. Engineering and Physical Sciences Gr.6 e. Designing Solutions for Today and Tomorrow Gr.7 f. Things STEM Gr.8 g. K- 2 Modules- developed with classroom teachers to meet specific needs of districts h. Design, Decisions, and Problem Solving- Gr. 9-10 i. Innovation, Creativity, and Design Thinking- Gr. 10-12 j. Environmental Sustainability- Gr. 11-12 k. Creative Entrepreneurship- Gr. 11-12 l. Additive Manufacturing- Gr. 11-12 m. Innovations in Biotechnology- Gr. 11-12

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

A shared service delivery model will increase efficiency, effectiveness, long-term sustainability, and scalability through Project Inspire's strong 12 year history of a collaborative consortium supported by business, community, and university partnerships, now expanding for this STEM initiative to support our students. Shared Services Model includes: 1. Collaboration Teachers will have the ability and opportunities to collaborate, share ideas and successes, and compare experiences. Collaboration will be facilitated through use of the AMI cloud network and in-person sessions. Students will work in collaborative teams, much needed for future careers, to solve authentic problems through the design and production of an invention. The IC cloud network and DL will allow anywhere, anytime collaborations. Management team members will share efforts and share responsibilities described in #16 for Project Inspire, working closely with the project director, the Board of Directors, and district personnel to ensure the timelines are met and the project is monitored and adjusted as needed. 2. Shared intensive PD in the summer will be a trainer to train model with the IC teacher, lab interns, and 3 teachers from each district to expand the number of teachers trained over time and provide new teachers with PD. Two follow days will support increased effectiveness and efficiency of PD, as well as building in a PD model for long term sustainability with easy replication for expansion beyond the county. 3. The IC teacher, and lab interns will provide services shared for each district. 4. The production hub at the CCCTC share purchased state of the art technology to build all K-12 student inventions. 5. Shared agreements provide college credit to all HS and CCCTC students through 2 universities and 1 community college, expanding those partnerships from other projects, a history speaking to sustainability.

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

- New - never before implemented
- Existing: Never implemented in your community school or school district but proven successful in other educational environments
- Mixed Concept: Incorporates new and existing elements
- Established: Elevating or expanding an effective program that is already implemented in your district, school or consortia partnership

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

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

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

[Enter Budget](#)

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

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

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

Upload Documents

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

The Lead Consortium Member (Columbiana County Educational Service Center) does not have a Reporting Metric.

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

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

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

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

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

975,250.00 State the total project cost.

* Provide a brief narrative explanation of the overall budget.

Capital Outlay: The capital outlay will be used to create an shared InventorCloud (IC) lab at the Columbiana County Career and Technical Center (CCCTC) that will be used to print each of the of the consortium districts projects. Equipment included in this lab will be 3D printers(8), laser engravers (2), CNC Router, and Storm Boxes (2). Each district will also need to have a Storm Box to communicate with the lab at the CCCTC where all 3D printing will occur. Establishing one central IC lab that all school districts can use makes this project feasible, as no single district could afford to do this. All projects created with this curriculum in grades K-12 will be sent to and produced at the lab. Additionally, each district will have a Polycom video conferencing unit. The video conferencing units will allow a single shared instructor to deliver the IC classes to all members of the consortium, thus sharing the costs of a single teacher. Instructional Purchased Services: Instructional purchased services will include the costs for each of the district to participate and use the curriculum of IC at both the high school and K-8 levels. Through our agreement with AML, districts will receive Inventor Cloud curriculum for three years with this grant. In years 4, 5, and 6 the individual districts will be purchasing the high school and elementary curriculum. This will also include salaries and benefits for one teacher and two interns that will be hired by CCCTC for year one. After year one, these costs will moved to salaries and benefits shared by each of the districts. Support Services - Purchased Services: Support purchased services will include: (1) Consultants will provide the needed curriculum support to carry out the STEM initiative so that all is aligned with Ohio standards (2) Technologist will provide training and support of technology as well as be in charge of career exploration through distance learning equipment (3) Project Director whose duties include ordering all supplies and materials, installations of labs, and coordinate all activities between schools and support personnel. (4) External grant evaluator will be responsible for collecting and analyzing all grant data to complete the summative evaluation. Supplies: The supplies that are being requested are to set up the IC classroom at the CCCTC and also the classrooms in each district. Each district will have an IC classroom at the high school where students will work on projects that will then be submitted to the CCCTC. Included in the supplies will be 4 workstations at the schools equipped with computers, classroom video projectors, large screen TVs, and cameras. Districts will be picking up all reoccurring costs after year one to include training and supplies. Each district in the consortium will also be equipped with two mobile carts with 30 devices, one at the elementary and another in the junior high, to access the anywhere, anytime online curriculum provided by IC. All equipment ordered will come with a three year warranty. Beyond year three we have built in equipment maintenance costs for each district. Professional Development: The professional development costs to our grant are somewhat limited as IC will provide all PD to our staff. The only costs we will incur will be two days of stipends in the summer and two days of subs during the school year. Each district in the consortium will send three staff members, 1 elem, 1 JH, and 1 HS, to be trained. We will then use a Train the Trainer model to train additional staff in each district. Salaries/Benefits: We have no salary and benefits costs.

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

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

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

Since we are able to set up our shared production lab at the CCCTC hub and workstations at each individual school district, we will have limited reoccurring costs with this grant. Two expenses that districts will incur after year one are annual supplies and salaries/benefits. The 8 districts will share the STEM teacher and the CCCTC hub production lab will be staffed with 2 interns at \$10.00 per hour, saving the cost of a second instructor. Each school district will pay 1/8 of the teacher salary and interns wages. The district supply costs for project completion will

be only \$2,000 annually. We have included an annual increase in this amount in our budget for years 3 through 6. Annual salaries and benefits will be for the classroom teacher and two interns to man the production HUB and teach the high school courses. The total costs for the teacher and interns will be a shared cost by two districts. This cost might even be absorbed by an existing teacher in the future as it is only 1 or 2 classroom periods a day and can be taught by a variety of certifications. Even though this is possible, we have left it in the budget as we cannot state for sure that it will happen. Starting in year 4 of this project, districts will be picking up curriculum costs for both the IC high school (\$7,500) and elementary curriculum (\$6,000). Additionally, since our equipment only comes with a 3 year warranty, we have built in maintenance costs for repair or replacement of the equipment to ensure that we can sustain our equipment. The total cost of Project Inspire per district will max out at \$30,232 annually by year 6. Because we have implemented this project with shared resources, we have been able to keep each district's costs at a minimum. Each district, through the financial impact table clearly has indicated how they will cover these costs as most have either redirected supply money or plan on eliminating a position through attrition. This is a pattern that has been going on over the last few years.

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

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

Yes

No

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

0.00 If yes, specify the amount of annual expected savings. If no, enter 0.

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

The fact of the matter is this grant will not result in any savings to our districts. In fact, the costs to implement IC will result in a small amount of additional costs to each of our districts in Years 2 and beyond. These costs include annual supplies, curriculum, a teacher, and two interns. Each of our districts understands that in the end they will have limited increased costs but at the same time by sharing these costs they are able to create and sustain a proven STEM initiative for their districts. Without this grant none of our districts would be able to implement these projects as our district enrollments are small, with many district enrollments under 1,000 students. By pulling and sharing resources within the grant, 7,018 students are now able to participate in STEM classes and have opportunities that are not readily available to smaller school districts. It was the perfect opportunity to involve the Columbiana County Career and Technical Center as a hub since all involved districts already transport students to them every day. So, although we did not create a cost savings, we were able to find a solution to an existing problem and expand our curriculum to include a well-documented and successful STEM project at a very affordable cost.

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

All Straight A Fund grant projects must be expenditure neutral. For applications with increased ongoing spending as documented in question 11-14, this spending must be offset by expected savings or reallocation of existing resources. These spending reductions must be verifiable, permanent, and credible. This information must match the information provided in your Financial Impact Table. Projected additional income may not be used to offset increased ongoing spending because additional income is not allowed by statute. Please consider inflationary costs like salaries and maintenance fees when considering whether increased ongoing spending has been offset for at least five years after June 30th of your grant year. For applications without increased ongoing spending as documented in questions 11-14, please demonstrate how you can sustain the project without incurring any increased ongoing costs.

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

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

IC by design, is intended to be sustainable. Its strengths include the ability for districts to share resources and access state-of-the-art equipment without the expense of purchasing or maintaining the equipment. IC utilizes web-related resources and digitally presented original materials, save districts costs of textbooks and supplemental materials K-12. IC sequentially focuses on content knowledge, crucial 21st Century skills, and the application of knowledge and skills. This sequential nature allows students to build upon their ability and allows the success of one course or module to build upon the successes of the previous course or module. Remember, sustainability is not just financial. Financially, the project will be sustained in a number of ways. First districts will be able to devote resources from savings realized from textbooks and supplemental materials schools do not have to purchase. The CCESC will join with the Mahoning and the Trumbull County ESCs to partner with business/industry and Mahoning Valley Manufacturer's Coalition for financial and in-kind support. IC has reached out to industry officials who stressed the importance of better preparing their future work force. IC and the ESCs will work with industry to build a strong partnership that will sustain IC in county schools and provide students and teachers with access to worksets, mentors, speakers and internships and externships. It is important to note that the explosion in the shale industry is especially strong in Columbiana County. The need is now for well-prepared employees who can make important contributions to their community. The CCESC will lead the effort to build strong and lasting partnerships with the oil and gas industry and the county's other vital employers to assure sustainability of the program. The IC program is sustainable because of the commitment of each district's leadership. Superintendents of all districts in the county, the superintendent of the CCESC and a county commissioner, as well as representatives of business/industry will sit on the program's Board of Directors. The Board will help assure sustainability by overseeing the program in guarantying that the follow occur: 1. Expansion of

Business/Industry and Community Partnerships 2. Evaluation of the IC program 3. Ongoing Professional Development 4. Recommendations for expansion and improvements 5. Stakeholder involvement 6. Financial assistance 7. Communication with communities Finally, IC is sustainable because it is a proven commodity with documented successes in a number of school districts and a community college. IC has its roots in a program developed and funded as a response to a Federal call to action from DARPA. After the original implementation, IC has further developed and improved IC itself and teacher PD. Working with Youngstown State University, IC continues to grow innovative curriculum for students and professional development opportunities for teachers and administrators, working with NAMII, National Additive Manufacturing Innovation Institute now called America Makes - of which AMI is a corporate member. AMI continues to expand partnerships and opportunities for students and teachers. The purchased service personnel at the CCESC will be year one only as supporting services will come under the umbrella of existing general services. The consortium districts and partners have a proven track record of sustaining grant projects through a shared resource/service model for cost effectiveness, demonstrating the commitment to do what is expected at each district to implement and sustain projects long after grant monies no longer exist. With support from partnerships with industry, post-secondary education, research agencies, local governments, school districts, and ESCs, IC has a sustainable model program that promises a long and rewarding future.

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

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

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

Enter Implementation Team information by clicking the link below:

[Add Implementation Team](#)

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

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

17. Planning - Activities prior to the grant implementation

* Date Range June-August, 2014

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

Plan Phase June - August 2014 Includes: July 2014-Management teams will coordinate technology purchases for school IC workstations and Hub; Recruit, interview, and hire 1 STEM teacher and 2 YSU STEM interns at the CCESC as a shared resource by teaching on the IVDL and network and managing the hub lab; Schedule PD for 1 shared high school STEM teachers and 3 HS, MS and Elementary teachers per district in a trainer of training model for sustainability in IC curriculum for 2 summer dates and 2 follow up days in November and March; track student progress in IC pilot at Crestview-Grades from 2013-2014, teacher and student surveys from participants in 2 IC courses; August Installation at school labs, IC production hub installation at CCCTC; Recruit and enroll students.

* Anticipated barriers to successful completion of the planning phase

Anticipated Barriers include: 1) recruiting teachers when they already have many new mandates to meet, Possible Solutions include: selection criteria from OTES evaluations in professional standards, district supports, and stipends for summer trainings with the graduate credit needed for license renewal provided; 2) scheduling summer PD in when vacations are occurring Possible Solutions include: scheduling with all recruited district teachers before school ends in June proactively before grant awards; 3) Installation time Possible Solutions include: CCESC and IC technicians to assist each district technician at no additional cost; 4) District changes in personnel Possible Solutions include: consortium district and CCESC support as new personnel are hired by August 1 as well as CCESC teacher as a shared resource for balancing existing expertise with any new personnel, our strong communication plan.

18. Implementation - Process to achieve project goals

* Date Range 08/01/2014-06/30/2015

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

Implementation Phase September 2014-June 2015 Includes: September-final student enrollments; schedule DL STEM career explorations; Schedule on-site visits and guest speakers; October: Follow up PD training; February: follow up PD training October-June Student career explorations for aspirations, awareness, and preparedness through site visits to IC Hub production lab at CCCTC; Youngstown State STEM College; Akron STEM School at Inventor's Hall of Fame; IVDL career explorations; IC Engineer presentations and explore lessons instructor; Kent State University Health Science guest speakers and site visits to the new Science wing; Salem Regional Medical Center guest speakers and on-site visits; Mahoning County Manufacturers Coalition guest speakers and onsite job shadowing with possible HS internships; Crestview pilot data collected and analyzed, together with bi-weekly management team meetings, monthly Board of Directors' meetings with feedback used to inform decision making for needed changes.

* Anticipated barriers to successful completion of the implementation phase.

Anticipated Barriers include: 1) project needs to be ready for full implementation September 1st for the grant timeline Possible Solutions include: a full commitment from district administrators, CCESC staff, technicians, and trained teachers to begin on time effectively as a

priority; 2) no calendar days and daily bell schedules are the same county wide for sharing teachers and interns Possible Solutions asynchronous instruction via the network for learning anytime, anyplace for all students; synchronous IVDL presentations on common calendar days; districts make Project Inspire a priority and collaborate for scheduling 3) scheduling time for trained teachers to train other staff members Possible Solutions include: have the trainers use teacher workdays to train additional teachers in IC, as well as IC providing yearly trainings to new staff members at no additional charge.

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

* Date Range Annually, June 2015-2020

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

To meet benchmarks related to student achievement quantitative measurements include: INVENTORcloud PD evaluations, pre-post teacher and student scaled surveys and OTES teacher evaluations; scores from the ACT; student grades including presentation rubrics; project rubrics; and end of course exams in English Language Arts, Math, and Science will be analyzed to demonstrate benchmarks for student achievement: 85% improvement in teacher and student knowledge and skill attainment; 80% of enrolled students attaining an increase in scores by 3% yearly or higher in IC STEM courses. To meet benchmarks related to shared resources and services quantitative measurements include: student enrollment counts; number of courses; number of PD sessions and the number of teachers trained K-12; number of career explorations offered/number of students participating in each district; number of site visits to partners/number of students participating; number of guest resource speakers at each district; guidance counselor information at each site on STEM career path interest; Board of Director meeting updates on implementation including purchases made, timeliness of installations at each site and for the IC production hub installation at the CCCTC; Teacher PD status.

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

Anticipated Barriers include: 1) Completeness and accuracy of data from each district over a 6 year time period Possible Solutions include single points of contact at each district and CCESC coordination: district guidance counselors for IC student data; project director, board of directors, teacher and student feedback, providing data to evaluate the impact of project goals in shared resources, services, and student performance to inform decision making 2) Personnel changes Possible Solutions include: District liaison reports to project director; google docs web communications; project manager reports to Board of Director; and shared responsibilities of each consortium member and partner.

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

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

Please enter your response below:

Project Inspire will transform the schools in Columbiana County from traditional brick and mortar models with reliance on outdated textbooks and paper/pencil learning to an innovative, creative 21st Century based model for today and future generations. The beneficial changes expected from this project include: improved student performance in Math and Science with the implementation of a rigorous, CCSS standard aligned curriculum capitalizing on hands-on authentic problem-project based learning; Significant improvement in student technology skills with the work they will do with cutting edge technology tools; Significant improvement in student self-motivation in the personalized learning classroom with high interest; a positive impact in student progress in all content areas based on research of the program; Students learn to work collaboratively for future college and career pursuits in a learn anywhere, anytime network; Student awareness increases of the many careers from which to choose in fields related to STEM; and most importantly, students will possess the college and career readiness skills needed for their future success. Both students and teachers will experience positive attitudinal changes as the project allows for differentiation and creative problem solving in an authentic work setting. Teachers will embrace teaching with the new technologies in an innovative problem based, rigorous curriculum with authentic assessments. Teachers will assume the role of facilitator in a student centered, student driven model. Schools will accommodate the new STEM program with the needed daily schedule changes and realignment of staff. Videoconferencing equipment in each school will be fully utilized with shared instruction by IC engineer, presentations from one site to other schools, shared guest experts and career presentations, teacher planning and review meetings across districts. Equal access to Project Inspire will be provided to all K-12 students without reservation with the cost saving measures and small rural poverty concerns eliminated by the shared resources and services of a consortium. Schools will realign five year projected budgets to sustain and grow the project far beyond the grant funded period at significant savings in instructor salaries, curriculum, and the hub production lab through shared services. Other important changes include teachers learning to instruct in a hands-on manner in a problem-based setting as facilitators who guide students to find and apply knowledge rather than serve as the provider of knowledge. Project Inspire will create and foster business and industry partnerships that will benefit students, business and industries, and communities. IC will open avenues of collaboration among all schools in Columbiana through the shared resource model. The project will inspire staff to expand opportunities for collaboration among other teachers not directly involved in the project. Project Inspire's design allows for no geographical limitations and therefore, wider collaborations and additional shared resources with the CCCTC hub providing the needed production site. Connections to existing partners in Mahoning and Trumbull counties, and their ESCs, where IC curriculum is in place, provides valuable opportunities for expanded opportunities for cost and time effective expansions. During the project, districts will look at the implementation of IC grades K-8 curriculum for a seamless STEM program throughout the county and into other counties partnering to replicate Project Inspire utilizing the production hub at the CCCTC. Additional collaborations with shared resources will replicate and strengthen the sustainability of the Inspire project in a wide region.

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

The responses in this section are focused on the ability to design a method for evaluating the project's capacity for long-term sustainable results.

Therefore, the questions focus on the method of defining the problem(s) the project hopes to solve and the measures that will determine if the problem(s) have been solved.

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

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

Please enter your response below.

An IC pilot at Crestview High School demonstrates high interest and growing enrollment. The consortium studied the feasibility of a K-12 program. Using lessons learned from looking at student progress data results and enrollment numbers at Crestview, the consortium is confident in replicating the success of this Crestview model for a successful, expanded K-12 IC program at minimal cost for sustainability beyond the grant period. Crestview staff and students are excited about implementing a K-12 program, a dream coming into fruition from their strategic plan. Data will be collected and analyzed for implementation in the 8 district consortium. The Manhattan Institute (2/20/14) states that "the number of oil & gas jobs has grown 40 percent at the epicenter of the shale. The shale oil & gas revolution has been the nation's biggest single creator of solid, middle-class jobs" Unfortunately, the skilled workers needed are being hired from a 5 state region. The Inspire project will provide the skilled workers needed while offering stable jobs to our graduates who often leave our area. Research of employers demonstrates a critical need for "employees who possess increased numeracy, team building, and problem-solving abilities." (Manufacturing Institute, Washington, D.C.). "Today, manufacturing facilities use computers, information, and high precision technologies operated by a skilled workforce. Manufacturers provide innovative products and solutions to multiple clients in a variety of industries." (Mahoning Valley Manufacturers Coalition) 83% of employers surveyed agree: "a candidate's demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than their undergraduate degree." "Employers strongly endorse educational practices that involve students in active, effortful work- practices including collaborative problem solving, internships, research, projects, and community engagement." (Hart Research Associates, April 2013) Among the primary goals of the project are to build student's mastery of 21st century skills to increase student achievement. This is carried out by employing the design process, by writing and expanding upon problem statements, and by creating and following a step-by-step process in a design brief. Students utilize content as the vehicle to drive the process. IC includes K-12 problem-project based coursework allowing a seamless, sequential approach. IC is a comprehensive STEM program that has been adopted in a number of northeastern Ohio school districts. A Crestview HS pilot, implemented 2013-14, with evaluations through AMI, made refinements where necessary. IC updates curriculum and resources as changes in content occur. For example, IC employs the 3D printer; advancements in 3D printing seem constant- from printing human organs to international space station materials. IC has the capability to dramatically improve student achievement by focusing on building skills necessary for success across the curriculum with an exciting, hands-on approach to solving real-world problems. Research is consistent in telling us that students perform better when material is relevant and practical, and students see a purpose. Because IC is digital, there are no costs for textbooks or supplemental materials and due to wide reaching content, schools can assign a teacher from a number of appropriate licensure areas instead of hiring staff, and IC provides experts in design, engineering, CAD, so there is no need for the school's teacher to be an expert in all areas. One shared instructor will be hired to teach over IVDL and IC's network for cost savings and sustainability. Schools can implement the full range of IC annually for less than the cost of a typical science department budget AND have access to the most modern equipment, reducing capital costs in the five-year forecast.

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

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

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

External evaluator Dr. Shawn Fitzgerald, with expertise in ODE technology and education grants, will conduct the evaluation of Project Inspire. Shawn M. Fitzgerald--Evaluator Fitzgerald Educational Consulting, Inc. Address: 973 Red Fern Circle City: Kent, OH 44424 Phone Number: 330-221-2386

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

External evaluator Dr. Shawn Fitzgerald, with expertise in ODE technology/education grants, will conduct the evaluation of Project Inspire. Formative and summative assessments, qualitative and quantitative, will measure timeliness, effectiveness, and growth of outcomes related to the model implemented. Formative evaluation components inform stakeholders and provide a mechanism for continuous improvements throughout program implementation. Summative evaluation components inform stakeholders on success and sustainability of the project. Short term methods include: Quantitative data collection/analysis used to measure student achievement and shared resources project goals: Pre, mid, post teacher and student surveys; student progress reports; enrollment; bi-monthly stakeholder meetings to evaluate the status of purchases, installations, teacher recruitment/hiring, student recruitment, student activities. Student activities related to program outcomes, ex. amount of Interactive videoconferencing STEM career exploration participation, hits on CCESC career website, and number of partner site visits and participants, will be tracked. Qualitative data collection/analysis to demonstrate the effectiveness of the IC curriculum in developing 21st Century skills: journals; open-ended student, teacher, administrator attitudinal surveys; teacher and student observations; teacher and student interviews. Long term methods to evaluate program effectiveness include: Quantitative methods: Scores from ACT; mid-term grades; Production Quality and Student Presentation Rubric; End of Course Exams for English Language Arts, Math, and Science; PARCC. Qualitative methods to inform modification needs include: management/stakeholder meetings; review of teacher/student feed-back; student/teacher interviews, surveys; dialogues with project manager, school liaisons, and technology consultant.

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

Project Inspire has methods and procedures in place for modifications if progress monitored is insufficient. Quantitative methods inform student achievement: data analysis of assessment scores and grades by evaluator; rubric scores on products and presentations. Qualitative methods will provide teacher and student attitudinal change in surveys and interviews; student journals; and observation notes from class visits. If students are not making the 3% improvement in scores, the management team and Board of Directors will adjust the following: roll out of the curriculum to meet the improved student; support from curriculum consultants from the CCEC and IC; increase # of IC engineer co-teaching with instructors to model effective practice; provide interventions in the classrooms for teachers, students; and utilize recommendations made from the evaluator to raise scores. To ensure the utilization of shared resources and services goals are being met, adjustments will be made based on quantitative evaluation methods including the # of DL connections with IC engineer and Stem instructor weekly; # of prototypes produced at the CCCTC hub from each K-12 building 3 of students /#of activities offered. Qualitative methods include: attitudinal surveys; reports from techs, Ed Tech, consultants, district liaisons; guidance counselor feedback; project manager reports to board of directors bi-monthly; manager reports to district administrators at monthly CCEC meetings for principals and superintendents; key stakeholder feedback; budget reports; and timeline reviews. If the measurement of effectiveness falls short, the following step will be taken: adjustment in staffing; training of more teachers by IC at no cost; increased PD by CCEC and IC; adjusting daily bell schedules and calendars; technology tool trainings increased for teachers and students; consortium commitment to adjust district schools to better meet goals; utilizing evaluator recommendations.

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

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

Please enter your response below.

INVENTORcloud curriculum stimulates student interest, incorporates multi-disciplinary topics, and instills life-long learning and problem solving skills essential for post-secondary and career success. INVENTORcloud semester courses support STEM, the fine and performing arts, and language arts and are aligned to Common Core State Standards, Ohio Academic Content Standards, Ohio Career-Tech Standards, and ISTE Technology Standards. Innovation, Creativity, and Design Thinking, the first course in the INVENTORcloud program, explores the roots of original thought and the facets of creativity, innovation, and design thinking. Scientific processes, critique, brainstorming, project management, and ethics are integrated with the important 21st Century skills for which employers are begging- critical thinking, creativity, collaboration, and communication. Students innovate and design solutions to real-world problems; they design, build, and evaluate prototype solutions, make refinements, and build a final product. Then, they communicate those solutions and demonstrate their products in technology rich presentations. Other courses in the INVENTORcloud high school program include the following: Design, Decisions, and Problem Solving Design Thinking for a Sustainable Future Creative Entrepreneurship Additive Manufacturing Innovations in Biotechnology The above courses build on the basic skills learned in ICDT and explore rich content in science, math, language arts, business, health, and the arts. The skills and abilities to apply content knowledge students learn in the INVENTORcloud program address the needs of our country's employers thus impacting our economy and preparing our graduates for success in post-secondary education. Students - demonstrate acquisition of knowledge and its application; - demonstrate creativity and innovative thought; - demonstrate critical thinking and the ability to solve complex problems; - demonstrate the ability to communicate clearly and work effectively as members of a team in a real-world environment; - demonstrate successful application of STEM knowledge and processes; - demonstrate the potential to impact the community, the state, the country, the world; - demonstrate the potential to replace engineers, scientists, technologists, and entrepreneurs of the "Baby Boomer" generation who are nearing retirement thus solving the crisis that their retirements create. INVENTORcloud changes the way we teach. This is an environment where students use the technology that they live with as tools to communicate, collaborate, and solve problems both great and small- both world-wide and every day. INVENTORcloud gives students the potential to impact their world- their school and their community- and affect education for the foreseeable future. INVENTORcloud introduces elementary and middle school students to this environment through the following mini-courses: - Exploring the Engineering Way - Problem Solving Through Design - The Science in Energy - Engineering and Earth Science - Designing Solutions for Today and Tomorrow - Things STEM In addition, AST will work with individual school districts to create modules for grades K-2 that meet their unique needs.

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

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

* Student Achievement

Students will demonstrate mastery in research, critical thinking, and analysis; communication of ideas and solutions; and integration of technology with student scores improving by 3% each year 2014-2020. Addressed are New Ohio Learning Standards for English Language Arts, Math, Science, ISTE International Technology Standards, and Ohio Career-Technical Standards Student achievement will improve in the following areas: a. Through observation, teachers will document student improvement in the ability to collaborate and work together as members of a team to achieve a common goal; b. Through the implementation of individual and team journals and integrated language arts lessons within the IC curriculum, students will demonstrate the improved ability to analyze; compare/contrast; research effectively; and use details, examples, and facts/figures to reach logical conclusions; c. Through observations, models, projects, and presentations in all grade levels, students will demonstrate the ability to be creative and innovative problem solvers as they identify specific problems and investigate solutions; d. Student achievement in language arts, specifically reading and writing, will improve by a minimum of three percentage points on Next Generation assessments; e. Student achievement in science and math will improve by a minimum of three percentage points on Next Generation assessments as students apply lessons in science and math that align to Ohio content standards and common core standards at each grade level; f. Students will demonstrate a sound understanding of technology concepts, systems, and operations. g. Students demonstrate the ability to explain the fundamentals of manufacturing drawings, schematics, specifications, and diagrams h. Students will reference workplace behaviors to professional codes of ethics and assess the implications of ethical and unethical behavior.

* Spending Reduction in the five-year fiscal forecast

We do not have any spending reduction.

* Utilization of a greater share of resources in the classroom

1. Personnel- Districts share IC program lab manager/instructor/lab interns. They will work with all teachers and students in the county. Districts will share CCESC technology personnel and science, math, and ELA consultants. AMI will provide educational consultants to support teachers and students with PD, follow-up, classroom visits, grading of equipment. 2. Collaboration- teachers collaborate, share ideas and successes, and compare experiences, facilitated through use of the AMI cloud network 3. Time- AMI's network allows teachers and administrators to collaborate efficiently without having to travel, saving districts money. AMI consultants provide districts with on-site visits during each quarter to observe classes, discuss ideas, and update equipment 4. Course offerings: a. Exploring the Engineering Way Gr.3 b. Problem Solving Through Design Gr.4 c. The Science In Energy Gr.5 d. Engineering and Physical Sciences Gr.6 e. Designing Solutions for Today and Tomorrow Gr.7 f. Things STEM Gr.8 g. K-2 Modules developed with classroom teachers to meet specific needs of districts h. Design, Decisions, and Problem Solving Gr. 9-10 i. Innovation, Creativity, and Design Thinking Gr.10-12 j. Environmental Sustainability Gr.11-12 k. Creative Entrepreneurship Gr.11-12 l. Additive Manufacturing Gr.11-12 m. Innovations in Biotechnology Gr.11-12

* Implementation of a shared services delivery model

Shared Delivery Service Model includes measured by formative and summative, qualitative and quantitative measures: 1. IC instruction daily through a shared teacher, distance learning videoconferencing, and the Cloud IC network for anywhere, anytime learning for 7,018 K-12 students 2. County management team with project director, external evaluator, and curriculum specialists shared by the 8 district Columbiana County Consortium under the direction of a Board of Directors with representation of county government, all university partnerships, and business and community partners 3. Technology services including PD and implementation support with CCESC Education Technologist for teachers and students; CCESC technology department support for district technicians; IC technology support on installation and updates; 4. Professional Development Services include IC teacher trainings, CCESC PD curriculum consultant services to support the project; ongoing IC teacher trainings at no cost as teachers change positions, retirements and new hires occur; Technology PD through the CCESC Education Technologist 5. CCCTC production hub for students to produce their solutions to authentic problems, saving each district \$16,000.00 in production hubs outside the consortium; two lab interns job sharing to manage the production hub 5 days a week, 8:00 am-4:00 pm 6. Data Collection through the district guidance counselors/liaisons to the central project manager for analysis by the external evaluation to inform decision-making 2014-2020 7. Career explorations through DL videoconferencing and CCESC website; guest resource speakers face to face and through DL; Job shadowing and internships; hospital Summer Teen Program 8. University Partner credit hours for students and teacher trainings

* Other Anticipated Outcomes

1. Strengthening the Columbiana Consortium shared resource/service model used in other projects with grant start up monies having sustainability far beyond the grant periods for the past 11 years 2. Providing state of the art technology tools and access to the much needed 21st Century skill based IC program for small rural counties unable to implement and sustain the program affordably 3. Preparing students for college and career readiness for today and into the future 4. Expanding the learn anywhere, anytime learning model through shared DL and IC cloud 5. Improving technology skills for teachers and students 6. Encouragement of STEM focus careers so critically needed in our county as well as nationally and globally 7. Meeting the local needs of the area for a skilled labor force in the epicenter of the shale industry as well as the health field and auxiliary industries for today and in the future 8. County increased population w college degrees from under 10% to 15% from 2014-2020 as students receive college credit in high school 9. Manufacturing certification through CCCTC and EGCC to fill a local need identified for the Crestview IC pilot in 2012-2013 10. Expansion of collaboration into other counties: Mahoning and Trumbull who have IC in place; career explorations; business partnerships 11. Replication for the counties south of Columbiana County: Jefferson, Harrison, Tuscarawas, Carroll, partners in other grant projects; utilization of the CCCTC production lab with minimal charges to help sustain the project 12. Eventual cost savings for districts as courses, instructors, and course materials are replaced; expansion reduces costs; by total implementation of IC

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

Yes

No

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

* Explain your response

Project Inspire is easily replicated. The IC program successfully implemented in 10 districts north of the county provides data to support its success. Additional schools have already joined the IC network for 2014-2015 with ten districts, Eastern Gateway Community College, and YSU. The nature and delivery of IC makes growth and replication easily accomplished. IC's support system of educators and engineers makes schools comfortable in joining the network, knowing that replication has taken place in a number of districts. Inspire will include the installation of a production hub located at the CCCTC for 7,018 K-12 student project inventions. Interest has been expressed from the superintendents of Stark, Jefferson, ESC, and Tuscarawas, Harrison and Carroll County ESCs to study our STEM program for possible replication, utilizing the CCCTC hub for student production. The Youngstown hub does not have the capacity to produce student project inventions in this southern region of Ohio, poising the CCCTC hub to serve those counties providing revenue. The Columbiana County Consortium has a proven track record of sharing services in other grants, including these southern counties, replications including the continuing success of Seniors to Sophomores program, now in year 5, the federal TAH grant with continued services beyond the 3 year implementation plan, and distance learning partnerships across the state through shared networking. Presentations at the annual OETC conference and CCESC website will allow for replication across the state, allowing districts access to grant resources. The IC program is easily replicated. It has been successfully implemented in school districts with data available to point to on-going student success in neighboring Mahoning and Trumbull counties. IC is aligned to New Standards in English/Language Arts and Math, Science, Social Studies, Fine Arts, and Ohio's Career-Tech Standards and ISTE National Technology Standards. Specific objectives stated in curriculum allow

teachers to focus learning and improve student understanding and achievement. Schools in the IC network have access to shared equipment and materials; a comprehensive, sequential curriculum with activities, projects, assessments; supplemental resources; current, relevant articles and videos; professional development and follow-up training for teachers. IC is provided in an easy-to-follow format that provides teachers with detailed instructional direction and recommendations, and the opportunity to personalize and individualize instruction, activities, and projects to fit their students' needs. IC is monitored and regularly updated, providing schools with the most current curriculum. Students and teachers have access to IC's technology, equipment, and support network and its multi-faceted TEAM-UP site, allowing teachers to share ideas and experiences, both face-to-face and via Teacher Share. IC's STORM Box permits schools and students to collaborate with one another remotely across the IC network, promoting a learning anywhere, anytime model. Students have found IC to be unique, effective, interesting, and fun. They appreciate the opportunity to present and evaluate their ideas and play an active role in their education. They value the opportunity to create solutions to real-world problems. Teachers see the ease of implementation and the support that exists from the IC staff and fellow teachers. Districts appreciate the innovative presentation of the program and access to modern manufacturing, analytical, and research equipment without having to buy it or maintain it. In addition, IC runs on a basic computer, making home access for learning anywhere, anytime a reality. IC supports learning in courses across the curriculum and teaches students a learning process that carries over to all courses. IC provides students with opportunities to integrate technology to research, prototype, communicate solution in a collaborative model.

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).

Anna Marie Vaughn

Consortium

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Consortium Contacts

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
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Partnerships

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Partnerships

First Name	Last Name	Telephone Number	Email Address	Organization Name	IRN	Address	Delete Contact
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Shawn	Fitzgerald	330-221-2386	smfitzge@kent.edu	Fitzgerald Educational Consulting, Inc		973 Red Fern Circle, , Kent, OH, 44240	

Implementation Team

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Implementation Team						
First Name	Last Name	Title	Responsibilities	Qualifications	Prior Relevant Experience	Delete Contact
Stephen	Stewart	CCESC Consultant	Responsibilities include: to oversee the purchase of equipment with the IC vendors; serve as director with the CCCTC coordinator for the installation of the IC production hub; serve as a liaison with the each district technology specialist for installation of IC lab classroom equipment; communicate with all key stake holders to inform any needed adjustments or changes to the Project Inspire ; schedule PD trainings for new technologies and IC; manage the budget; communicate monthly with the management team for updates as to the status of the project, report to the Board of Directors on project status to inform any needed adjustments or changes.	B.A. in Education from Youngstown State University (1973). Masters Degree in Education (Instructional Technology) from Kent State University (1989).	Steve Stewart has 36 total years in education with 16 years as a classroom teacher and 20 years as an administrator. Experiences include Technology Director and State and Federal Grants Director for Salem City Schools and Lisbon Exempted Village School District. Mr. Stewart is currently administering the Seniors to Sophomores PSEO program for the Columbiana County ESC, the Race to the Top initiative and 3rd Grade Reading grant at Lisbon EVSD. He has an extensive background in both technology and grant administration.	
Katrina	Moore	Educational Technologist	Responsibilities include: to consult with district teachers; schedule and support all remote lessons provided by IC Engineering Instructor; schedule and support bridging for network STEM teachers, and schedule DL career presentations for students 5-8.	Qualifications: Master's degree in Education, Trainings in state of the art technology tools with integration into the classroom curriculum including Videoconferencing, LMS software, Ipads, Interactive Boards, Google, and other web-based tools.	Prior Relevant Experience: Katrina Moore has been the Distance Learning/Education Technology Consultant at the Columbiana County ESC for the past 12 years. During her time at the CCESC Katina is responsible for various technology trainings for teacher and staff and supporting the ESC's online learning initiative. These trainings include Videoconferencing, LMS software, Ipads, Interactive Boards, Google, and other web-based tools. Before coming to CCESC, Katrina worked as the Distance Learning Educator the Cleveland Health Museum. Her responsibilities included creating and teaching health related curriculum to be shared over videoconferencing, technical support for videoconferencing and assisted in development of strategic plans for the Distance Learning Department. From 1999-2005 Katrina was a part-time instructor at Cuyahoga Community College in Cleveland. Katrina has presented at various state and national conferences and has been a member of the state wide distance learning group	

					DLState/OhioDLA for the past 13 years.	
Sherry	Bobek	CCESC Math Consultant	Responsibilities: to provide continuing PD and curriculum support in each school, ensuring complete and seamless alignment with the New Ohio Learning Standards	Qualifications: Undergraduate degree from YSU, Masters From Walsh and Westminster and 19 years in the field of Education	Prior Relevant Experience: 14 years Teaching Experience, 3 years at Mahoning County ESC, 1 year as principal, Consultant in Education and PD experiences with district level leadership	
Alaina	Kirkpatrick	CCESC Science Instructional Consultant	Responsibilities: to provide continuing PD and curriculum support in each school, ensuring complete and seamless alignment with the New Ohio Learning Standards	A masters degree in education	5th grade science teacher, providing PD for standards roll outs in Science for the CCESC	
Marie	Williams	CCESC English Language Arts Instructional Consultant	Responsibilities: to provide continuing PD and curriculum support in each school, ensuring complete and seamless alignment with the New Ohio Learning Standards	Education: BA: Mount Union MAED: Walsh University Administrative degree: Ashland University	Experience: 6,7,8 ELA teacher for 10 years Principal at a K-8 building for 2 years, Consultant Experience: Provide PD for SLOs, Assessment Literacy, Standards Roll Outs, Value Added, Differentiation, 3rd Grade Reading Guarantee, teacher TBTs and district DLTs	
Jeremy	Corisello	Director/ Assistant Superintendent, CCCTC	Responsibilities: will serve as CCCTC coordinator for the implementation of the IC program and hub production lab to be located at the CCCTC, supervise production hub personnel	Master degree in Administration	Nine years of experience supervising career education	