## Bowling Green City School District (043638) - Wood County - 2015 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (324)

### U.S.A.S. Fund #:
#### Plus/Minus Sheet (opens new window)

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**Adjusted Allocation** 0.00

**Remaining** -7,116,943.00
Please respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information

1. Project Title:
   BiG Fab Lab Makerspace: An Education, Industry, and Community Partnership

2. Executive summary: Please limit your responses to no more than three sentences.
   This grant will provide funding to create a MakerSpace in Bowling Green, Ohio that will function as a shared service to bring STEAM (Science, Technology, Engineering, Arts, and Mathematics) education to students in Bowling Green City Schools, Eastwood Local Schools, Otsego Local Schools, Montessori School of Bowling Green, Bowling Green Christian Academy and St. Aloysius K-8 where our students will learn from industry and community mentors and role models using industry-standard equipment and technology that support STEAM. Simply stated, a MakerSpace is a community collaborative where equipment, knowledge, skills, and most importantly, ideas bring together citizens from education, industry, and the general public for the purpose of design, creation, and career exploration not currently available or possible in individual districts. The Bowling Green MakerSpace - the BiG Fab Lab - is unique in that it will be developed with an educational perspective as opposed to MakerSpaces across the country (and world) that are designed by industry and/or community.

   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.

6800 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:

   - Pre-K Special Education
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 9
   - 10
   - 11
   - 12

5. Lead applicant primary contact: - Provide the following information:
   First Name, last Name of contact for lead applicant
   Ann McVey
   Organizational name of lead applicant
   Bowling Green City Schools
   Address of lead applicant
   137 Clough Street, Bowling Green, OH 43402
   Phone Number of lead applicant
   419-352-3576
   Email Address of lead applicant
   amcvey@bgcs.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
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

Students yearn for a disruptive, authentic, learning environment - doing-making-innovating-creating. They seek skilled mentors & career exploration. They crave collaboration with peers, professionals, & skilled tradespeople. But schools are organized in a linear progression, moving students thru grades systematically regardless of their mastery of skills. Students are shuffled from Kindergarten to HS graduation, not prepared for college or careers (Newsweek, 8-22-12). They lack exposure to the world of work, lack skills to garner gainful employment, & lack authentic experiences in collaboration & innovation. Attempts to integrate these skills & experiences into classrooms fall short due to time constraints & lack of resources. Teachers lack of experience inhibits their honest attempts to implement new content standards & craft authentic lessons. They have no first-hand training in the design aspects embedded in Ohio's science standards, yet blueprints indicate 25% of science tests will cover design. Our graduates pay the ultimate price for their teachers' lack of understanding and skill and their districts' inability to provide the funds necessary for adequate equipment and expertise. Industry leaders attempt to fill expanding vacancies with a qualified workforce. Over the past several months, meetings between educators & industry leaders have been held throughout NW Ohio to brainstorm solutions of an unprepared workforce. Attempts at traditional methods of exposing students have included field trips, speakers, & more. This 'drive by' approach doesn't meet the goal of enhancing student interest in skilled trades as it lacked depth, relationships, & immersion in project-based settings and brought us no closer to fulfilling the business and industry's needs.

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

Teachers from consortium schools are gathered together in the BFL training area while instructors from BGSU and Owens sit among them & guide their learning. They are designing lessons that implement strong PBL for their students. They collaborate & offer suggestions to other members in this new Professional Learning Network. They tour the facility which includes a wood working area. They cross a hallway and observe banks of computers with Photoshop and Illustrator in the first row and in the second row are stations for CAD design. They see students in grades K-12 working in each of these areas. Magnetic ID cards provide differentiated access to tools & areas within the BiG Fab Lab (BFL) spaces. The tour continues & they see 8-10 year olds designing a playground concept using lego blocks. Later the models will be scanned into a 3D printer. They present their ideas to a community board who will help students finance and expand their existing school playground. The tour continues and moves into the art area, through a glass wall, they watch glass artisans blowing molten glass into beautiful art, but soon it is their turn to begin a lesson on pottery wheels. This is a group of math teachers learning today how to integrate the pottery wheel into pre-calculus. In two weeks, they will begin foundational lessons in their classrooms and then bring their students to the art studio within the MakerSpace. The MakerSpace will provide innovative methods for teachers to expand learning and meet student learning styles. When these connections are made, students achievement will sequentially improve on Ohio's Next Generation Assessments.

Students will increase achievement through utilization of higher-level thinking skills such as those included in Anderson's revisions to Bloom's Taxonomy to include applying, analyzing, evaluating, and creating. The BFL will provide students the opportunity to reach the highest level of learning - creating, through the creation of products to solve authentic problems; to enrich lives; as the space, the equipment, the instructors, and the mentors are present under one roof. Students will also learn the 'soft skills' or 'dispositional skills' through interaction with adults from the community and area businesses; these skills have been cited as a significant reason that area companies cannot find qualified workers. Students will enhance communication skills on an interpersonal level through interaction from industry and community members. Students will learn public speaking skills through sharing their creations at BFL Fairs. Teachers will learn too. Through PD they will experience exemplar learning activities from formal STEAM curricula such as Engineering by Design. As a result of this training, teachers will begin crafting PBL experiences on their own. The partners and consortium will, in conjunction with students and teachers from these districts, plan the layout of the MakerSpace. Members from each district will serve on committees to oversee the use and professional development opportunities. A Google Doc has been created and shared for teacher input. Teachers will continue to enter websites regarding MakerSpaces, ideas for materials, and ideas for activities to complete in the BFL. Teachers will create schedules to enhance the experience (adaptive block schedules where science class may spend 2 days at the lab and then the next four in their other classes; middle school learning concept will provide 4 period blocks of time for interdisciplinary/cross-curricular teams to spend in the Lab) Teachers will collaborate together - science teachers from four schools working on large collaborative projects with their students and art, music and math teachers working together in the MakerSpace to provide connectivity for student learning. The roles of leads are described in detail in question 16.

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,
A MakerSpace is an innovative environment rich with unique learning possibilities, serves as gathering points where communities of makers connect to work on real, meaningful projects, informed by helpful mentors and expertise, using new technologies and traditional tools (MakerSpace Playbook, School Edition, Spring 2013). The uniqueness of the BFL is that it represents a grassroots collaborative between education, industry, community. A local engineer and entrepreneur will operate and maintain the BFL from the business perspective while the consortium will transform the space for teaching and learning. BG, Eastwood, Otsego Schools, & Penta Career Center have formed a consortium for this grant in partnership with St. Aloysius, BG Christian Academy, Montessori School of BG, local businesses, BGSU, Owens, United Way, and Habitat for Humanity. This is an historic collaborative creation of shared services between education, industry, and community that will mutually benefit each member & partner. The heart of MakerSpaces is CREATIVITY. Bloom's Taxonomy identifies creativity as the highest level of learning (Anderson, 2001). According to The Maker Movement Manifesto (Hatch, 2014) philosophers such as Wilhelm, Hegel, Jung, Maslow concluded that creative acts are fundamental to human growth/development. Students will learn fundamental skills in the classroom and then be transported to the BFL for immersion in creative, authentic, innovative STEAM activities. Students will engage in project-based learning to enhance skills, knowledge, opportunities never before available to them in a space shared with engineers, scientists, artisans, and mathematicians as mentors with the same goal: creating. The BFL will provide authentic project-based learning for students of all ages & ability levels. Primary students will tinker with basic concepts of engineering design. They may create structures with legos or design their own legos using the 3D Printer. Students of all ages will be introduced to robotics, soldering, electric circuitry, woodworking, 3D printing, laser engraving and more. Students, even with significant disabilities, will utilize the space to create. Student clubs & organizations such as drama, DECA, FFA, Robotics Teams, Legos Teams will have the equipment & expertise available to design & create at elevated levels. Families will finally have a space where there truly is something for everyone. This is not just PBL, nor a field trip on steroids. It is organized collaborative communities where students will become engaged in innovative learning experiences, providing a spark for more complex & deeper learning, aligned to standards. Possibilities are endless but also focused. Teachers will be provided numerous opportunities for immersion in the BFL in a collaborative manner with facilitators who will teach, model, and mentor. The BFL, by nature, is a place where it is ok to not know all of the answers. In fact, trial & error; creative problem-solving; is the cornerstone of a makerspace. Formal professional development will be provided for teachers to create lessons aligned to standards, steeped in problem solving and project learning. Students will become facilitators as they become teachers in the learning process. Student failures/successes become the catalyst for learning. Students and teachers literally imagine, create, market & sell their creations. No other opportunity matches the possibilities of the BFL for our teachers & students. Industry leaders will meet, greet, mentor, recruit students in the BFL. Students will learn skills; establish relationships; build enthusiasm for industrial careers. Mentorships will arm students with experiences to define career pathways beginning in MS and including Penta Career Center as they will have had authentic experiences to inform future college and career goals.

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.)

It is not anticipated that there will be immediate spending reductions as a result of this grant. It is possible that, over time, fewer curricular materials such as textbooks will be purchased; fewer one-day field trips will be taken; fewer teachers will travel to conferences or workshops to learn STEAM activities; less duplication of manipulatives and equipment will occur due to the shared services available through the BFL fab Lab. Engineering by Design is a STEAM curriculum that is available at no cost to any district. Positive performance on other approved fiscal measures Penta Career Center has reduced costs in their overall budget as delineated on the FIT (retiring teachers being replaced with lower salary teachers) representing a credible, verifiable, and permanent spending reduction of $66,180 through FY 20 although Penta does not anticipate increased expenditures as a result of this grant because the activities that Penta will carry out represent their current practices. Penta career tech teachers and career counselors will go into the lab to mentor and instruct students and to ultimately provide specific career counseling to students who may spend their 10th, and/or 11th and 12th grade years at the Penta Career Center. This is consistent and forward thinking toward the goal of working with JH/MS students in determining a career tech plan. Currently JH/MS students spend a day touring the Penta Career Center as an introduction to industrial/technological trades. This one-day visit is woefully insufficient. Students must have the opportunity to fully engage in innovation, design, creativity to understand the possibilities that exist in science, technology, engineering, the arts, and math. This must begin in middle school as it is too late by the time students are freshmen or sophomores in high school. Bowling Green City Schools will not replace 2.5 teachers who are retiring this year resulting in a credible, verifiable, permanent spending reduction of $205,665 in salaries and $31,843 in fringe benefits (delineated on the FIT). These reductions will be used to offset any increased costs in transportation personnel and materials and supplies as delineated on the FIT.

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.)

Not applicable to this grant application

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.)

Fundamentally, MakerSpaces were originally created to share services and resources. People from all walks of life: all ages: all abilities come together in a shared location to share tools and equipment, expertise, ideas, and creations. BG, Otsego, Eastwood Schools, BG Christian Academy, St. Aloysius, & Montessori School of Bowling Green will engage in a shared-service model with the BFL, industry, & community. Approximately 6,800 students & 608 teachers will have access to instructional materials, supplies, tools, equipment, computer labs, upscale artisan equipment. No one district has the financial resources nor the physical space to provide this for their students. In addition, student robotics, legos, art, entrepreneur, FFA, DECA, Scout Troops will engage in activities using the space and equipment available in the BFL. This shared-service delivery model meets the requirement of efficiency and effectiveness in several capacities. Cost: The startup tools/equipment will be purchased with grant funds. These are beyond the financial reach of any single district. PD Cost & Effectiveness: Teachers from all districts and non-publics will come together to participate in professional development, significantly reducing the overall cost of PD for each district. Each district will not be spending funds to provide their own STEAM PD. Training: Teachers will be provided specific training on tools/equipment at no cost through the partnership with the BFL. Teachers will benefit from collaboration with each other in planning instructional activities. The lack of teacher knowledge of the use of tools, equipment, technology is a significant barrier to STEAM instructional practices and the BFL MakerSpace solves this problem. The shared services with community and industry will support fixed and variable operational expenses and therefore is sustainable. The BFL business plan identifies monthly or annual membership fees
C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

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

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)
* If applicable, upload the Consortium Budget Worksheet (by clicking the link below)
* Upload the Financial Impact Table (by clicking the link below)
* Upload the Supplemental Financial Reporting Metrics (by clicking the link below)

Upload Documents

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

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

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

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

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

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

7,116,943.00 State the total project cost.

* Provide a brief narrative explanation of the overall budget.

The main components of the budget (not categorized by accounting codes) are as follows: BGSU evaluation services: 300,000 Renovation of space: 3,000,000 Technology: 100,000 Professional Development: 250,000 Equipment/Materials/Supplies: 3,766,643 (Includes 680,000 for instructional supplies which equals 100 for each of 6800 students) The equipment that will be purchased is broken down into several categories with specific items already listed under each category. These categories include: Abrasives; Arts and Crafts; Automotive; Project Unit; Computer Lab; Electronics; Fabrication; Fabrics/Sewing; Instructional; Layout; Machining; Measurements; Plastics; Prototyping; Sheet Metal; Surfacing/Finishing; Welding; Wood Working; Office Equipment; Security Systems; RFD Systems; Rolling Stock (includes vehicles); Janitorial; Maintenance/Service Room; Classroom/Meeting Room furnishings (including computers); Pottery/Ceramics; Equipment such as
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.

This grant proposal represents a partnership with the BFL. The renovation and start-up costs are requested in this grant in order to provide the location, tools/equipment, renovation and startup for the BFL that will benefit the 6,800 students represented by the consortium. Once initial start-up is complete, the BFL will cover all future day-to-day operating expenses, including personnel, maintenance, utilities, training. Districts will not be charged membership, instructional, or equipment fees. The 'shared service' design of this partnership results in minimal expenditures (transportation) and maximum benefits for school districts. This shared service model is mutually beneficial to education, industry, and community. However, the greatest benefit is to education & the 6,800 students (plus home-educated students) and 608 teachers who will benefit from use of the BFL at no cost to the school districts. It sounds too good to be true, but is real as the founders of the BFL are teachers at heart and are committed to enhancing the educational experience of all students which will, in turn, enhance the workforce and ultimately the community of Bowling Green and surrounding areas. Initially, it is anticipated that there may be a slight increase in transportation costs as each district will transport students to the BFL (centrally located in BG). All districts currently have budgets for transportation that include field trips which will cover the costs in all districts except BG due to larger student enrollment numbers in the district. It is also anticipated that material/supply costs may increase as the nature of the BFL is such that no teacher can foresee all activities and thus materials and supplies that will need to be purchased. These costs will be covered through existing curriculum budgets at Otsego & Eastwood Schools as both superintendents are fully committed to PBL and will earmark field trip, PD, and materials/supply budgets for this grant. Due to the larger number of teachers and students in district, a slight increase of $35,000 has been included in BG's FIT for materials and supplies. This represents an increase of $5,000 in year 3 (FY 17) and $10,000 in each of years 4, 5, 6 (FY 20) totaling $35,000. These costs are offset by the credible, verifiable, and permanent spending reduction of $205,665 in salaries and $31,843 in fringe benefits of 2.5 teachers who are retiring and who will not be replaced (delineated in the FIT). PD activities are built into the grant for initial year. However, all districts have PD budgets, and PD in the area of STEAM & PBL will become a priority in all districts. All consortium members are committed to this project and will engage in flexible, collaborative PD as a shared-service through the consortium to minimize professional development costs in subsequent years. Utilization of grant funds, combined with existing district PD budgets, allows each district the option to provide PD offerings to meet the different needs of our teachers. There will be transportation costs specific to each district. All districts have existing field trip funds that will be earmarked for transportation to the BFL. Due to the larger number of students and the assistance that BG will provide to non-publics for transportation, BG anticipates a slight increase in field trip costs. These costs will be personnel costs to compensate bus drivers for additional driving trips. BG has included an anticipated $42,000 increase in personnel costs for bus drivers (Salary $36,675; Benefits $5,325). These costs are offset by the credible, verifiable, and permanent spending reduction of $205,665 for the salaries of 2.5 teachers who are retiring and will not be replaced (delineated in the FIT).

- **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.**

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<td>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 Not Applicable</td>
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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. If applications without increased ongoing spending as documented in questions 11-14, please demonstrate how you can sustain the project without incurring any**
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: October 2013-April 2014

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

Idea Conception Oct 2013-Regional meeting held at Penta Career Center convenes industry, business, & education reps from NWOhio. Bowling Green City School (BGCS) Supt McVey’s participation ignited her passion to form an education, industry, community partnership. Fall-Winter 2013-BGCS Leadership Team & BG City Econ Dev launched a plan to form a partnership with an emphasis on preparing high school students for the workforce. A think-tank luncheon for local industry/business, Gr6-12 principals, guidance counselors & school supt resulted in plans for students to tour industrial sites; mentorships; career pathway revisions. Mark Bowlus, engineer & owner of a local business, introduced the concept of MakerSpaces & the partnership was born. Pre-Grant Submission Jan-Mar14 Business people, entrepreneurs, retired industrial tech teachers, & Supt. McVey met weekly to develop vision and plans for Makerspace in BG. Teachers and students’ insights refined & enhanced the vision. The business plan for the BIG Fab Lab (BFL) was written. Architects & contractor viewed possible locations; materials & equipment lists began; STEM curriculum review began. Apr14 BGCS teachers brainstorm Makerspace activities for students. A regional Makerspace Lunch & Learn was attended by over 70 regional industry, community, & educational leaders. The concept was met with incredible enthusiasm & support. BFL interactive website opened to share Makerspace concept & collect specific interest of education, industry, community. As of this writing, the spreadsheet contains over 350 entries. Post-Grant Submission Early Sum14 -Finalize membership of the BFL Advisory Board & begin monthly meetings. -Form the BIG Team (teacher reps from all consortium members and partners; industry and community members); team spends at least one day in a Makerspace (ie, Detroit; Columbus) -Continue PD development & partnerships -Solicit industry & community membership/partnership with Ed -Finalize location; discuss flo

* Anticipated barriers to successful completion of the planning phase

Anticipated Barriers -Anticipated barriers to Planning (2000 characters) Makerspace Concept. The makerspace concept is not familiar to most
18. Implementation - Process to achieve project goals

* Date Range Fall 2014–June 30, 2015

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

Specific to Education Fall 14 - BiG Team structures exemplary student learning opportunities at BiG Fab Lab. Ideas will come from teachers, industry partners, and formal STEAM curricula such as Engineering by Design (free). Selected activities will be aligned to Ohio’s standards, meet the needs of ALL learners, and include partnership with industry/community. - BiG Team creates PD timeline & design to roll out exemplar learning activities. Winter-Spring 14 - After experiencing the exemplary student learning activities, grade level teams from across the consortium identify and design STEM activities. -BiG Team provides catalogs/websites & teacher teams make lists of supplies, tools, equipment. Summer 2015 - Teacher PD on safety measures; protocol for student use of the Lab 2015-16 High Quality STEAM instruction takes place in the BiG Fab Lab. Specific to Renovation August 14 - The BiG Fab Lab Steering Committee determines architect, construction management, IT firm. Equipment ordering begins. September 14 - Architect & BiG Team design the BiG Fab Lab. Solicitation of basic equipment & tools from partners. October 14-January 15 - Architect plans finalized & renovation of space begins; specific attention to safety includes cameras, Magnetic ID / Security badges for bidg, rooms, & equipment access. Design color schemes for age groups/activities. Student & teacher input for additional equipment purchases. Steering Committee hires personnel. Sub committees develop protocol, procedure, & policy manuals; technical manuals; training protocols for specific areas & equipment. February-May 15. Interior construction completed & equipment, tools & supplies placed in the Lab. Students, teachers, and community members participate in finishing the space which includes painting/decorating. Guided tours start mid-May. June-July 15 - BiG Fab Lab opens for consortium & partners. Kiosk installed at each entrance for BGSU data collection. August 15 - BiG Fab Lab is operational.

** Anticipated barriers to successful completion of the implementation phase.

The "Disruptive Innovation" of a MakerSpace is significant change to traditional instruction. It will challenge teachers to teach outside their comfort zone. Teachers will be supported with high quality PD throughout the 2014-15 year, led by trained instructional coaches (classroom teachers). Opportunities to meet with industry/community mentors throughout the PD process will increase teachers’ comfort level prior to taking students to the BiG Fab Lab. Communication: The BiG Fab Lab Makerspace is unique in that it includes education as a key stakeholder. Education as an equal partner in the BiG Fab Lab has been embraced by industry/community. To continue these relationships, the communication plan must focus on a variety of venues and structures. The BiG Fab Lab website will also continue provide two-way communication and monitor comments daily. Scheduling: There will be a limit to the number of people who can share the BiG Fab Lab at any one time. The BiG Fab Lab will hire an employee who will coordinate with one person from each school district and nonpublic school to facilitate scheduling. Priority will be given to secondary students to enhance career pathways. Safety and Liability: This is a concern of many and could potentially be a barrier to some. The space needs to be safe for students of all ages including families to enjoy the space safely during the evenings, weekends, and summers. The tech team will take the lead on this in tandem with industry experts. Cameras will be installed; training will be required specific to each user; cards will be programmed to allow specific access to specific individuals. Regarding liability, insurance coverage is currently in process. The safety precautions alleviate this concern for insurance providers. Everyone using the space will sign a waiver of liability; however, it is the responsibility of the BiG Fab Lab to maintain safety as a priority at all times.

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

* Date Range Summer 2014-July 2019

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

CAES will conduct a five-year evaluation of the project. Year One evaluation activities focus on establishing teacher and student baselines, measuring the impact of teacher PD, and monitoring the progress of BiG Fab Lab creation. Year Two focuses on evaluating the impact of using the BiG Fab Lab as well as establishing a baseline of use. Use and impact will continue to be monitored in subsequent years. Summer 2014 - Develop teacher and students surveys on STEAM and PBL learning. - Work with Project Leaders to build in user tracking within MakerSpace facility - Create Progress Monitoring Checklists September-October 2014 - Administer teacher and student pre survey and analyze results. Fall 2014 - Attend Project Leader Meetings - Monitor teacher PD and Big Fab Lab progress - Write Formative Report (Dec) and present to project administrators. Spring 2015 - Attend Project Leader Meetings - Monitor teacher PD and Big Fab Lab progress - Conduct classroom observations of PBL implementation May 2015 - Administer teacher and student post surveys. June-July 2015 - Analyze survey and observation data. - Collect the student achievement data from each district. - Write Year One Final Report and present to project administrators. - Install user tracking mechanisms and surveys in Big Fab Lab August-September 2015, 2016, 2017, 2018 - Collect the student achievement data from each district. - Administer teacher and student pre surveys Monthly throughout 2015-16 Academic Year - Document Big Fab Lab use - Conduct classroom and Big Fab Lab observations May 2016 - Administer teacher and student post surveys July 2016 - Analyze survey and observation data. - Collect the student achievement data from each district. - Write Annual Report and present to project administrators. August-September 2016, 2017, 2018 - Administer teacher and student pre surveys May 2016, 2017, 2018 - Administer teacher and student post surveys June-July 2017, 2018, 2019 - Write Annual Report/present results

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

The main barrier for completing the summative evaluation of this project is the volume of participants (districts, grade levels, teachers, and
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:

Mr. Moore is a high school physics teacher. His principal believes him to be one of the best teachers in the school, maybe the area. This year, he provides students with engaging, technology-rich, lessons including labs during his daily 42 minutes. He integrates literacy standards into his lessons, posts his learning targets daily, provides descriptive feedback in a timely manner, encourages student choice on presentations, and aligns assessments to standards. His colleagues and students think that he is an excellent teacher and make positive statements about him often. During the summer and fall Mr. Moore attends project and problem-based learning PD offered through this grant. While he attends PD his principal is working with the building leadership team to create a flexible schedule which will accommodate the BiG Fab Lab integration. The following year, Mr. Moore has completely revamped his lessons. The first lesson includes science standards at its very core. Mr. Moore isn’t sure how it will work out as he has embedded critical thinking, problem-solving, and design into this foundational lesson. Students see that this is different from the moment they walk into class. They complete a jigsawed, close reading activity on a physics article one day one. On days two through six they are presented with three machines. Students are asked to evaluate each machine based on concepts presented in the article. As they evaluate, they must cite evidence from the article read. They present their findings to their peers.

During the second and third weeks, they work in teams to design a new machine. They are encouraged use physics concepts presented in the article but are free to use their own ideas. During the fourth week they travel to the BiG Fab Lab and complete training for four distinct areas which include multiple machines. They spend full days on both Monday and Tuesday learning about the equipment and computers they will use in the future. On Wednesday through Friday they don’t attend science class at all and will have adjusted schedules with math, English, US/World integrated studies and electives. The following week the schedule repeats and they begin to use the equipment in the MakerSpace. After the lesson concludes, students may visit the MakerSpace on their own and tweak their project outside of the classroom.

Teachers are there outside of school meeting with other physics teachers or college professors, tweaking the foundational lesson and discussing how the exdissussi

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:

Reliable research, business, industry, and local government partnerships, and a collaborative planning approach, coupled with a proven track record of successful collaboration means that this project has a high probability of success. Business and Industry often state that students are not college and career ready. In response to the apparent lack of skills and knowledge, which resulted in fewer job opportunities and remedial coursework, The Partnership for 21st Century Skills (P21) was founded in 2002. P21, a collaborative organization of governments, industry leaders, and educators developed a framework and defined the skills and knowledge that students would need to face their futures - changing the conversation about what kids need to know and be able to do. However, the linear classrooms that were formed in the 1900s still exist today - and students are still not prepared for future endeavors. This disruptive innovation and learning project changes that completely for the member districts' students, for our communities, and for business and industry. The MakerSpace places each student (and their ideas) squarely in the center of the learning experience. Deakin University reserach indicated that innovative learning spaces substantially impact student learning (Blackmore, et al., 2010). A shift to a genuine focus on the development of authentic and skilled citizen-worker will provide new levels of flexibility and adaptability for a our rapidly changing global society. Our new learning environment will provide new experiences for our students but also for our community. Rutgers reports that MakerSpace will provide access to technology and tools; facilitate resource and knowledge sharing; and provide opportunities for creativity and innovation.(2014). Instead of simply introducing students to possible careers or expecting teachers to understand the needs of all industries, students and industry unite in new and exciting ways. Students have the opportunity to share their knowledge and skills with adults; industry can identify future recruits; students can create and market their ideas in one place; and technology previously out of reach are now available and free for all students in our districts. Zitter and Hoeve report that combining or connecting features of school-based settings - only - is not sufficient to ensure learners will develop a fully integrated knowledge/skill base to be prepared for the world of work. (2012). To do this we need to offer hybrid experiences for students and teachers, encouraging students to be creative and solve problems. By developing the hybrid concept and sharing resources with adjacent districts students, the community and business gain mutual benefit. The benefits include critical thinking skills, collaboration with a larger community of people and ideas, and learning to solve problems in new and engaging ways. Blackmore, J., Bateman, D., Cloonan, A., Dixon, M., Loughlin, J., O'Mara, J., & Senior, K. (2010). Innovative learning environments research study. Marzano, Robert J., and Tammy
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.

The Center of Assessment and Evaluation Services (CAES) at Bowling Green State University will serve as the external evaluator of this project. CAES will utilize a team of researchers to complete this external evaluation. Dr. Rachel Vannatta Reinhart will serve as the lead evaluator of this project, coordinating all evaluation activities and reports. Dr. Toni Sondergeld will manage observations and Big Fab Lab data. Dr. Stacey Rychener will manage all district data. CAES will implement a five-year mixed methods design to evaluate the objectives and outcomes of the proposed program. Since Year One is focused on PD and the creation of the BiG Fab Lab, MakerSpace use and impact will be measured in the subsequent four years (2015-2019). Rachel Vannatta Reinhart, Ph.D. Professor, Assessment, Research & Statistics Co-Director, Center of Assessment & Evaluation Services Bowling Green State University Education 365 Bowling Green, OH 43403 419-372-0451 (office) 419-378-1870 (cell)

* 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).

Short-term Objectives include: -Implement STEAM & Problem/Project-based (PBL) PD for teachers -Increase teacher preparedness to teach using STEAM curriculum & PBL instructional methods Construct, equip, & implement BiG Fab Lab -Create operational policies & procedures for BiG Fab Lab Long-term Objectives include: -BiG Fab Lab is operational -Integrate PBL learning through class visits/work at the BiG Fab Lab -Increase teacher use of STEAM curriculum & PBL methods -Increase student experience of PBL methods -Increase student use of BiG Fab Lab -Increase student math & science achievement scores -Increase student awareness of & interest in STEM careers Quantitative & qualitative data from a variety of sources will be utilized to measure objective benchmark fulfillment. Multiple surveys will be developed to evaluate student & teacher growth. CAES staff will conduct observations of classrooms & the BiG Fab Lab to observe how PBL learning is implemented in the classroom & MakerSpace. The BiG Fab Lab will provide multiple data points as well. User keys will automatically record user, type of equipment used, & length of use. In addition, users will complete a brief survey using touch-screen technology that gathers information regarding the purpose & outcome of use. Districts will provide CAES with achievement data to evaluate student growth. Pre/post survey data will evaluate: -Teacher preparedness to teach using STEAM curriculum & PBL methods -Teacher use & impact of STEAM curriculum & PBL methods -Student experience & impact of STEAM curriculum, PBL methods, BiG Fab Lab -Student awareness of & interest in STEM careers -Observation data will evaluate: -Teacher use & impact of STEAM curriculum & PBL methods -Student experience & impact of PBL methods -Teacher, student & community use of Big Fab Lab -Big Fab Lab data will evaluate: -Equipment use: user, type, length, purpose, outcome -District data will evaluate: -Changes in student achievement

* 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.

Due to the formative evaluation process that is sequential, reliable, and valid, it will be realized through data at a very early stage in the project if goals are not being met. The vast array of individuals who will contribute to the evaluation, combined with the computerized data systems and analysis will be reviewed continually. At any specific point and in regards to any specific goal/benchmark (achievement; PD; renovation) it is not appropriately on track, the evaluation team under the leadership of Dr. Rachel Vannatta Rinehart will convene to review and either 1) readjust evaluation methods and/or data collection and/or amend goal statements/benchmarks that are not providing the valid, reliable information that support the processes being used. Process will remain fluid and are therefore amendable at any time.

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

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

Please enter your response below.

The overarching goal of the BFL project is to increase student achievement in the areas of math & science. This goal will be measured through scores on the Ohio Achievement Tests, Ohio Graduation Tests, & PARRC assessments. In order to reach the goal of increased student achievement, several other goals & objectives/benchmarks must be met. Evaluation of these goals/objectives is described in specific detail in the evaluation section. Center for Assessment & Evaluation Services, BGSU will conduct a five-year evaluation of the project. Year One evaluation activities focus on establishing teacher & student baselines, measuring the impact of teacher PD, & monitoring the progress of BFL creation. Year Two focuses on evaluating the impact of using the BFL as well as establishing a baseline of use. Use & impact will continued to be monitored in subsequent years. Annual reports will be compiled, analyzed, & subsequent processes will be revised accordingly. Quantitative & qualitative data from a variety of sources will be utilized to measure objective benchmark fulfillment. Multiple surveys will be developed to evaluate student & teacher growth. CAES staff will conduct observations of classrooms & the BFL to observe how PBL learning is implemented in the classroom & MakerSpace. The BFL will provide multiple data points as well. User keys will automatically record user, type of equipment used, & length of use. In addition, users will complete a brief survey using touch-screen technology that gathers information regarding the purpose & outcome of use. Districts will provide CAES with achievement data to evaluate student growth. Implement STEAM & Problem/Project-based (PBL) PD for teachers; Increase teacher preparedness to teach using STEAM curriculum & PBL instructional methods.

24. Describe the specific benchmarks, by goal as answered in question 9, which the project aims to achieve in five years. Include any other
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.

**Anticipated Outcomes of the Project**

The planning process has already brought together many individuals from education, industry, and community that would not have come together with the shared interest of educating our children. The grant will provide an opportunity to build these relationships to the benefit of our students. I believe that the economic development of our community will be enhanced as a result of the BFL. I also believe that this concept will be replicated across the United States as it is unique in the equitable involvement of education with industry and community.

### 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

Disruptive innovative projects are seldom easy - people involved in this project have passion and are motivated to improve their community, impact their local businesses, and engage their students. How extraordinary! This diverse group which includes Mr. Bowlus a local engineer, Dr. McVey, a passionate superintendent, and Bowling Green's Economic Development Department, have shared their passion, their promise to make this project successful, and their commitment to see it through from an idea to actuality. This process in and of itself replicates and embodies the very concept of MakerSpaces. Mr. Bowlus and Dr. McVey have shared their vision and passion with superintendents, curriculum directors, Lake Erie West ESC, teachers, parents, students, local business leaders, construction workers, architects, marketing, and non-profit organizations such as the United Way and Habitat for Humanity. All of these people and organizations studied the proposal and came to the project, sleeves rolled up ready to work. As a matter of fact, every single person who has engaged in conversation about the BFL has exciting and innovative ideas about how to use the space. Vision and passion will be what makes our MakerSpace replicable for other communities and schools. Our community members have already begun, and will continue to document processes, protocols, meetings, discussions, actions, and barriers and share those experiences through a variety of tools including a website, google sites and docs, and audio and video repositories. BGSU will compile evaluation data that will inform future STEAM ventures including classroom observations pre and post implementation to document evidence regarding pedagogy. The BFL plans to archive videos of training; instruction; students collaborating with industry and community; student presentations; and will link these to the www.bigfablab.com website. The BFL business performa will be placed on the website as well. There is an education link on the website currently that contains information for anyone who...
would like to start immediately on their own MakerSpace. We will offer tours and meet with districts or consortia. Otsego and Eastwood currently work within another consortium and have extensive experience at planning, documenting, and sharing information with large groups of interested parties. Those lessons will be beneficial in this project as well. As this consortium learns from its members those lessons will be shared with others. The BFL Lab will change teaching and learning in Northwest Ohio. Even though our consortium is comprised of four public schools and local private schools, there are many more within our county and adjacent counties who will take advantage of the MakerSpace concept. A MakerSpace can work anywhere with any group of dedicated individuals. Education - Industry - Community working together is not a new concept, but this project will set the bar for what it can and should be. The BFL consortium will support any Ohio group who wishes to start their own MakerSpace.

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

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

I have read and agree with all assurances. Dr. Ann F. McVey, Superintendent 137 Clough St Bowling Green, OH 43402 419-352-3576 amcvey@bgcs.k12.oh.us
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## Implementation Team

**Bowling Green City School District (043638) - Wood County - 2015 - Straight A Fund - Rev 0 - Straight A Fund**

### Sections

#### Responsibilities

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<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>Qualifications</th>
<th>Prior Relevant Experience</th>
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<tbody>
<tr>
<td>Ann</td>
<td>McVey</td>
<td>Superintendent, Bowling Green City Schools</td>
<td>Dr. McVey will serve on the BiG Fab Lab Advisory Board, representing education, and will also facilitate the renovation, equipment purchases, industry and community contacts, and on-going communication with the owner of the BiG Fab Lab LLC. Dr. McVey will also be the liaison between the BiG Fab Lab, consortium members, Bowling Green School's Treasurer to fulfill fiscal agent responsibilities. She will continue attending monthly economic development meetings and continue communication (data based and in person) with industry, community, and educational leaders.</td>
<td>Dr. Ann McVey holds licenses in elementary education; special education; music education; Master's degree in Gifted &amp; Talented education; administrative licensure and doctorate. Dr. McVey's 33 years of experience in education includes 18 years as a social studies, language arts, and gifted teacher; Director of Special Education; Assistant Superintendent and Superintendent at Bowling Green City Schools. Dr. McVey serves on numerous advisory boards at Bowling Green State University, is a Board of Director's Member for the Bowling Green Chamber of Commerce, and is a voting member of the Family &amp; Children First Council of Wood County. Dr. McVey is also an active member of the Bowling Green Exchange Club whose mission is to serve children. Her tenure with Bowling Green City Schools has afforded the opportunity to build strong relationships with Bowling Green community members, business leaders, and educators.</td>
<td>Dr. McVey has lead large projects in BG district including the closing of 3 buildings and construction projects. She understands the need for continual communication among all constituents. Dr. McVey has also had 20 years of experience working with school budgets and fully understands the budgeting process. Over the last few years, the BG budget has been reduced significantly through collaborative efforts within and outside the district. Dr. serves on Boards at BGSU: NWO COSMOS; NWOET Technology; Ed Pre 21 to name a few. All of these boards are involved in innovative and creative ideas through STEAM and Tech, which is the cornerstone of this grant.</td>
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<td>Ron</td>
<td>Matter</td>
<td>Superintendent, Penta Career Center</td>
<td>Mr. Matter will provide the expertise needed from the Career Tech perspective of the grant. He will provide current career tech trends and will also collect data regarding trends of BG, Eastwood and Otsego Students attending Penta Career Tech Center. Mr. Matter will establish a process to involve the career tech experts that he employs. Penta Career Tech teachers will also utilize the BiG Fab Lab and will participate in PD with other consortium members.</td>
<td>Ronald Matter is the current superintendent of Penta Career Center, a career-technical school for high school and adult students, in Perrysburg Township. He has held this position since 2009. Matter first joined Penta Career Center in 2005 as the assistant superintendent. Prior to Penta, Matter served 14 years in administrative positions with the Northwood Local School District in Northwood, Ohio. He served Northwood as the superintendent from 1998 to 2005, and prior to that two years as their high school principal and five years as principal of Lark Elementary School. Matter has also worked in the Pandora-Gilboa Local School District as a principal.</td>
<td>Matter is a member of several professional organizations which include: -Ohio Association of Career Technical Superintendents - OACTS (member of Executive Committee and President Elect) -Ohio Association for Career and Technical Education - OACTE -Buckeye Association of School Administrators - BASA -American Association of School Administrators - AASA Some of the present and past leadership roles Matter has held in various community and regional organizations include: - Greater Northwest Ohio Tech Prep Consortium (member Governing Board) -Wood County Workforce (WIA) Policy Board -Northwest Ohio Educational Technology Foundation (past President, current Governing Board member) -Northwest Ohio Educational Computer Association (member Governing Board) -Bowling Green State University Board of</td>
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<td>Lori Rae</td>
<td>Director of Curriculum and Instruction, Otsego Local Schools</td>
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<td>Adam Koch</td>
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**Lori Rae**

Director of Curriculum and Instruction at Otsego Local Schools. Mrs. Rea is Otsego’s Curriculum Director and will serve as liaison between BGSU evaluation team and the consortium to set appropriate benchmarks, develop sound progress monitoring systems and communicate the final summative evaluation to all consortium members and stakeholders. She will also support all ODE progress monitoring meetings and audits.

Lori has been in education for 18 years, serving as a teacher, peer coach, and administrator. Prior to entering education, she directed multi-million dollar projects in the United States & Canada as Lead Project Manager for an engineering firm. While with Toledo City Schools she oversaw School Improvement Grants, worked with the Bill & Melinda Gates Foundation on small school grants/projects, applied for and secured an ARRA grant for Woodward HS, served on RtT & the DLT, developed Toledo’s teacher and principal evaluation systems under OTES/OPES, and supported teacher training/data collection. Lori previously helped establish clear progress monitoring and program evaluation guidelines for various programming at Toledo Public and for a current Straight A grant, NWOi3.

**Adam Koch**

Superintendent of Otsego Local Schools. Adam Koch has earned an MBA, concentrating on Management Innovation & Change & is Otsego’s Superintendent. Mr. Koch served as a School Treasurer previously & his experience in business has made him an excellent member of the Straight A Grant submission. Mr. Koch is continuously seeking new ways to save money. Mr. Koch’s passion lies with offering Otsego's students the best possible education. He previously served on Otsego's RtT & now leads the DLT.

Prior to entering education, he directed multi-million dollar projects in the United States & Canada as Lead Project Manager for an engineering firm. While with Toledo City Schools she oversaw School Improvement Grants, worked with the Bill & Melinda Gates Foundation on small school grants/projects, applied for and secured an ARRA grant for Woodward HS, served on RtT & the DLT, developed Toledo’s teacher and principal evaluation systems under OTES/OPES, and supported teacher training/data collection. Lori previously helped establish clear progress monitoring and program evaluation guidelines for various programming at Toledo Public and for a current Straight A grant, NWOi3.

Mr. Koch has conducted a number of community and parent outreach activities within the Otsego community. He has lead community forums, parent summits, leads a Superintendent's Advisory Council, participated in strategic planning and more. He will adapt this activities for a broader community and maintain transparency and trust with the consortium parents, business leaders and stakeholders.

Mr. Koch earned his MBA from Wright State University. He currently serves as the lead on both Race to the Top and a Straight A Innovative Grant in round 1. We have worked through implementation of that project as well including new processes for purchase order work flow and expanded communication plans.
leaders, and community at large. He will also serve as the liaison between Otsego's BOE and the consortium.