

Budget

Wheelersburg Local (049668) - Scioto County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (178)

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	0.00	0.00	0.00	0.00	0.00
Support Services		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family/Community		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities		0.00	0.00	0.00	0.00	184,000.00	0.00	184,000.00
Transportation		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>		0.00	0.00	0.00	0.00	184,000.00	0.00	184,000.00
<b>Adjusted Allocation</b>								0.00
<b>Remaining</b>								-184,000.00

Application

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

**A) APPLICANT INFORMATION - General Information, Experience and Capacity**

1. Project Title:Wireless Connectivity for the 21st Century

2.Executive summary: Provide an executive summary of your project proposal and which goal(s) in question 9 you seek to achieve. Please limit your responses to no more than three sentences.

This is a project to create a wireless network, based on the newest wireless standards in order to provide high performance, high bandwidth infrastructure to accommodate a digital media learning environment. Providing this will afford students the capability to participate in new, media-rich learning opportunities and positively impact student achievement.

1585 3. Total Students Impacted:

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

First Name, last Name of contact for lead applicant: Mark Knapp

Organizational name of lead applicant: Superintendent, Wheelersburg Local School District

Unique Identifier (IRN/Fed Tax ID): 049668

Address of lead applicant: 620 Center Street, P.O. Box 340 Wheelersburg, Ohio 45694

Phone Number of lead applicant: 740-574-8484

Email Address of lead applicant: mark.knapp@wheelersburg.net

5. Secondary applicant contact: - Provide the following information, if applicable:

First Name, last Name of contact for secondary applicant: George Grice

Organizational name of secondary applicant: Treasurer, Wheelersburg Local School District

Unique Identifier (IRN/Fed Tax ID): 049668

Address of secondary applicant: 620 Center Street, P.O. Box 340 Wheelersburg, Ohio 45694

Phone number of secondary applicant: 740-574-8484

Email address of secondary applicant: george.grice@wheelersburg.net

6. List all other participating entities by name: Provide the following information for each additional participating entity, if applicable: Mention First Name, Last Name, Organizational Name, Unique Identifier (IRN/Fed Tax ID), Address, Phone Number, Email Address of Contact for All Secondary Applicants in the box below.

N/A

7. Partnership and consortia agreements and letters of support: - (Click on the link below to upload necessary documents).

\* Letters of support are for districts in academic or fiscal distress only. If school or district is in academic or fiscal distress and has a commission assigned, please include a resolution from the commission in support of the project.

\* If a partnership or consortium will be established, please include the signed Straight A Description of Nature of Partnership or Description of Nature of Consortium Agreement.

[UploadGrantApplicationAttachment.aspx](#)

8. Please provide a brief description of the team or individuals responsible for the implementation of this project including relevant experience in other innovative projects. You should also include descriptions and experiences of partnering entities.

Melissa Bibbey, Technology Director, 37 years experience in education, 18 years experience as Technology Director. Previous grant administration: Responsible for implementing an eTech Ohio Raising the Bar grants at Wheelersburg Middle School and Wheelersburg High School. Evan Mercer, Technology Coordinator, 3 years experience as Technology Coordinator at Wheelersburg Local Schools. Darin Porter, Director of Operations, Safety & Transportation, 15 years managing personnel and projects for the District. Previous project administration: Responsible for P-12 school construction project completed in 2008. Bruce Ottens, Network Engineering Consultant, 14 years of experience with the District working in networking design and server management.

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

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

Student achievement

Spending reductions in the five-year fiscal forecast

Utilization of a greater share of resources in the classroom

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

New - never before implemented

Existing and researched-based - never implemented in your district or community school but proven successful in other educational environments

Mixed Concept - incorporates new and existing elements

Enhancing/Scale Up - elevating or expanding an effective program that is already implemented in your district, school, or consortia partnership

11. Describe the innovative project.

This project would enhance learning by upgrading the existing wireless infrastructure throughout the K-12 building to ensure enough bandwidth capacity to accommodate a true 1:1 educational environment. Currently the district has a BYOD initiative at the high school and middle school, in addition to eight mobile laptop carts that are moved to classrooms as needed. The current wireless installation has an access point for every two rooms, that has 25 mbs of 802.11a usable bandwidth and 25 mbs of 802.11b/g bandwidth shared among the clients in two rooms. This enhancement project will move the district to the new wireless standard of 802.11 ac and provide 12X the performance of the current wireless infrastructure, thus positioning the district to move forward with a 1:1 computing environment. According to Cisco, 802.11ac: The Fifth Generation of Wi-Fi Technical White Paper: "802.11ac is the fifth generation of wi-fi. It provides significant improvement in the number of clients supported by an access point, a better experience for each client, and more available bandwidth for a higher number of parallel streams." New 802.11 ac access points will be installed in each classroom, instead of the current shared access. Items to be purchased include 802.11 ac/a/n radio and 802.11 b/g/n radio dual band switches, a controller to manage the radio points, license expansion to accommodate the additional radio points, and Power over Ethernet switches for each technology closet in the building to provide connectivity. This installation will take the district many years into the future in regards to wireless infrastructure and capacity. While it is difficult to predict the type and quantity of wireless devices that might be used in the future, we do know that based on these newest standards we would have the bandwidth and capacity to accommodate these devices. Major activities of this project include the selection and ordering of the hardware and licensing, configuring the network and hardware devices, and installing the radio access switches. District personnel listed in Item 8 will complete these tasks. No outside contractor will be required.

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

The District's mission is "To ensure the highest quality education, to prepare all students for their future through an innovative and diverse learning environment." As we continually engage in efforts to transform the learning environment we recognize the impact that digital content and media are making on the way students work and learn. We must promote new ways for teachers and students to interact and change the learning environment to reflect the instructional opportunities made possible with digital media. In order to use digital media to improve student achievement, all students must use technologies that provide instant access to content. In a survey of research on the impact of 1:1 initiatives by Lori Holcomb, Professor of Instructional Technology at NC State, the data shows an increase in student achievement in all areas when students use technology in a 1:1 environment. Gains occur when students have the technology available and when it is used to promote learning. In order for these technologies to work the District must have the infrastructure to support them.

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

13. Financial Documentation - All applicants must enter or upload the following supporting information. Responses should refer to specific information in the financial documents when applicable:

a. Enter a project budget

b. Upload the Straight A Financial Impact Template forecasting the expected changes to the five-year forecast resulting from implementation of this project. If applying as a consortia or partnership, please include the five-year forecasts of each school district, community school or STEM school member for review.

c. If subsection (b) is not applicable, please explain why, in addition to how the project will demonstrate sustainability and impact.

This project has no impact on the current 5-year forecast, as these types of expenditures have been cut from previous forecasts in order to reduce general fund expenditures. The current technology budget is funded through the Permanent Improvement fund, which is not part of the 5-year forecast. The current technology budget is used to simply maintain the current level of service and quantity of equipment, with no planned enhancements.

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

184,000.00 \* Total project cost

\* Provide a brief narrative explanation of the overall budget. The narrative should include the source and amount of other funds that may be used to support this concept (e.g., Title I funding, RttT money, local funding, foundation support, etc.), and provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.).

The \$184,000 budget for this project includes equipment items and licensing necessary to upgrade the current wireless network to the newest wireless standards. 160 HP brand 802.11 ac/a/n and 802.11 b/g/n radio port access points will be purchased to provide high bandwidth wireless network access to all clients across the entire school facility. A HP controller to manage the wireless network and license expansions are necessary for the installation. One power over Ethernet (PoE) HP switch (HP 2920 PoE #J9727A) will be purchased for each technology closet and the main server room (8 total). These will provide the necessary connectivity to the network for the wireless radio access points. This configuration of equipment will allow us to be fully compatible with older, existing devices, as well as new devices coming onto the market, in other words, what the students have now, and what devices they might bring in five years from now, because this configuration meets the newest IEEE wireless standards. We will be able to use the existing Ethernet wiring to make the connections, so no wiring costs will be incurred.

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

0.00 \* Specific amount of new/recurring cost (annual cost after project is implemented)

\* Narrative explanation/rationale: Provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If there are no new/recurring costs, please explain why.

Ongoing costs associated with this project include maintenance and Internet Access. The District internet access is provided by our regional ITC, which is SCOCA. The District files E-rate applications for Internet Access and is currently funded at the 67% reimbursement level. We will need to increase our current bandwidth to SCOCA as we implement this project. We will continue to leverage the e-rate program to offset costs of Internet access. Internet access costs will continue to be District responsibility. Maintenance and routine firmware updating and wireless network management will be done by existing staff and thus we will not incur additional expenses related to this technology enhancement project.

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

0.00 \* Specific amount of expected savings (annual)

\* Narrative explanation/rationale: Provide details on the anticipated savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.)

All costs associated with this project are one-time expenditures, other than Internet access, which is an expense the District already incurs and which will remain the responsibility of the District. We will not need to pay an outside contractor for installation as all installation, setup, and network/switch configuration tasks will be done in-house. Leasing this equipment would result in a higher overall cost and be an ongoing cost.

17. Provide a brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

Internet access is an annual expense which the District has and will be responsible for. By installing a wireless network based on the newest IEEE standards this network will take the District many years into the future and be able to provide adequate access and bandwidth for students and staff. The Technology staff will closely monitor bandwidth out of the District to SCOCA and negotiate additional bandwidth as usage indicates. The District will continue to participate in the federal E-rate program to reduce the net costs of Internet access to the District.

**D) IMPLEMENTATION - Timeline, communication and contingency planning**

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

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

\* Proposal Timeline Dates

Plan (MM/DD/YYYY): 02/28/2014

\* Narrative explanation

During the planning stage the District will get firm quotes from vendors and place orders for equipment. The District will develop a plan for installing the equipment, locate access point placement on a building map, and decide on the network configuration. Melissa Bibbey, Technology Director, will consult with administrators and teachers in the implementation planning. She will update the Board at monthly meetings.

Implement (MM/DD/YYYY): 06/15/2014

\* Narrative explanation

During the implementation stage, the access points will be installed per the marked-up building map, PoE switches will be installed in the technology closets, and network configuration will be implemented and testing of systems will be conducted. Melissa Bibbey, Technology Director, will communicate with the principals and teachers on a daily basis about the installation progress and the enhanced wireless access. She will update the Board at monthly meetings.

Summative evaluation (MM/DD/YYYY): 06/30/14

\* Narrative explanation

The project will be completed by June 30, 2014. The enhanced wireless access will be fully functional. Melissa Bibbey, Technology Director, will communicate with the principals and teachers about the full access and functionality of the systems. She will demonstrate to the staff the enhanced technology for use in their daily instruction. She will report to the Board at monthly meetings.

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

We have achieved past successes with our mobile laptop carts. Our initial success with our fledgling BYOD initiative show that there is interest among teachers and students and that our capacity to scale up is limited by the wireless network capacity. As a result of creating this broadband, high performance network we expect to see more student-owned devices used for learning. There should be no delays or timeouts when using digital media and Internet. The District expects this usage to increase every year. The District will leverage the devices that students already have. Teachers will be able to make assignments requiring Internet and other digital tools without feeling the pinch of not enough resources and not enough capacity. When access to the Internet is slow and other digital tools are slow and the infamous "timeout" messages appear, teachers tend to give up and move on to more reliable tools, which means they are not using the tools and resources that 21st Century students need to be using. The District has experimented with online formative assessment tools and will expand this type of formative assessment with this implementation. One side benefit will be that this high bandwidth network will help facilitate the new testing being implemented in 2014-15. We will be able to use our mobile laptop labs with reliability, because there will not be bandwidth or performance issues. The current wireless network is based on 10-year old technology and design and we anticipate that this wireless installation, based on the newest standards will take the district ten to twelve years into the future.

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

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

The District has been successful in the past in implementing network infrastructure changes and has experienced personnel to complete the work. The District began a limited BYOD initiative in the 2012-

13 school year. We monitored the bandwidth usage and graphs show increased use of bandwidth over previous years. Bandwidth usage spiked significantly May 2013 during the time that the high school was administering the ACT QualityCore End of Course exams, which are given online. This project will address those issues. In a survey of research on the impact of 1:1 initiatives by Lori Holcomb, Professor of Instructional Technology at NC State, the data shows an increase in student achievement in all areas when students use technology in a 1:1 environment. Gains occur when students have the technology available and when it is used to promote learning.

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

Yes

No

22. If so, how?

The District can serve as a showcase for other districts and Technology Coordinators. The District can prepare information on the new standards, a list of parts and pieces and a plan for implementation and make this available to anyone that requests it. As we monitor bandwidth and performance usage, other districts can compare their own wireless stats to determine the benefit to them. This project is certainly replicable as a building implementation or a district implementation depending on the overall network structure in existence.

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

The District is located in an area of the state where broadband Internet access is not widely available geographically or economically; therefore the access provided at school is critical. This enhanced wireless network leverages the technologies that the students already have and allows the District to move them forward academically instead of holding them back with older district provided equipment. This high performance wireless network will have the capacity to have many multiple devices performing simultaneous streaming of content. It will provide future enhanced testing environments, as the current labs are at capacity. Some of the measures that the District will use to monitor this project include the monitoring of bandwidth usage through a product called SolarWinds, inventory records will show the number of radio access points installed, building layouts will show placement of devices, and data on the number of student-owned devices used on the network will be collected.

24. What are the specific benchmarks related to the fund goals identified in question 9 that the project aims to achieve in five years? Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

Benchmarks for meeting our goals include installation of equipment and network configuration. This benchmark must be achieved in order to have the capacity. Benchmark 2 would be the use of digital content within lessons and projects would increase from current usage. A third benchmark would be improved scores on high stakes testing. An additional outcome that is anticipated, but not easily measured is simply that students will be more comfortable with an online testing environment because of the experiences they have had, which should minimize any negative impact caused by hardware/bandwidth issues or by moving from a paper and pencil testing scenario to the online environment.

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

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

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

To evaluate the impact the District will use inventory records, building plans with locations marked, and work schedules to measure the installation as it progresses. These measures will be conducted by the technology staff. Sample lessons and student projects will be collected to show the new work done. Scores on OAA exams and End of Course exams will be compared to previous years and trends identified.

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation timeframe. The Governing Board of the Straight A Fund reserves the right to conduct evaluation of the plan and request additional information in the form of data, surveys, interviews, focus groups, and any other related data to the legislature, governor, and other interested parties for an overall evaluation of the Straight A Fund.

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

I accept. Mark Knapp, Superintendent Wheelersburg Local School District October 22, 2013