

Newfane Central School District

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Newfane, New York 14108

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Smart Schools Investment Plan

2016-2018



Chief School Officer: Superintendent, Mr. Michael J. Baumann

Newfane Central School District Contact: Mr. Peter Young, Director of Technology

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NEWFANE CENTRAL SCHOOL DISTRICT

SMART SCHOOLS INVESTMENT PLAN

STAKEHOLDERS

| | |
|-------------------------------|---|
| Mr. Thomas Adams | Newfane Middle School Principal |
| Mr. Douglas Ames | Newfane Athletic Director |
| Mrs. Jenna Arroyo | Newfane Elementary School Principal |
| Mrs. Kelly Artieri | Newfane Community Resident |
| Mr. Justin Balcom | Newfane High School Teacher |
| Mr. Michael J. Baumann | Newfane Superintendent of Schools |
| Mr. Daniel Bedette | Newfane High School Principal |
| Mrs. Jennifer Bower | Newfane Director of Pupil Services |
| Mr. Dan Connolly | Newfane Director of Buildings and Grounds |
| Mr. William Crago | Newfane High School Teacher |
| Mrs. Kristina DeGlopper-Banks | Newfane Public Library |
| Mrs. Lisa Erck | Newfane Middle School Nurse |
| Mrs. Roberta Faery | Newfane Middle School Teacher |
| Mr. Craig Isaacson | Newfane High School Teacher |
| Mrs. Maureen Kaszuba | Newfane Middle School Instructional Associate |
| Mr. Mike Little | Newfane Board of Education Vice-President |
| Alexa Littman | Newfane High School Student |
| Mrs. Susan Neidlinger | Newfane Town Board Member |
| Mrs. Emma Oudette | President, Newfane PTSA |
| Mrs. Jenny Ray | Newfane High School Librarian |
| Reese Rudnick | Newfane Middle School student |
| Mr. Eric Schmidt | Newfane Elementary School Teacher |
| Mr. Bart Schuler | Newfane Central School Business Official |
| Jordan Sherman | Newfane Middle School student |
| Bradley Strobel | Newfane High School Student |
| Mr. Victor Thibault | Newfane Middle School Teacher |
| Mr. Mitchell Tomtishen | Newfane Parent |
| Mrs. Cheryl Wentland | Newfane Board of Education Trustee |
| Mrs. Jean Wolfe | Newfane High School Instructional Associate |
| Mr. Peter Young | Newfane District Director of Technology |

I. BANDWIDTH PRECONDITION

As a precondition to utilizing Smart Schools Bond Act funds, the District has confirmed that current bandwidth exceeds the Federal Communications Commission minimum speed standard of 100 Mbps per 1,000 students to sustain the increase of classroom devices. The Newfane Central School District is currently equipped with a high speed 1 gigabit local area network and 1 gigabit wide area network access through Erie One BOCES. There is no currently existing wireless network; wireless capability in the District is limited to a small number of mobile carts of classroom sets of wireless devices; each cart includes a wireless Apple airport. There are also a limited number of airport devices deployed in a small number of locations in the district. The District seeks to permanently install a wireless infrastructure with state of the art access points and a wireless controller. This wireless network will provide campus wide coverage on demand in all instructional areas for all staff and student wireless devices. The district has a history of utilizing technology in a few distinct areas that serve as guideposts for all departments in the future. For instance, course and program offerings in Computer Aided Drafting and Robotics in our Technology Education department rely heavily on technology to maintain the viability of their programs; and for over a decade our students have competed both regionally and nationally in the FIRST Robotics program, in partnership with local engineering firms. The development and installation of a robust wireless system will support and strengthen our programs, allowing many more to access and utilize technology as an instructional tool to enhance and expand our students' experiences and achievement.

District student enrollment: 1505

District instructional staff: 135

District non-instructional staff: 106

II. NETWORK INFRASTRUCTURE

Our current network infrastructure has served the District well in terms of the wired model. In anticipation of the wireless phase, the District has applied for E-rate funding to upgrade all switches to POE+. The installation of the new switches is anticipated to take place in the summer of 2017. As part of this Smart Schools Investment Plan, the District will purchase wireless access points for all instructional spaces which will provide comprehensive wireless coverage for all buildings in district. The upgraded wireless system will provide significantly improved coverage, reliability, and manageability for future additional devices. The District will continue to monitor network activity of all users by utilizing the Lightspeed content filtering appliance and by managing group access rights through the use of profiles in our Active Directory and mobile device management (MDM) applications.

III. INSTRUCTIONAL TECHNOLOGY PLAN & SMART SCHOOLS INVESTMENT PLAN OVERVIEW

The Newfane Central School District allocation from the Smart Schools Bond Act of 2014 is \$1,670, 935. The Smart Schools Bond Act (SSBA) supports educational technology and infrastructure to improve teaching and learning. In partnership with the District's SSIP Committee, four of the six main areas of funding were given consideration (e.g., school connectivity, community connectivity, classroom

technology, high tech security features; transportable classrooms and Pre-kindergarten program needs are not an issue in the District and therefore were not considered).

The New York State Department of Education has provided guidance to all districts regarding the required elements of the Smart Schools Investment Plan, including the demonstration of student need; internet connectivity, network speed and bandwidth requirements; the role of professional development; provisions for ongoing technical support; and provisions for ongoing sustainability of projects. The Newfane Central School District developed the District Instructional Technology Plan and completed the NYSED Technology Survey Tool in compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner's Regulations. The Newfane Central School District Instructional Technology Plan includes expectations for the incorporation and understanding of technology at all grade levels aligned with national standards. The Technology Plan also includes a framework for infrastructure improvements, technical support and methods of evaluation. The District has received notice of approval from the New York State Department of Education for the 2015-2018 Instructional Technology Plan.

The Instructional Technology Plan adopted by the District contains goals to enhance teaching and learning through the acquisition and use of classroom technology to support instruction. Newfane Central's technological vision is to provide our educational community with access to technological resources that promote the collaboration, critical thinking, problem solving, and communications skills necessary for our students to become competitive, productive citizens in a technologically complex, ever-changing global environment. This vision and commitment by the District represent a firm belief in the opportunity that technology (e.g., infrastructure, hardware, and software) plays in the enhancement of instruction, learning and achievement now and into the future. All school buildings are currently equipped with wired desktop computers, computer labs, mobile carts and projectors. Educational software and applications provide a digital learning environment for teachers to utilize in support of their instruction, curriculum and learning.

The District has worked with a diverse group of stakeholders and they have developed a preliminary Smart Schools Investment Plan and will seek approval of that plan from the Board of Education. The preliminary plan will be posted to the District's website for minimally thirty days for public review. The school's mailing address will be provided for those who want to submit written feedback. A future public hearing will take place at a Board of Education meeting that will offer a forum to react to any public comments with respect to the spending plan. Notice of this hearing will be provided through local media and the District's website for at least two weeks prior to the meeting. The stakeholder group will review feedback and prepare a final plan for the Board of Education to review and approve. The final Board of Education approved plan will be posted to the District website and submitted to the New York State Education Department for review.

IV. ALLOCATED FUNDING PURCHASE PROPOSAL: DEVICES

The District is pursuing approval for use of \$350,000 in the School Connectivity category in the 2017-2018 budget year, and \$905,000 in the Classroom Technology category spread over the 2017-2018, 2018-2019 and 2019-2020 budget years.

| Budget Category | Newfane Central School District |
|---------------------------------------|--|
| School Connectivity | \$350,000.00 |
| Connectivity Projects for Communities | 0 |
| Classroom Technology | \$905,000.00 |
| Pre-Kindergarten Classrooms | 0 |
| Replace Transportable Classrooms | 0 |
| High-Tech Security Features | \$210,000.00 |
| Total: | \$1,465,000.00 |

SCHOOL CONNECTIVITY

The Newfane Central School District seeks approval to install a wireless network in all instructional spaces across the district. The District plans to purchase and install a sufficient number of access points to provide saturated coverage for teachers and students to utilize the wireless technology in all instructional spaces in the District. In anticipation of this project, the District contracted with Frontrunner Network Systems to determine the appropriate number and placement of access points to provide the desired density of signal coverage across the district. In addition, Frontrunner evaluated the current wired infrastructure and determined that existing wiring is appropriate to utilize in their wireless design. The District also plans to replace the current fiber optic connection linking our Central Services building, where the internet connection enters the District, to the High School building, which houses the hub connecting the rest of the District. Upgrading this connection to a minimally 12 strand single-mode fiber will provide sufficient bandwidth to accommodate the increased access demand brought on by the installation of wifi access in all the buildings.

CONNECTIVITY PROJECTS FOR COMMUNITIES

The Newfane Central School District is not submitting an investment plan in this category at this time.

CLASSROOM TECHNOLOGY

The District seeks approval to make a large acquisition of classroom technology which is at the heart of enhancing instruction and student achievement at all levels. Three main components are included in this category and they are: interactive flat panels (IFPs), mobile devices, and desktop machines. The interactive flat panels will be used to replace the existing older Smartboards and, due to their portability, it will be possible to deploy the IFPs in classrooms where in the past it was not practical. The mobility of the IFPs and the devices allow the District, in collaboration with the faculty, to reimagine the physical environment of the classrooms across the district. The IFPs will be compatible with a variety of operating systems and devices (e.g., Apple iOS, Windows, Android, etc.) and will provide a means of integrating all the technology into one place for all users to utilize. The IFPs will allow teachers to implement a “flipped” classroom structure when appropriate and where they seek to spend more time supporting student learning and to offer instructional time outside of the traditional class time. The IFPs allow the district to continue to utilize a variety of software applications including Smart Notebook, Microsoft Office, digital citizenship software, Apex online curriculum, and more. In addition, the District has plans to create a Google domain and begin to use Google apps for education and the IFPs will offer the platform for users to readily save and access work from the Google cloud storage.

Mobile devices are a key component of the District's technology spending plan. The District plans to purchase Chromebooks, iPads or similar devices for all teachers from grades Pre-K to twelve. The District will purchase management licenses for all mobile devices and synchronize the existing Active Directory accounts to the Google for Education domain. The devices will be configured to work in conjunction with a future learning management system, thus enabling students 24/7 access to content and resources provided by their teachers. In addition to the mobile device purchase, the District intends to use local funds to purchase carts, cases, and extra power supplies. The District intends to migrate its e-mail system to Gmail. With mobile devices in all classrooms, students will be able to collaborate with other students within the classroom, school, district, state, nation or world. This "one to world" initiative is possible due to the mobile devices and internet connectivity.

The third component of classroom technology is desktop computers. At this time, there continues to be a need for more powerful computers which are required to run high demand software applications such as SolidWorks or Adobe Creative Suite. These computers will replace the current computers that have reached their expected end of life. In the 2015-16 school year, the District began purchasing Dell All-In-One workstations with a 23.8" display to replace older Dell computers and monitors. Since that initial purchase, the All-In-One computers have performed well and reliably in addition to the space saving advantages. The District intends to continue to purchase All-In-One computers for labs and other high demand areas.

In sum, the three classroom components combine to completely reimagine future flexible classroom spaces throughout the District. Teachers will use mobile IFPs, students will use mobile devices in and out of class, and the District will continue to invest in high quality desktop machines for more sophisticated software packages. As such, our technology vision becomes a reality where students can collaborate and connect to a broader audience and prepare themselves for a future globally competitive world.

PRE-KINDERGARTEN CLASSROOMS

The Newfane Central School District is not submitting an investment plan in this category at this time.

REPLACE TRANSPORTABLE CLASSROOMS

The Newfane Central School District is not submitting an investment plan in this category at this time.

HIGH-TECH SECURITY FEATURES

The Newfane Central School District intends to utilize Smart Schools funding to install a Voice Over IP (VOIP) telephone system to replace our current outdated analog system. This system will allow administrators and security personnel to communicate directly with all district locations and personnel immediately and simultaneously via visual only (silent) text and voice messaging (dependent upon the details of the particular situation). The VOIP system provides additional security features not available in our current communication infrastructure, including an emergency alert notification system and the ability

for key administrative and security personnel to “twin” their IP desktop telephones with their cellular telephones. With the VOIP system, all stakeholders are instantly reachable at all times.

| | |
|---|----------------|
| High Tech Security Feature | Sub-Allocation |
| Replacement of existing telephone system with VOIP System | \$210,000.00 |
| Total | \$210,000.00 |

V. STUDENT LEARNING

The District has implemented limited technology tools and technology related resources to enhance instructional practices and provide new learning experiences across the district. Technology has given our teachers the opportunity to individualize instruction to support students in all content areas. For instance, for several years the District has used STAR math and STAR reading assessments to evaluate student growth in math and ELA. The data provided through these STAR online adaptive assessments have been used to regroup students and determine appropriate levels of support in our Response to Intervention programming. By greatly expanding the technological tools available for regular classroom use, the District anticipates expanding the use of regular assessments that allow for almost immediate feedback and greater timeliness in providing appropriate support for all students.

The acquisition of new technology will provide the District with the opportunity to get instructional technology tools into the hands of all learners on a regular basis. Implementing a student learning management system like Google Apps for Education will allow both students and teachers to have regular access to a wider variety of instructional tools and resources than ever before.

Working in collaboration with the Director of Special Education, identified students will continue to benefit from the incorporation of technology designed to support their needs and learning. All teachers, including those who work with identified students will be provided training to optimize their understanding and capacity to utilize appropriate technologies in their instruction. The new IFPs have high quality display screens and provide portability and flexibility that will allow us to meet the diverse needs of all learners. In addition, the District plans to implement a student learning management system like Google Apps for Education that will allow for the use of a variety of instructional applications that both personalize instruction and provide assistive technology for special needs students.

The three major purchasing components of our investment plan– IFPs, mobile technology, and the replacement of existing desktop units- combined are designed to increase student engagement, collaboration, and provide more instructional options to every teacher. As teachers at all levels work to personalize instruction to meet the needs of each individual student, we seek to create classroom learning environments that are more consistent with the reality of the current college campus and the work place environments of the 21st century. Instructional innovations like the “flipped classroom” concept become possible as teachers will have the technological tools necessary to break from the traditional classroom paradigm. Opportunities to collaborate with others globally in real time become possible for teachers in all content areas and at all levels. All students, including students with disabilities, will benefit from the portability of the technology including the IFPs that can be used in all areas of the future classroom.

The proposed technology purchase will assist the district in the implementation of the New York State Common Core Learning Standards (NYSCCLS). The IFPs, mobile devices and new desktop computers will help teachers to expand their teaching methodologies and offer a new level of flexibility in the classroom that has not been possible in the past. Our current classroom configuration provides limited access to technology (5 computer workstations in the back of the classroom); whole class instruction using technology requires most teachers to move from their regular teaching locations into a “computer lab”. In the future classroom, all students will have on-demand technological access in their regular classroom and will be able to collaborate on projects both inside and out of the classroom on an ongoing basis. This peer to peer interaction and feedback will create an environment where building on one another’s work which is accepted and necessary to learn, grow and succeed- an environment that more closely resembles the modern day work environment. In addition, teachers will have the ability to showcase work within the classroom in ways that were not possible in the past. The combined opportunity of new instructional models (e.g., flipped, blended classrooms), authentic real-time experiences (e.g., virtual field trips), peer to peer collaboration, and the use of digital exemplars will serve to increase overall student engagement and learning at all levels. As a rural school district, the importance of real-time collaboration with others through the IFPs cannot be understated as it serves to open up numerous opportunities in the future.

VI. COMMUNICATION

The District proposal to enhance the classroom connectivity and purchase classroom technologies through the Smart Schools Bond Act will greatly increase capacity for teaching, learning and communications at all levels. With the introduction of a learning management system, students and parents will have access to a moderated virtual platform that is synchronized with our existing student management system. In that regard, digital classrooms will contain class descriptions, assignments, grades, resources for assignments, presentations and more. This learning management system will be readily accessible on the IFPs and mobile devices in all classrooms. The learning management system will offer a place for parents to communicate with their child’s teacher at any moment and for parents to continuously view events on a class calendar.

At present, the District has agreements in place with three institutions of higher learning including Niagara University, Niagara County Community College and Genesee Community College. As such, the District will seek to utilize the new technology to enhance communication and to expand those partnerships whenever possible. As many of our students seek to attend these colleges after graduation, greater communication and collaboration with these campuses, through the new technology, will allow us to better prepare our students for the college experience after graduating from Newfane.

VII. PROFESSIONAL DEVELOPMENT

Professional development is a cornerstone of the District Instructional Technology Plan and the District Smart Schools Investment Plan. The commitment to provide professional development in both a variety of ways and over time is critically important to the overall success of the District’s technology implementation. The District professional development will be a year round process and will utilize both in-house faculty and outside resources to optimize the availability and expertise for all faculty to build

capacity using instructional technology. The District works with Erie One BOCES trainers and utilizes the CSLO (Common Set of Learning Objectives) COSER to provide coaching and training in various hardware and software applications by BOCES trained professionals. Building principals are identifying technology competent staff to offer school based trainings and workshops. The District Professional Development Catalog provides a series of relevant trainings at local and regional NYSED approved providers including Niagara Orleans BOCES and Niagara Orleans BOCES Teacher Center. In addition, the district has established a “summer institute” model of professional development and the District will host a local technology “institute” utilizing a mix of locally trained faculty and regional experts to offer professional development to all staff as a means of building high levels of capacity as it relates to instructional technology and student learning. The training will be offered on an ongoing basis as we will continue to utilize locally trained faculty *power users* who will offer trainings after school to all faculty across the district throughout the year on a variety of technology hardware, applications and skills. As part of the institute model, the District has created a new faculty conference room as a model training center with an IFP, document camera, and wireless capability. This training center will be a centerpiece of future professional development throughout the District.

VIII. CONTACT WITH SUNY

The Newfane Central School District has contacted SUNY Teacher Preparation Programs as required by the Smart Schools Bond Act to request advice on innovative uses and best practices related to instruction and technology. The District has established partnerships with Niagara University, Niagara County Community College and Genesee Community College. Through these partnerships, the District continues to discuss college and career readiness for all students and the instrumental role that technology plays.

IX. LOANING HARDWARE TO NON-PUBLIC SCHOOLS

The Smart Schools Bond Act establishes that any district hardware purchases made using Smart Schools Bond Act funds shall be lent, upon request, to non-public schools located in the district. All students attending non-public schools are eligible to receive loans of classroom technology equal on a per-pupil basis to the per-pupil amounts spent on classroom technology for public school students (up to \$250 per pupil). The District does not include any non-public schools at this time as there are currently no non-public schools located within the District. .

X. SUSTAINABILITY PLAN

Sustainability of the District technology initiative is of the utmost importance. District technology hardware and associated operating systems have an end of life expectation and the District recognizes that success is closely linked to sustainability over time. The District outlines end of life expectations for technology purchases in the District Instructional Technology Plan and also includes expectations for maintenance and continued professional development. The District is aware of the recurring costs of the technology initiative and understands certain costs are not eligible for Smart Schools funding as per the guidance documents. Additional budgeting will be planned for based on recommendations from the standing District-wide Technology Committee and technology support staff in order to maintain operation

of the infrastructure, network servers and switches, professional development and other incidental aspects of this initiative. The District continues to investigate options to best support the existing and future technology including the role of BOCES technical specialists and local support. Funding sources for technology and support include local budget, Erie One BOCES purchase agreements, Erie One BOCES CSLO COSER, Erie One BOCES Cooperative Services, New York State Hardware and Software funds, Orleans-Niagara BOCES Instructional Technology COSERs, Federal E-rate funding, New York State Title II grant, capital projects, and other grant opportunities.

The District annually provides information about the appropriate use of technology. The policies and expectations are reviewed by the technology committee and shared with faculty and staff. Content filtering is installed on all district owned devices and allows the district to properly supervise the activity of all users. The Lightspeed device gives the District daily reports and allows for further review of activity when necessary. Internet safety and digital citizenship is part of our existing curriculum and takes place in all classrooms in all buildings.

XI. DISTRIBUTION, PREPARATION, MAINTENANCE & INVENTORY MANAGEMENT

Accurate inventory management is critical to effective oversight of the technology system and devices. District technology staff maintains a technology spreadsheet that is regularly updated and accessible for key district staff and auditors. At the same time, from the point of initial purchase, all district equipment and mobile devices (e.g., assets) are tagged and entered into the District equipment inventory. Classroom technology equipment and IFPs purchased through the use of Smart Schools Bond Act will be included in this inventory system.

XII. CLASSROOM LEARNING TECHNOLOGY SUB-ALLOCATION

| EQUIPMENT | QUANTITY / EST. COST | SUB-ALLOCATION |
|-------------------------|-----------------------------|-----------------------|
| Interactive Flat Panels | 60 at \$6000 ea. | \$360,000.00 |
| Computer Servers | | |
| Desktop Computers | 200 at \$1000 ea. | \$200,000.00 |
| Laptop Computers | | |
| Mobile Devices | 1150 at \$300 ea. | \$345,000.00 |
| Total | | \$905,000.00 |

XIII. STATEMENT OF ASSURANCES

As Chief School Officer, I am assuring the District will operate according to the requirements under the Smart Schools Bond Act of 2014, as detailed in the guidance documents located on the NYSED Smart Schools Bond Act website at: http://www.p12.nysed.gov/mgtserv/smart_schools/

Specifically, I assure the District will:

- Make and submit for reimbursement, expenditures consistent with the approved Smart Schools Investment Plan

- Comply with all Education Law requirements and Commissioner Regulations under Title 8, Chapter II, Subchapter J, Part 155 for capital projects at educational facilities. See: http://www.p12.nysed.gov/facplan/Laws_Regs/8NYCRR155.htm
- Comply with all Education Law requirements and Commissioner Regulations, under Sections 3602-e and 3602-ee of Education Law and Subpart 151-1 of the Commissioners Regulations for new Prekindergarten classrooms.
- Use such fiscal control and fund accounting procedures as will ensure proper disbursement of, and accounting for funds under the Smart Schools Bond Act;
- Make reports to the State Education Department as may be necessary to enable the Department to perform its duties under the program.

The District will maintain on file and provide to the State Education Department as requested:

- A detailed accounting of expenditures, including other sources of funding used to support the District's Smart Schools Investment Plan; and
- Documentation to support any variances requested by the district, if applicable; and
- A copy of the Smart Schools Investment Plan approved by the Board of Education.