

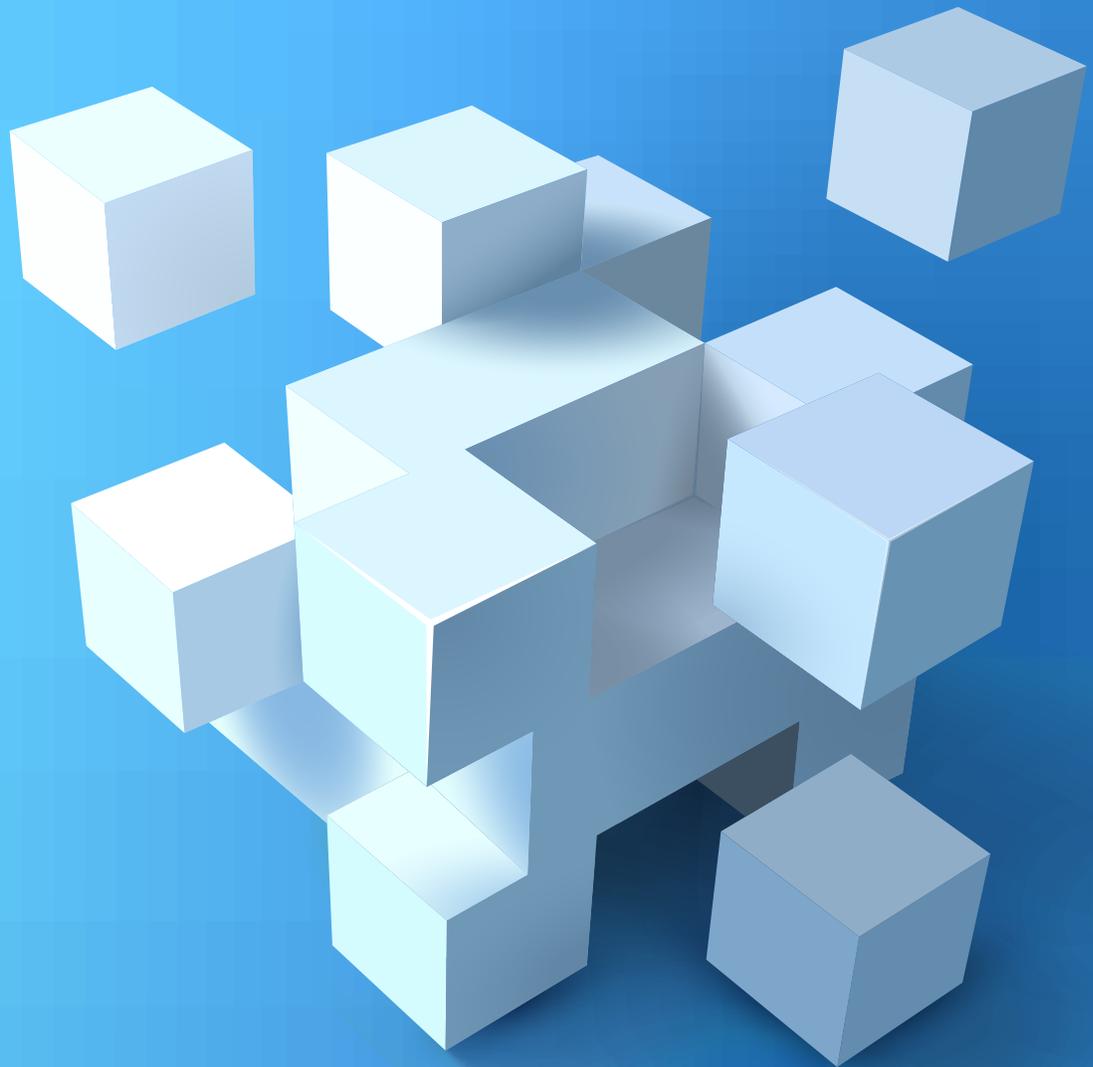
# PNW BOCES

INFORMATION TECHNOLOGY



*Service and Innovation Through Partnership*

## 2017-2019 TECHNOLOGY PLAN



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# Table of Contents

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## Contents

|                                                                          |    |
|--------------------------------------------------------------------------|----|
| PNW BOCES Technology Vision .....                                        | 2  |
| Current Status .....                                                     | 3  |
| BOCES Technology Committees .....                                        | 3  |
| Network Infrastructure .....                                             | 3  |
| Software.....                                                            | 5  |
| Administrative Applications .....                                        | 5  |
| Student Management Systems.....                                          | 6  |
| Access to Technology .....                                               | 6  |
| Student Access.....                                                      | 6  |
| Parent Access .....                                                      | 7  |
| District Access .....                                                    | 7  |
| Staff Access.....                                                        | 8  |
| Training and Support .....                                               | 8  |
| Professional Development .....                                           | 8  |
| Technical Support .....                                                  | 8  |
| Goals & Objectives, Implementation Strategies, and Evaluation Plans..... | 9  |
| P/NW BOCES-Wide .....                                                    | 9  |
| Special Education .....                                                  | 11 |
| Career & Technical Education .....                                       | 12 |
| Curriculum and Instructional Services .....                              | 14 |

# PNW BOCES Technology Vision

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At Putnam/Northern Westchester BOCES, technology will be used (1) to enhance and expand the teaching and learning process and (2) to assist in the efficient operation of the organization.

To achieve these goals, we will provide access to sufficient hardware and software and maintain an up-to-date information infrastructure. Training for staff will be flexible and will address the needs of all groups of employees.

The Putnam/Northern Westchester BOCES organization recognizes that the use of technology enhances teaching and learning by providing a multitude of interactive and multi-sensory educational opportunities; therefore, the use of technology in all aspects of education from curriculum and instruction to assessment and management is essential.\*

As a result of their involvement in technology-rich learning experiences, BOCES students will be better prepared for the world of work, for post-secondary education and for life.

\*[This paragraph is based on Lynchburg City Schools Technology Plan 2013-2015]

## Current Status

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### *BOCES Technology Committees*

There are two committees that address the technology needs of Putnam/Northern Westchester BOCES. These committees are the Education Technology Committee and the Outstanding Projects Committee.

Education Technology Committee: This committee falls under the umbrella of the Curriculum, Instruction and Assessment committee (CIA). The committee membership includes teachers and administrators from Putnam/Northern Westchester BOCES. The mission of this committee is to explore and learn about ways to use educational technology as a tool to support teaching and learning through collaborating, creating, critical thinking, contributing, conversing, and connecting. As there are diverse needs, three sub-committees meet to plan on-going staff development opportunities for their constituent groups.

Outstanding Projects Committee: The committee membership consists of Central Office administrators from Putnam/Northern Westchester BOCES. The mission of this committee is to support the infrastructure needed for the management and operations of Putnam/Northern Westchester BOCES. Part of this committee's mission is the oversight of the technology needed to support Putnam/Northern Westchester BOCES as an organization and the initiatives that come from the Instructional Technology committee.

Both committees will manage their processes through:

- A: Participating in ongoing needs assessments and
- B: Identifying best practices and future directions for technology in the field of education, management, and communication.

### *Network Infrastructure*

The Putnam/Northern Westchester BOCES network supports connectivity for all buildings on the Yorktown campus and on the Fox Meadow Campus. Fiber optic cabling connects all buildings to a central point on both campuses. Fox Meadow is then connected by a fiber optic line to our Yorktown campus. The internet service on the main campus is provided by Lightpath, which provides both data and voice.

Our servers operate on a Windows platform with a few exceptions. Data integrity is insured through the use of high availability servers. Anti-virus protection is enabled on campus by three (3) distinct layers. The first layer is afforded by an appliance that serves as a firewall and also has an inherent ability to detect viruses. This appliance will shut down any connections in which a virus is detected and/or delete objects entering our network that contain a virus.

The second layer of protection is afforded by software that resides on our e-mail servers. The third layer of protection in our network occurs at the desktop. These applications provide instantaneous detection and heuristic detection of malware. All three layers are updated regularly or in instances where there is a virus breakout, these appliances are notified immediately and update all layers immediately.

We utilize complex passwords throughout the network login system. Passwords are forced to be changed every four months. Brute password intrusion protection is afforded by the fact that accounts are locked out after three unsuccessful attempts.

**Wireless:** P/NW BOCES utilizes high-density Wireless Access Points. These high-density WAPS are aimed at being able to accommodate large numbers of students with wireless devices, BYOD visitors and others, without sacrificing performance.

**Backup:** All the important data that resides on our servers is backed up not only on premise, but also off-site, in two geographically disparate states. This is in keeping with the latest trends and best practices for disaster recovery.

**Telephones:** P/NW BOCES uses an IP based phone system. Apart from standard telephony features, there is the ability to use instant messaging, video and voice conferencing. It also allows for desktop sharing of a whiteboard or application, polling, and both internal and federated presence. In addition, it is available as a mobile application.

**Security:** P/NW BOCES continues to expand the use of video surveillance in various school buildings to help monitor and maintain a safe school environment. We have IP access control that utilizes HID proximity cards and/or a buzzer system with a screen for visitors. These dual-purpose cards also serve as the ID cards for BOCES and control other operations such as the use of copying machines.

## ***Software***

The Microsoft Office Suite is installed throughout P/NW BOCES. Various applications exist in other areas and include, but are not limited to, the following:

### **Administrative Applications:**

***WinCap:*** *WinCap* is an integrated financial management system designed specifically to meet the needs of a BOCES environment. *WinCap* is our solution for accounting, payroll, budget, and human resources.

**AESOP:** AESOP is the system that BOCES employees use to report and track staff absences, as well as to automatically identify a substitute for instructional staff.

**Frontline (formerly My Learning Plan):** My Learning Plan is used by BOCES staff and staff from other districts to register for professional development activities located at BOCES and in the region. BOCES' administrators use My Learning Plan to track professional development for all instructional staff.

**OLAS:** The On-Line Application System for Educators (OLAS) is an application written in-house which serves school districts throughout New York State. It is a job recruitment application for districts.

**BlackBoard Connect:** Blackboard Connect is an automated calling system that we use to notify students, parents, and staff of events and school closings or delays.

**SchoolDude:** SchoolDude is used by our Operations and Maintenance department to track and process work orders.

**Service Desk Plus:** Service Desk Plus is used by the Information Technology department to track and process work orders related to technology issues.

**Schoolwires:** Schoolwires is a web-based application where teachers can create and maintain their own websites. The teachers' sites include class curriculum, assignments, links to resources, photo galleries, and calendars.

## Student Management Systems:

**ESchoolData:** ESchoolData is the student management system used for student demographics, attendance, gradebook, and report cards. It is the platform we use to pull our data for NYS reporting requirements.

**Frontline IEP:** Student profiles and Individualized Education Plans for Special Education students are maintained by the home district. We use Frontline IEP to view those students and their IEP and 504 Plans.

## *Access to Technology*

Putnam/Northern Westchester BOCES owns PCs that are distributed throughout the Yorktown and Fox Meadow campuses as well as at Pines Bridge at Sunshine and our Local School Building programs. Presently, the Windows operating system is our standard.

An assessment of our access to technology is presented below in outline format.

## Student Access:

### *Special Education*

- Many classrooms have interactive whiteboards and/or projectors and access to laptops and/or tablets. There are a variety of assistive technology tools available.

### *Career & Technical Education (CTE)*

- Classrooms have access to interactive whiteboards and/or projectors and computer labs. Students also have access to laptops.

### *BOCES-Wide*

- A consistent platform has been achieved across all areas.
- BOCES has increased the number of wireless access points (WAPS) in all buildings.
- Schoolwires serves as a platform for Teachers' websites at CTE and provides students access to homework and curriculum materials from any computer with an Internet connection.

## Parent Access:

### *Special Education*

- Email is used effectively for communication with parents.
- Information on programs is available on the website.
- Schoolwires is being piloted by specific departments (for example Walden Related Services) as a source of information.

### *Career & Technical Education*

- The P/NW BOCES website is updated regularly.
- Parents can initiate an online application to the Tech Center from a web page.
- Schoolwires is used for teacher websites that parents can access. The content of these websites may include: classroom activities and lessons, homework assignments, and photo galleries.
- The parent portal in eSchoolData is used to share progress reports and report cards with parents.

### *BOCES-Wide*

- The BOCES website has information on the many services that BOCES has to offer as well as the contact information for the staff and departments.
- BOCES is currently using a variety of social media platforms such as Facebook and Twitter to help communicate with parents and the community. The links for these sites can be found on the BOCES website and in various publications produced by BOCES.
- Blackboard Connect is used to notify parents and staff of school closings, special events, and emergencies.

## District Access:

### *Special Education*

- Email is used effectively for district communication.
- Frontline IEP provides good information exchange with districts.

### *Career & Technical Education*

- Attendance, progress and grade reports are shared electronically with districts.
- The application process for students is entirely online. Counselors can check online for the status of each student's course request.

### *OC-21*

- Attendance, progress and grade reports are shared electronically with districts.
- The application process for students is entirely online. Counselors can check online for the status of each student's course request.

## Staff Access:

### *Special Education*

- All staff members have access to computers for use of email and other applications.
- Files are shared among staff using shared network folders.
- Schedules and school-wide forms are shared through a shared network folder.

### *Career & Technical Education*

- All staff members have access to computers for use of email and other applications.

### *Administration*

- Computers and internet access are available to all.

## *Training and Support*

### Professional Development:

#### *All Staff*

- Many staff members have participated in technology trainings, including those online, in the areas of Outlook, Excel, SMARTBoard, and PowerPoint.
- Laptops are available for hands-on workshops.
- Both the Information Technology (IT) and the Education Technology (ET) departments offer trainings throughout the year.

#### *Professional Development Workshops for Districts*

- Laptops are available for hands-on training in professional development workshops.
- SMARTBoards/interactive projectors are available in all conference rooms used for training.
- The Education Technology department offers workshops at our conference center, in our school buildings, and on location at districts.

### Technical Support:

- A ticketing system is used to keep track of all helpdesk calls and to communicate the status of calls.
- Support is centralized and technicians are dispatched when calls cannot be completed remotely.

## Goals & Objectives, Implementation Activities, and Evaluation Plans

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### *P/NW BOCES-Wide*

The use of technology will focus on three goals:

1. Curriculum Integration;
2. Assessment and Data Collection; and
3. Technology Related Hardware

**Goal #1 Curriculum Integration:** The use of educational technology will be infused in learning activities wherever possible.

**Implementation Activities:**

- Updating Curriculum Maps (CTE), work with teachers (SE)
- Timeline: On going

**Evaluation:**

- Timeline: On-going

**Goal #2 Assessment and Data Collection:** Each of the educational programs and services that BOCES provides will include assessments and the collection of data that will help to improve instruction and services.

**Implementation Activities:**

- Choose appropriate assessment tools. Utilize student management system to store and manipulate collected data. Make decisions to change or maintain programs based on the selected data results.
- Timeline: On-going

**Evaluation:**

- Compare collected data over a period of time checking for trends that could inform program modifications.
- Timeline: Periodically or as needed

**Goal #3 Technology Related Hardware:** Provide our students and staff with the appropriate level of technology resources to help them be successful.

**Implementation Activities:**

- Develop processes for enhancing, upgrading and replacing existing technology related hardware in a cost effective manner.
- Timeline: On-going analysis of current technology trends

**Evaluation:**

- Each year the IT department will do an inventory review that will include a comprehensive look at usage and a projected lifespan of the equipment.
- Timeline: Annually

## *Special Education Department*

Our use of technology will focus on three goals:

1. Integrated Curriculum goal;
2. Assessment and data collection goal; and
3. Technology Related Hardware

**Goal #1 Integrated Curriculum:** Technology will be used to enhance teaching and learning.

**Implementation Activities:**

- Exploration of a variety of software, web-based applications, and apps
- On-going

**Evaluation:**

- On-going

**Goal #2 Assessment and Data Collection:** Students will be assessed using STAR early literacy, STAR Reading, and STAR Mathematics to guide instruction, collect data on program effectiveness, and document student regression for the purpose of guiding student programming.

**Implementation Activities:**

- Implementing STAR Reading, Math, and Early Literacy through professional development and APPR integration
- On-going

**Evaluation:**

- Use is an ongoing topic at Supervisors and Reading Teacher Meetings

**Goal #3 Technology Related Hardware:** A variety of technology and assistive devices will be used.

**Implementation Activities:**

- Pilot a variety of assistive technology devices including document cameras, tablets, and robots.
- Ongoing.

**Evaluation:** Ongoing

## *Career & Technical Education*

Our use of technology will focus on three goals:

1. Integrated Curriculum goal;
2. Assessment and data collection goal; and
3. Technology Related Hardware

**Goal #1: Integrated Curriculum:** Our Curriculum maps will include alignment to Common Core standards.

### **Implementation Activities:**

- Rubicon Atlas; all CTE programs aligned to common core standards for all academic areas.
- Exploration of ATLAS PLCs
- Schoolwires; all CTE teachers have their own page where they post course information.
- Specific CTE programs are utilizing online Curriculum; for example, NATEF, NCCRER, and Prostart.

### **Evaluation:**

- Every 5 years, each CTE program needs to apply for re-approval. Curriculum maps are reviewed to determine academic credit that will be approved by SED.
- Each year, all students are pre-and post-tested, and all students in a 2 year 2 hour SED program approved CTE program are administered a nationally recognized technical assessment.
- Results of all assessments are reviewed and there is collaboration between trade and academic teachers to determine curriculum covered, to ensure alignment between assessment and curriculum.

**Goal #2: Assessment and Data Collection.**

### **Implementation Activities (Secondary):**

- Explore use of Qualtrics for possible implementation in 2018.
- All juniors in a 2 year SED program-approved program will be pre-tested.
- All seniors in a 2 year SED program-approved program will be post-tested.

### **Evaluation:**

- Ongoing.

**Implementation Activities (Adult Ed):**

- Best Plus utilized for testing ESOL/Pre and Post

**Evaluation:**

- Data collected in the ASISTS database for State report card.

**Goal #3: Technology Related Hardware.**

**Implementation Activities (Secondary):**

- Each year, inventory of computers and determination of need for upgrade.

**Implementation Activities (Adult Ed):**

- Installing of internet in Peekskill site for TASC preparation.

## *Curriculum and Instructional Services*

Our use of technology will focus on three goals:

1. Integrated Curriculum goal;
2. Assessment and data collection goal; and
3. Technology Related Hardware

**Goal #1: Curriculum Integration:** Professional Library, Integrated Social Studies/ELA Curriculum, Science 21 and Curriculum Center will use technology to deliver and enhance services.

### **Implementation Activities:**

- Professional Library – Ebooks, video streaming, subscription databases and library automation services will be provided to districts. A continuous improvement model will be used to ensure services are provided in accordance to current needs and appropriate resources.
- Integrated Social Studies/ELA Curriculum – The web-based curriculum will be revised annually to reflect teachers' needs and address state standards and/or national trends.
- Science 21 – The Science 21 website will continue to be enhanced and ongoing efforts will be made to seek additional resources to fund the transition to a web-based curriculum. An online ordering system will be designed to order Science 21 kits and curriculum.
- Curriculum Center – The Curriculum Center will enhance current professional development offerings by using data collected from participants.
  - Timeline: On-going

### **Evaluation:**

- Professional Library – Ongoing feedback will be collected for Library Council members, network meeting participants and participants in professional development programs.
- Integrated Social Studies/ELA Curriculum – Teacher feedback will be collected each spring and through the listserv and the web-based curriculum will be updated each summer to reflect changes.
- Science 21 – The website will be reviewed annually, and the ordering system will be reviewed on an ongoing basis. Feedback will be collected annually from the Steering Committee.
- Curriculum Center – The Center will analyze enrollment data and participant feedback to inform workshop design for the following year.

**Goal #2: Assessment and Data Collection:** Each of the education programs and services that BOCES provides will include assessments and the collection of data that will help to improve instruction and services.

**Implementation Activities:**

- Professional Library – Usage statistics will be collected for subscription databases and EBook service.
- Integrated Social Studies/ELA Curriculum – On going feedback collected via listserv and teacher input from spring feedback workshops will be collected and used to modify curriculum.
- Science 21 – The website is reviewed at least two times during the year. The pilot ordering system was piloted and will be reviewed on an ongoing basis.
- Curriculum Center – Enrollment data will be collected to analyze professional development trends.
- Timeline: On going.

**Evaluation:**

- Periodic review of collected data.
- Timeline: Periodically or as needed.

**Goal #3: Technology Related Hardware:** Provide staff with the appropriate level of technology resources to help them be successful in delivering services.

**Implementation Activities:**

- Technology needed for professional development will be updated. BOCES support for the delivery of the online curriculum programs will be maintained.
- Timeline: On-going analysis of current technology trends.

**Evaluation:**

- Each year the CIS department will conduct a review of technology needs for the department
- Timeline: Annually.