

# Cashmere School District No. 222



## 2016 – 2018 Technology Plan

**Cashmere School District No. 222**  
**Technology Plan 2016-2018**  
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1. Describe your district's <b>basic technology infrastructure</b> , including telecommunications. 2. Identify <b>upgrades and acquisitions</b> necessary to meet the district's educational goals. 3. Identify level of <b>maintenance and tech support</b> —current and proposed— necessary to meet the district's educational goals.	Cashmere Technology Plan 2016-2018	7	12
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## District Technology Plan 2016-2018 Cashmere School District No. 222

### District Vision

Excellence in teaching, learning and community engagement.

### District Mission Statement

To ensure a quality education for every student

### District Foundational Beliefs

- Home is the cornerstone for learning
- Our schools will strengthen the home and school partnership
- Diversity is an asset
- Effective instruction will be present in every classroom, every day
- Schools are safe places where every student is respected
- Our schools will prepare every student to be a lifelong learner
- Community engagement is essential

### Technology Vision Statement

Cashmere School District believes that technology exists as a very powerful, essential tool in the education process for both students and staff. Our society requires people who know how to use appropriate problem solving techniques, understand complex terminology, communicate clearly, and make sense out of ever-changing information. Technology is not a separate curriculum, but an appropriate part of every curriculum at every level of instruction. The impact of technology in our classrooms will result in lifelong learners and productive members of society.

The 2016-2018 Cashmere School District No. 222 Technology Plan has been reviewed and modified by the Technology Director, Technology Committee, Director of Finance, and has been approved by Superintendent Glenn Johnson.

Glenn Johnson, Superintendent

Dwight Remick, Director of Finance/  
Technology Director

Juan Valle, Technology Committee Chair

# **Cashmere School District Technology Plan 2016-2018**

## **Purpose — Technology Planning**

### **Technology Planning Purpose**

The Technology Plan serves as our state approved plan to allow us to submit for FCC Erate funding. It also provides District Leaders, Staff, the Teaching and Learning Department, and the Technology Department a clear road map to follow when planning and implementing new technology to support the growth of student learning in Cashmere School District. The 2016-2018 Technology Plan covers the following areas:

- o Clear goals and realistic strategies for using telecommunications and information technology to improve education services.
- o Professional development strategies to ensure that staff know to use new and existing technologies to improve education services.
- o Assessment of the telecommunication services, hardware, software, and other services that will be needed to improve education services.
- o Sufficient budget to acquire and support the technology elements of the plan: hardware, software, professional development, support, support staff, and any other services that will be needed to implement the strategy.
- o Evaluation process that enables the schools to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.

The content of this document and progress of this plan will be ever changing through the evaluation processes set in place to ensure that the overall goal of student achievement is best supported.

# **Cashmere School District Technology Plan 2016-2018**

## **Goals & Strategies — Priority 1 Eligible Services**

### **E-rate Priority 1 Services Connections to District's Educational Goals**

Based on Cashmere School District's Free and Reduced Meals rate it qualifies for a 80% discount on E-Rate Priority 1 funds from the FCC.

E-rate Priority 1 Funding is used to support all of Cashmere School District's phone services, long distance, inter-building network connections, shared internet connection and website hosting. These critical systems either directly or indirectly play a vital support role for all other systems used within the district to support students, families, and staff.

Classroom teachers, students, administrators, staff, and families use the internet based Skyward Student Information System for all aspects of student achievement, assessment, and records keeping. Teachers also use internet resources for instruction. Student achievement is assessed through the use of web-based technology. Students continually use the network and internet for completing research and learning collaboration. Staff and students use office 365 email and OneDrive for document storage which are both web-based.

Many student programs such as keyboarding, reading, and mathematics rely on our inter-district network as well as our internet connection as they are centrally or cloud hosted applications. Also, internal network and internet connections are utilized by students to complete the Smarter Balanced Assessment, and the Measure of Academic Progress Assessment.

Smarter Balanced Assessment Consortium (SBAC) is a bipartisan, state-led group developing assessments aligned to the Common Core State Standards in English language arts and math. These new standards call for deeper thinking and interaction with content. The SBAC will be accessible to students through the internet secure browser. It is our goal to provide sufficient bandwidth capacity, robust network infrastructure and tools to support student access to SBAC assessments.

Measure of Academic Progress Assessment (MAPs) is a personalized assessment that adapts to each student's learning level to measure each student progress and growth. It provides timely information for teachers and administrators so they can either intervene with students that need help, or provide enrichment to challenge those higher-level students.

Providing these network resources is a necessity in today's teaching and learning environments. In order to ensure these resources are utilized to their maximum capabilities and for their intended purposes, the district will analyze bandwidth use and maintain and update telecommunications systems to provide staff, students and community members adequate and reliable communication capabilities.

The goal is to provide students with the tools needed to be successful. The first phase of this is to assess the districts capability to provide those tools effectively.

# **Cashmere School District Technology Plan 2016-2018**

## **Goals & Strategies — Priority 2 Eligible Services**

### **E-rate Priority 2 Services Connections to District's Educational Goals**

Based on Cashmere School District's Free and Reduced Meals rate, it does qualify for E-Rate Priority Two funds from the FCC, but the fund distribution has not reach the districts with 80% free and reduce meal rate.

The Cashmere School District technology program continues to grow at a very fast pace. While it has not benefited from E-rate Priority 2 Funding, these types of services are continually utilized. We continue to monitor our E-rate Priority 2 qualification status as well as seek out other funding sources for these services such as General Funds, Bond Funds, Capital Funds, and Grants. District technology needs and planning are a continuous topic of discussion to ensure we are meeting the district's educational goals.

The district ensures that students have access to up-to-date hardware and software, so they can have the most effective instruction possible in every classroom, every day.

There are new Cisco switches/routers in the network core and all MDFs and IDFs, and new CAT6 network cabling throughout the district to ensure that communication from student and teacher electronic devices is fast and reliable 99.99% of the time. A district wide wireless infrastructure connects all student and staff mobile devices to our network and cloud based resources like SBAC, MAP, ELPA Assessments, keyboarding/Typing software, and access to live data and instructional tools to enhance the classroom experience.

The core server is a brand new HP server running the latest windows server operating system (Windows Server 2012), a windows 2008 server and windows 2003 server for file storage and applications. Staff and student have Office365 email accounts and OneDrive accessibility for files storage and online collaboration.

Vale elementary school has 4 computer labs, 3 carts with 30 Chromebooks each, and 1 cart with 30 iPads.

Cashmere Middle School has 2 computer labs, 5 carts with 30 Chromebooks each, 1 cart with 30 iPads, and 2 carts with 10 Chromebooks each.

Cashmere has one computer lab with 32 computers, one library with 30 computers, 4 carts with 32 Chromebooks each, 5 carts with 30 windows laptops each, and 10 iPads. All computers and mobile devices meet or exceed the state technology requirements standards.

The computer labs and mobile devices create an efficient environment in which students complete assessments (i.e. SBAC, MAP, ELPA, PLATO, Lexia), and increases device availability for students and staff to access training materials/software such as Typing Agent, Type to Learn, Lexia, University Level Classes, research material, online communication and collaboration. The goal of Cashmere School District is to reach a 1:1 instructional/learning device to student ratio.



# **Cashmere School District Technology Plan 2016-2018**

## **Professional Development**

### **District Staff Professional Development**

Teachers, administrators, and other education professionals use technology and research to design personalized, authentic, and student-centered learning opportunities to meet the diverse needs and interests of all students. The following are professional growth opportunities that are in place or planned to support technology and other online learning tools.

- x Cashmere School District's Teaching and Learning department has an established professional development calendar that includes training modules surrounding the proper use of technology.
- x The Teaching and Learning Department is building a staff of technology leaders in each building so staff can quickly access assistance when needed.
- x New staff members receive technology training at our August Institute before school begins and periodically throughout the year as requested.
- x Educational Service District (ESD) – Workshops are available that cover many topics from curricular integration to emerging technologies.

### **Technology Department Staff Professional Development**

In order to support integration of technology into teaching and learning it is important that Technology Department staff possess the appropriate skills and training necessary to support technology used in the teaching and learning environment. The Technology Department's goal is to continue professional development and training in order to support the core teaching and learning goals in a proficient and efficient manner. As a result of these needs the following action items will be addressed and continue to be reviewed to support technology integration into teaching and learning.

- x Increase budget for specialized training
  - o Professional Certifications
  - o System Specific Training
- x Plan for indicating training needs
  - o Staff Assessments
- x Benchmarks and Milestones
  - o Develop Benchmarks
  - o Develop Milestones

# **Cashmere School District Technology Plan 2016-2018 Needs Assessment/Network & Telecom**

## **Technology Strategic Planning**

In alignment with the District Strategic Plan, the Technology Plan will evolve to support the core district goals and strategies. To accomplish this, the Technology Department along with the Technology Committee will ensure technology planning will encompass: Resource Management, Teaching and Learning, Safety, Service and Support.

### **Existing Technology Infrastructure**

The district network consists of 4 sites interconnected using PUD Fiber 100Mb multipoint to multipoint connections. At each site there are separate VLANs for local data and IP communications. The shared 1GB district internet connection is located at Cashmere Middle School. All servers are physical servers centrally located at Cashmere Middle School. And they provide DNS/DHCP/Domain functions, as well as file and application services. The district voice over IP system is Cloud based hosted by JIVE.

#### **Main District**

- x Network – Chelan PUD Fiber 100Mb multipoint to multipoint connections between 4 sites. Individual VLANs are utilized for each site consisting of; Staff Vlan, Student Vlan, Voice Vlan, Wireless Vlan. All schools have wireless networking. All buildings are filtered by a Palo Alto Firewall.
- x Internet - District Internet is provided by a shared 1Gb K-20 connection.
- x Servers - District servers are physical servers and operate on Microsoft Windows Server 2003/2008/2012. Domain Controller, DNS, DHCP, File and App Server are located at the Cashmere Middle School.
- x Storage – File storage is located on the Servers. The district also uses Office 365 and OneDrive for staff and student file storage.
- x Phones – Hosted phone system by JIVE. Total of 160 phones, all are Cisco POE powered handsets. Each site has standard POTS lines for FAX/Alarm Systems/Voice Failover.
- x Security – There are two security cameras in each of the 3 school buildings with a recording device/DVR located at the Cashmere Middle School



**Cashmere School District  
Technology Plan 2016-2018  
Needs Assessment/Network & Telecom**

**Upgrades and Acquisitions Necessary to Meet Educational Goals**

There District will continue the use of externally hosted cloud based internet systems for student information, web hosting, office document collaboration, student testing, student assessments, and staff/student email accounts.

- x Look into deploying On-Premise VoIP Phone System in the absence of E-rate.
- x Continue computer replacement cycle
- x Switch Replacement Cycle and Upgrades
- x Building cabling upgrades and additions
- x Increase number of security cameras throughout the district to enhance safety
- x UPS replacements in MDFs and IDFs
- x Modernization of High School to make it conducive to STEM/TECH
- x Projector and Document Camera replacement cycle
- x Continue funding 1:1 initiative
- x Additional Technology Staff and Technology Staff restructuring

**Maintenance and Tech Support to Meet Educational Goals**

Based on anticipated growth and continued movement to more mobile computing devices for students, there are three key areas that require continued focus to meet the district's educational goals: staffing and support, computer and network planning, and budget.

**Current Staffing**

The District currently contracts with our local NCESD 171 for Desktop support for 1 FTE and .4 FTE for Network support. The district pays a stipend to one person in each school building

**Cashmere School District  
Technology Plan 2016-2018  
Needs Assessment/Network & Telecom**

**Device and Network Planning**

**Minimum Device Requirements**

- x Minimum Desktop Computer Requirements
  - o Intel Core i3 Processor or equivalent
  - o 2 GB RAM
  - o 80 GB Hard Drive
  - o Windows 7 Operating System
  - o DVD-R/RW
  - o 100/1000 MB/s Ethernet Adapter
  - o 15” LED LCD Display
  - o Extended warranty plan for expected life of computer
- x Minimum Laptop Computer Requirements
  - o Intel Core i3 Processor or equivalent
  - o 2 GB RAM
  - o 500 GB Hard Drive
  - o Windows 7 Operating System
  - o DVD-R/RW
  - o 100/1000 MB/s Ethernet Adapter
  - o 802.11b/g/n Wireless Adapter
  - o 13” LED LCD Display
  - o Extended warranty plan for expected life of computer
- x Minimum Tablet/Mobile Device Requirements
  - o Must be compatible with current District Mobile Device Management System
  - o Must be compatible with current District Internet Content Filtering
  - o Must be compatible with District Active Directory authentication
  - o Must be evaluated by Technology Department

**Network Planning**

- x Building Servers
  - o Replace on 5 year cycle
- x Network Upgrades
  - o Switch Replacements
    - f Replace on 7-8 year cycle
  - o Network Cabling
    - f Eliminate the need for in classroom switches
  - o Wireless Network
    - f Continue growth and expansion for increased load balancing

**Cashmere School District  
Technology Plan 2016-2018  
Needs Assessment/Network & Telecom**

**Budget**

**Current and Future Budget**

**2015 E-rate**

<b>2015 E-rate Eligible Services</b>	<b>Total Annual Cost</b>	<b>E-rate Discount</b>		<b>Actual Annual Cost</b>
PUD Fiber	\$129,780	\$103,824	80%	\$25,958
Phone System	\$60,000	\$30,000	50%	\$30,000
<b>Annual Totals</b>				

**2016-2018 E-rate**

<b>E-rate Eligible Services</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>		<b>Total Cost*</b>
PUD Fiber	\$129,780	\$129,780	\$129,780		\$389,340
Phone System	\$45,000	\$60,000	\$60,000		\$180,000
<b>Pre E-rate Totals*</b>	<b>\$174,780</b>	<b>\$189,780</b>	<b>\$189,780</b>		<b>\$554,340</b>

\*Total cost before projected E-rate discount

\*Costs based on current pricing

**Cashmere School District  
Technology Plan 2016-2018  
Needs Assessment/Network & Telecom**

**2015 Non E-rate**

<b>Description</b>	<b>2015</b>
Hardware and Network Support	\$32,000
Software, Licenses, and Renewals	\$17,000
Desktop Support	\$82,000
Professional Development	\$5,000
Web Hosting (Schoolwires)	\$7,500
1:1 Purchases	\$38,000
Vale Sound	\$13,000
Vale Chromebooks	\$6,000
Vale Typing Agent	\$1,600
Middle School Typing Agent	\$700
Middle School Teacher PC replace	\$35,000
Document Camera Replacement	\$5,000
Middle School Switch Replacemen	\$44,500
Tech Supplies	\$5,000
Stipends	\$6,000
Hosted Phone System	\$30,000
Total	<b>\$328,300</b>

**2016-2018 Non E-rate**

<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>		<b>Cycle Totals*</b>
Hardware and Network Support	\$32,000	\$40,000	\$40,000		\$112,000
Software, Licenses, and Renewals	\$17,000	\$17,000	\$17,000		\$51,000
Desktop Support	\$82,000	\$82,000	\$82,000		\$246,000
Professional Development	\$5,000	\$5,000	\$5,000		\$15,000
Web Hosting (Schoolwires)	\$7,500	\$7,500	\$7,500		\$22,500
1:1 Purchases	\$50,000	\$50,000	\$50,000		\$150,000
Vale Typing Agent	\$1,600	\$1,600	\$1,600		\$4,800
Middle School Typing Agent	\$700	\$1,000	\$1,000		\$2,700
Teacher PC replace	\$35,000	\$35,000	\$35,000		\$105,000
Document Camera/LCD Replacement	\$15,000	\$15,000	\$15,000		\$45,000
Tech Supplies	\$5,000	\$5,000	\$5,000		\$15,000
Stipends	\$6,000	\$6,000	\$6,000		\$18,000
Hosted Phone System	\$45,000	\$60,000	\$60,000		\$165,000
Total	\$301,800	\$317,100	\$317,100		\$936,000

\*Costs based on current pricing

**Cashmere School District  
Technology Plan 2016-2018  
Needs Assessment/Network & Telecom**

**2016-2018 Additional Projects**

<b>Additional Projects</b>	<b>Estimated Cost*</b>
Phone System Deployment	\$150,000
Security Cameras	\$18,000
Total	\$168,000

\*Costs based on current pricing

**2016-2018 Total Budget**

<b>Total Technology Budget 2016-2018</b>	
<b>Description</b>	<b>Cost*</b>
Erate (before discounts)	\$554,340
Non -Erate	\$936,000
Additional Projects	\$168,000
Total	\$1,658,340

\*Costs based on current pricing

# **Cashmere School District Technology Plan 2016-2018 Evaluation Process**

## **Process to Monitor Progress toward Technology Goals**

The processes to monitor progress toward technology goals will be an annual internal District Technology Survey and the results from the quarterly submissions to the Technology Readiness Tool Inventory. The District Technology Committee will conduct quarterly reviews of the Technology Plan itself.

## **Outcomes of Previous Technology Plan**

Based on the needs of the 2013-2016 Technology Plan, support efficiency and technology reliability saw great improvements. This allows better distribution of workloads to individual users and faster more reliable communications to students, parents, and staff. It also provides a robust foundation to accomplish the goals of the 2016-2018 Technology Plan.

### **Improvements made based on 2010-2013 Technology Plan-**

- x 100Mb WAN connections
  - o Increased building connections from 10Mb to 100Mb.
- x Servers
  - o Upgraded core District servers (Server 2012)
- x Storage
  - o Increased total District storage capacity to 1TB
  - o OneDrive cloud based file storage for staff and students
- x District Backup System
  - o 3 1TB External Backup drives change every Monday for offsite backup
- x Wireless Network District Wide
- x Technology Help Desk Ticket System
  - o Implemented electronic help desk
- x Computer Replacement Cycle
  - o 5 year cycle
- x Laptops/Chromebooks (1:1 Initiative)
  - o Mobile carts with 30 Laptops/Chromebooks in each building
- x Email
  - o Moved from exchange server to Office 365 cloud based email
- x Internet Filter Upgrade
- x Website
  - o Externally hosted Website
- x Increased District Internet Bandwidth
  - o 10Mb to 1GB
- x Security System
  - o 2 Security Cameras in each of the school buildings
- x Mobile Device Management for Chromebooks



**Cashmere School District**  
**Technology Plan 2016-2018**  
**Evaluation Process**

**Course Corrections, Respond to Changes, and New Developments**

- x The District has a District Technology Committee
  - o Members
    - f Administrators
    - f CTE Director
    - f District Tech
    - f Building Tech
    - f Teaching and Learning
    - f Staff
    - f Teacher-Librarian
- x Evaluate District Staff Feedback from District Technology Surveys.
- x Complete and Evaluate Quarterly Technology Readiness Tool Inventory.
- x Quarterly review of District Technology Plan.



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March 21, 2016

Mr. Dennis Small, Educational Technology Director  
Office of Superintendent of Public Instruction  
PO Box 47200  
Olympia, WA 98504-7200

Dear Mr. Small:

The School Board of Cashmere School District No. 222 has reviewed the districts technology plan and is in full accord and agreement with the contents and direction of the plan. The Board has also agreed to support:

1. Ongoing efforts to implement the elements of this plan
2. Maintain currency within the plan through regularly scheduled reviews.

The district's technology plan does, to the best of our knowledge, comply with the criteria established for state approval. This technology plan was approved and adopted by the School Board on March 21, 2016.

Thomas Christensen, School Board Chair  
Cashmere School District No. 222

Glenn Johnson, Superintendent  
Cashmere School District No. 222

# Cashmere School District

