Proposed Technology Plan
2016-2019

Wheatland Union High School District
1010 Wheatland Road
Wheatland, CA 95692
District Mission Statement
- Together, building a foundation for life.

Technology Mission Statement
- (Need collaboration with admin for content)

Technology Priorities

- **Student Learning**
  - Provide learning resources that implement the the power of technology to reach all students.
  - Students have access to their data from anywhere at anytime with either District assigned devices and/or possibly BYOD (Bring Your Own Devices)
  - Provide mobile hotspots for students who do not have broadband at home
  - Enhance the Science, Technology, Engineering, and Math program (STEM)
  - The ability to learn 21st century skills including Digital Media Arts
  - Use learning simulations, collaboration, virtual worlds and digital presentations to engage and motivate students

- **Productivity**
  - Provide technology tools for productivity and efficiency across the campus
  - Students to be able to use implemented technology proficiently to meet Common Core State Standards

- **Support Educators, Staff, and Students**
  - WUHS educators, staff and students have access to their resources and tools from anywhere in the world with a computer, smartphone, or mobile device utilizing Google Apps for Education (GAFE)
  - Use GAFE for collaboration, sharing and communication

- **Safety and Ethics**
  - All staff receive on-going professional development in appropriate and ethical use of information technology
  - All students, staff and parents understand the District policies for technology, communication and data
  - All students and staff have safe and appropriate access to the Internet
  - All District data is secure yet available from anywhere
• **Infrastructure**
  - Ensure all educators and students have broadband access to the Internet both on and off campus
  - Every student and educator has at least one Internet access device and needed software on and off campus
  - All buildings on campus have appropriate WiFi, electrical capacity, and wiring to support the broadband and technology hardware
  - Data systems are online, linked and available

• **Equity and Access**
  - The District adopts minimum standards for technology for all four grade levels
  - The District prioritizes allocating funds for technology enhancements
  - The District provides staff development for technology including advanced training as needed.

**To Fulfill this vision and mission the plan focuses on 5 areas:**

• **Continually update and increase implementation of District-wide technology standards, policies and best practices**

• **Link instructional technology professional development to curricular goals and state standards**
  - Ensure that professional development supports increased student achievement and enhances teaching and learning

• **Continuous improvements and maintenance of the District's technology infrastructure**
  - The District's infrastructure is currently in a very antiquated state and needs completely replaced during the three year plan

• **Provide appropriate and equitable access to technology tools**
  - Technology currently is not available as needed globally to staff and students as it should be. GAFE is the solution for accessibility

• **Ensure effective, secure and efficient use of current and future District resources**
  - Implement technology resources (GAFE) and implement professional development and support to provide the best teaching tools and enhance student learning.

This technology plan describes the Wheatland Union High School District’s plan to use technology to achieve its mission from June 2015 - May 2018.
Curriculum

(Need collaboration with admin and teachers for content)

Professional Development

Ongoing staff development in technology will support the professional growth of staff members. The success of this technology program is dependent with the educator's comfort of the hardware and software provided. Technology training will be thorough and constant with technical support provided by I.T. and savvy volunteer teachers on campus available to all staff. This support will range from basic technology help to advanced assistance with specific software including GAFE and hardware. Staff development will be accomplished through conventional classes, webinars, training videos, online tutorials, conferences and a mentoring program. Staff development participation will be mandatory.

Infrastructure, Hardware, Technical Support and Software

The WUHSD I.T. Department will implement the technical capabilities and network services to meet the needs of all stakeholders. This will be done by the following projects.

- Enable stakeholders to easily access, store, analyze, share resources and collaborate by implementing Google Apps for Education (GAFE).
- Implement Ruckus WiFi campus wide that will support every device utilizing the network including student devices, not just the devices provided by WUHSD (Included in Architect Plans)
- Utilize the existing 140 PC laptops and the acquisition of additional Chromebook laptops to provide student access to GAFE and provide the tools needed for Common Core testing
- Update laptops from Windows 7 to Windows 10
- In accordance to the federal ConnectED Initiative, WUHSD will increase bandwidth speed from the current 100 megabits per second (Mbps) provided from the Yuba County Office of Education to the target speed of 1 gigabit per second (Gbps) per 1000 students by 2018. This translates to a per-student target of at least 1 Mbps
- Configure the WUHSD WiFi network into two segments. Students will use a mobile configuration by authenticating themselves to the network using their student ID and password. Once authenticated, students have access to filtered high-speed Internet, intranet resources, print and file share services, and learning resources. The WUHSD staff will access the appropriate secure network based on their position providing additional access to intranet including the student information system, online testing, human resources, and financial systems.
- Upgrade staff computers to Windows 10
• Provide all classrooms Smart TVs and the ability to mirror from their mobile devices or computers.
• Acquisition of any other software determined to be needed by administration to improve all areas of the curriculum and improve productivity, teaching and learning
• Update STEM lab computers to Windows 10
• Remove desktop student computers from all classrooms except for the STEM lab.
• Migrate Exchange to GAFE
• Migrate Data to GAFE
• Install VoiP phone system
• Pull Cat 6a cable to all classrooms from Wing IDF including drops for VoiP phones (Included in Architect Plans)
• New 10GB switches in every wing (Included in Architect Plans)
• Pull 30 data drops into STEM lab from panel in C Wing (Included in Architect Plans)
• Purchase and assign Google Chromebooks to students. Plan needs to be developed based on funding to make sure equality for all grade levels
• Provide mobile hotspots to students without home access
• Possibly equip school buses with mobile wireless hotspots, enabling students to access the Internet and do homework on the way to and from school

Funding and Budget

(Need collaboration with admin and business services for content)

Monitoring and Evaluation

The process of monitoring and evaluation needs to be so that the use and acquisition of technology is centered around curriculum and the educational process. Evaluation procedures should include the following.

• Technology and Business Services Department meetings
• Technology Department meetings with Administration and lead teachers
• Monthly technology meetings with YCOE, WSD and PLESID
• Quarterly meetings between Administration and the I.T. Department to review and update the Technology Plan
• Classroom teacher observations regarding usage of provided technology
• Stakeholder surveys related to the District's technology program
  o WUHSD should consider surveys, suggestions and evaluations from the following stakeholders as critical to the success of this tech plan's implementation and success.
    ■ District Board
    ■ District Administration
- Teachers
- Classified Staff
- Parents
- Students
- Coaches
- Feeder Districts
- I.T. Staff from different districts and/or county offices of education

**Student Access**

Currently WUHSD provides computers that must be shared by many students in designated labs which limits the ability of students to engage in ongoing collaboration and constant access. These labs also limit the teachers from using resources and software that is available to enhance student learning. Students who do not have their own devices may not have access to the same level of personalized learning and may not learn as productively as those students who have access to devices whenever they need them.

Implementing GAFE as well as other web-based materials and tools will decrease paper usage, make teacher time more efficient, and enable students and teachers to access learning materials at any time of day.

- Special education specialists should be an integral part of the device selection process if Google Chromebooks don't meet the need of specific students. The Individuals with Disabilities Education Act (IDEA) ensures that children with disabilities have access to the general curriculum and that they will receive the services and supports needed to achieve their educational goals, and to prepare them for further education, employment and independent living. These students must have full access to content and instruction required to effectively participate in educational environments and to meet their educational goals. Assistive and instructional technologies such as special software and devices, and accessible versions of curricular materials, textbooks and media must be available.

**Determining Student Access at Home**

WUHSD will survey families about home Internet access that will include questions on emergency care forms that are updated annually. The District will send also send the survey via email to student's parents. For families that do not respond, the District will conduct a telephone survey to both home and cell phones. Additional surveys if needed will be sent in paper form home with the students because if the survey is only email or web-based it will likely miss families most concerned about.
The survey will ask whether a family has high speed internet and adequate devices at home for their child to do homework rather than whether they have a computer/device at home because even if there is only one or two computers in the home, it may be shared by multiple children and multiple adults.

For students who do not have home Internet access WUHSD will assist the family. Possibilities include looking into reduced rates programs from Internet Service Providers and partnerships with cellular companies for mobile hotspots.

**Student Google Chromebooks**

- **Option 1 - Outright Purchase.** WUHSD buys and owns the devices until it decides to retire them via donation, salvage, or other forms of disposal. With this model, WUHSD may purchase a warranty or service agreement from the manufacturer or retailer to repair or replace devices under certain circumstances. Although it allows for expedient purchases, there can be challenges in relying on an outright purchasing approach. WUHSD would need to specifically create a yearly budget line item for technology on a per pupil basis instead of using available one-time funds or other non-recurring budget sources to pay for the initial purchase. Research shows this line item is established by some districts as the result of amortizing the purchase across multiple fiscal years through the selling party or a third-party lending institution. This allows for outright purchase in schools and districts that do not have budgets allowing for a single bulk payment. Many times these devices end up being deployed to students and teachers for 5 or more years. This extended use can result in students using outdated technology and districts spending a lot on labor and parts to maintain older devices. Before leveraging nonrepeating funds for an initial technology purchases, WUHSD must decide how you will fund the replacement or update devices in subsequent years. Beyond 3-4 years, the combination of student wear and tear and software updates require devices to be replaced.

- **Option 2 - Leasing Model.** WUHSD acquires devices in exchange for periodic payments instead of purchasing the Chromebooks outright. The leasing company owns the equipment and provides an equipment refresh based on the terms of the lease. For example, WUHSD may determine that a 3-year refresh is appropriate to ensure students are using modern devices. At the end of the 3-year term, the leasing company refreshes all the devices and potentially pays WUHSD for the residual value in the devices. Relative to outright purchase, leasing addresses some of the challenges created by owning equipment, like regular budgeting, maintenance, and equipment replacement.

**Google Chromebook Funding**

In addition to identifying new funding sources, there are costs eliminated because of the evolving education mode presented in this plan. Funds typically dedicated to textbooks, printed materials, or other instructional resources may be redirected to devices that make such resources obsolete.
WUHSD can move to a curriculum model that no longer requires textbooks, allowing the redistribution of funds to support the transition to digital learning.

**Google Chromebook Rollouts**

WUHSD starting with the 2016-2017 will begin sending devices home with students.

Two possible models for device rollout are outlined here. Each has the potential of being used in conjunction with the others, and WUHSD will design a rollout that best suits the needs and capacities of the District.

- **Full school:** The entire student body of a school receives devices at the same time.
  - **Pros:** Creates a cultural shift within the school. A concentration of resources are available for full professional development for faculty and teachers. High school rollouts can benefit from wholesale 9–12 deployment because multi-grade classrooms in high school make grade-by-grade implementation difficult.
  - **Cons:** Provides limited opportunity to work out the kinks and a great deal of pressure to ensure professional development and logistics are adequately planned.

- **Grade level:** Over the course of several years or throughout a single year, devices are distributed to students one grade level at a time. In this model, devices are given to the Freshman in a school each year. As students age up a grade, they take their devices with them. This cycle continues until all students have received devices.
  - **Pros:** Allows you to buy fewer devices at a time as well as work out the kinks in a single grade and prepare a few teachers at the same time.
  - **Cons:** Runs the risk of losing funding for the next grade level. Creates inequity of access across grade levels.

WUHSD I.T. will plan a flow of responsibility for checking devices in and out to keep 100% accurate inventory. Parents will be a partner in this process since the devices will also be for home use. I.T. will plan informational meetings in advance of handing out devices in order to walk parents through policies and procedures and address concerns without the distraction of new devices in students' hands. WUHSD will take into account the availability of the parent population so that staff can meet face to face with as many parents as possible and avoid miscommunications with parents who are not able to attend. It will be extremely important to communicate with parents and guardians to keep them informed of all aspects of the process. For many families, the shift to devices in classrooms and homes will require a great adjustment; providing as much information as possible will help to answer questions as they arise and show WUHSD is operating in accordance with a clear vision and plan.
Digital Citizenship

Before students are allowed to access the Internet at school, whether via a school-provided or personal device, WUHSD will ask parents and students to sign an Acceptable Use Policy (AUP), also known as a Responsible Use Policy (RUP). An AUP is a written agreement between parents, students, and school personnel that outlines the terms of responsible device use and consequences for misuse. The WUHSD AUP will cover topics such as guidance on how students are expected to interact with one another in digital spaces, what resources may or may not be accessed with district-provided devices, and standards for academic integrity when using digital resources for learning. Parents will be asked to acknowledge that their child agrees to basic care and responsibility guidelines. Students are asked to sign a contract agreeing to follow rules governing their use of the Internet and online conduct. The AUP will be written in plain language that is easily accessible for students, parents, and district personnel.

AUPs are important because only relying on strict policies and procedures for the use of devices can often have unintended negative consequences like preventing access to legitimate educational resources. The WUHSD AUP will be an opportunity to teach students to create a positive digital persona. Learning responsible digital citizenship while in school will help WUHSD students to thrive in a connected world.

Digital citizenship will address aspects of students’ online lives that range from online etiquette and safety to their rights to privacy and access. Rather than try to mandate how devices will be used, WUHSD will set forth clear guidelines to parents, teachers, and students about how the devices should be used and about how WUHSD will use student data. By implementing flexible policy recommendations, WUHSD will set expectations for responsible use.

It may be prudent for WUHSD to hold a mandatory parent orientation before issuing students’ devices. Possibly hosting parent nights to explain the WUHSD’s approach to connected learning, ensuring clarity about policies, and presenting digital citizenship to help share the responsibility. Parents should be educated on use, responsibilities, digital citizenship, and how to manage devices at home.

Protecting Privacy

WUHSD, families and community members must be mindful of how data privacy, confidentiality, and security practices affect students. WUHSD has an obligation to tell students and parents what kind of student data the school or third parties are collecting and how the data can be used. WUHSD must be certain that policies are in place regarding who has access to student data and that families understand their rights and responsibilities concerning data collection.

These policies should include an online clickwrap agreement. Clickwraps are agreements formed on the Internet by posting terms and conditions asking the user to click an "I Accept" button. The courts have generally held these agreements to be enforceable. With clickwrap agreements, the
act of accepting the terms of service enters the developer and the user (in this case, the school or district) into a contractual relationship akin to signing a contract. WUHSD will be sure all students, parents/guardians and staff understand the implications and district policies governing the use of such agreements.

Student Privacy

A number of statutes apply to student privacy in schools.

- **FERPA (the Family Educational Rights and Privacy Act)** - FERPA gives parents the right to access and seek to amend their children's education records (these rights transfer to students when they reach 18 years of age). FERPA protects personally identifiable information in education records from unauthorized disclosure, and requires prior written consent before schools share personally identifiable information from student education records. However, school officials with legitimate educational interests can disclose personally identifiable information from education records with vendors subject to certain requirements, including that the vendor performs an institutional service or function that would otherwise be performed by school employees.

- **COPPA (the Children's Online Privacy Protection Act)** - COPPA won't apply to WUHSD as it governs online collection of personal information from children under 13. Before an online organization can collect any information from students under 13, "verifiable parental consent" is required. The Federal Trade Commission, which enforces COPPA, has said that school officials can, in certain situations, provide consent on behalf of the parents in order to sign students up for online educational programs at school.

- **CIPA (the Children's Internet Protection Act)** - CIPA imposes several requirements on schools or libraries that receive E-rate discounts for Internet access. Schools and libraries must certify that they have technologies in place to block or filter Internet access to content that is obscene, pornographic, or harmful to minors, and schools must also monitor the online activities of minors.

- **PPRA (the Protection of Pupil Rights Amendment)** - PPRA is intended to protect the rights of parents and students in two ways. The first is by seeking to ensure that schools and contractors make instructional materials available for parents’ inspection if those materials will be used in connection with a survey, analysis, or evaluation funded by the U.S. Department of Education. Second, PPRA requires that a school district, with exceptions, directly notify parents of students who are scheduled to participate in activities involving the collection, disclosure, or use of personal information collected from the students for marketing purposes or for sale or provision to others for marketing purposes and give parents the opportunity to opt out of these activities. One important exception to PPRA is that neither parental notice and the opportunity to opt out nor the development and adoption of policies are required for school districts to use students’ personal
information for the exclusive purpose of developing, evaluating, or providing educational products or services for students or schools.

- **HIPPA (the Health Insurance Portability and Privacy Act)** - HIPPA sets national standards for the security of electronic protected health information. In most cases, the HIPPA Privacy Rule does not apply to an elementary or secondary school because the school either: (1) is not a HIPPA-covered entity or (2) is a HIPPA-covered entity but maintains health information only on students in records that are by definition "education records" under FERPA and, therefore, is not subject to the HIPPA Privacy Rule.

### Safeguarding Against Inappropriate Content

It is WUHSD's responsibility to protect students from inappropriate content when they are using the Internet. This can be done through technical approaches (filtering and blocking) as well as through establishing a digital citizenship curriculum and school culture that includes online safety.

- **Technical Filtering**

  Many tools are available to filter the content that can be accessed on the Internet. WUHSD currently utilizes a Sophos Web Appliance. All connections to the Internet must be filtered in order to be in compliance with E-rate. Proper filtering is a challenge because of the enormous volume of online resources. WUHSD must balance protecting students from inappropriate materials without limiting access to valuable educational content. If filters are set to be too strict, students and teachers may be prevented from using high-quality educational resources and collaboration tools, which would defeat the very purpose of investment in the technology.

  Filtering is a partnership between WUHSD teachers, students, and the I.T. Department. Decisions about what materials should be available or restricted should be made in consultation with teachers, and teachers will have an ongoing and streamlined way to request access to sites with educational value as well as to recommend sites that should be restricted to the I.T. Department.

  WUHSD’s I.T. Department will periodically audit content access. In this approach, websites being accessed by students are regularly reviewed and adjustments made. Inappropriate activity can be detected and consequences created for inappropriate behavior. Conversely, blocked sites that students regularly attempt to access can be reviewed in case they are educational sites that are inadvertently being blocked.

  No technical filtering tool is 100% reliable, and some objectionable content may still pass through, which is why building a curriculum and school culture that include digital citizenship is an essential component of keeping students safe.
• **Teach Responsibility**

While WUHSD technical filtering tools will always be in place, teaching students to be responsible Internet users is the best long-term strategy because students can develop judgment, which can ensure appropriate use even when students are using devices that may not have the same technical restrictions (such as home computers or personal smartphones). Approaching the guidance WUHSD offers students from this mindset can help them act like proper online citizens when parents or teachers are not in the room or monitoring a device. Failing to teach students responsible use and hoping they will automatically know the safest ways to behave when filters and security settings are no longer present is irresponsible and potentially dangerous. The most successful approach to protecting students from inappropriate content is a combination of technical filtering and a strong digital citizenship curriculum.

**Dealing with Lost or Damaged Devices**

WUHSD will implement a plan to address the inevitable issue of lost, stolen, or damaged devices and ensure that parents and students are aware of their responsibilities in these situations.

• **Preventing Device Damage or Loss**

The best way to deal with device loss or damage is to prevent it from happening in the first place. WUHSD will implement the following to help prevent and reduce rates of device damage and loss.

  - **Teach students responsible practices** - Explicitly discussing with students how they can protect themselves and their devices will help them care for what is likely to be the most expensive learning resource they have ever received from a school. Practices like discussing what they would do in hypothetical situations, group brainstorms of tips to keep themselves safe, and periodically asking students to share what they have learned about taking care of devices are all good starts to the effort.

  - **Allow students to customize their devices** - When students are allowed to customize their device, they have a greater sense of ownership of them. Customization may include putting stickers on the device and choosing a unique desktop background image. Customization also helps prevent students from accidentally taking someone else's device by making it easier to identify their own.

  - **Require password lock when Chromebooks are not in use.** Requiring students to set a password can help make the device unattractive to would-be thieves who lack the passcodes. This has the added benefit of preventing students from accessing other students' work and accounts.
Prohibit students from carrying the device outside their backpacks. In a school setting where all students carry devices from place to place, the chance of damage from being dropped is reduced if devices are moved only in backpacks. Asking students to stow devices in backpacks when moving outside the school can lessen the chances of device theft.

If student doesn’t have a proper backpack, WUHSD will provide a protective case for the Chromebook to protect them from accidental drops.

Keep students and families in the loop and ask for their feedback. This will make device safety everyone's responsibility.

DEALING WITH DEVICE DAMAGE OR LOSS

WUHSD’s strategy for dealing with lost or stolen devices will be to communicate it clearly and often with families and students to help embed safe practices across all stakeholders.

- **Require payment** - WUHSD will require the student or family to pay for a device that is missing or damaged. The advantage to this approach is that it provides accountability for addressing the damage. However, this may also pose challenges for families who may not be able to afford the new device. For such families, this option will have a plan for possible reduced or installment payments.

- **Contract insurance** - WUHSD may also establish an insurance policy but will add to the cost of the rollout as it is a more expensive way to handle lost or missing devices.

- **Maintain extra inventory** - WUHSD will have a very small inventory of extra devices by purchasing more than are needed for the initial rollout and keep them in stock to replace broken or missing ones.

- **Additional consequences** - WUHSD will establish clear guidelines defining when the district is liable for repairing a student’s device and when the student is liable (e.g., because of intentional misuse). WUHSD will also establish additional consequences for students with repeated problems with maintaining their device or when there is evidence of intentional damage. Examples may include losing the privilege of taking the device home or losing the use of the device altogether for a certain period. An older or less expensive device may be provided until the student can show he or she is able to properly maintain control over the original device. These decisions will balance accountability with the need to provide the student with the tools to complete schoolwork.
Staff Technology

Professional development on the most effective ways to use digital learning resources will be an ongoing process, and it should begin even before teachers receive devices when possible.

All classroom options are 100% compatible with Google Apps for Education as well as Android, iOS and Microsoft smartphones or tablets.

All projectors will be phased out of the classrooms as new technology is introduced. Some teachers will want to use existing Smartboards but other options may be more beneficial once they are introduced to new technology.

Classroom Hardware Options

Teachers will have the choice of three technology setups for their classrooms.

Option A
- Computer - Google Chromebox or Chromebook with external monitor
- Smart TV or Smartboard
- Chromecast

Option B
- Computer - iMac or Macbook Air with external monitor
- Apple TV or Smartboard

Option C
- Computer - Windows 10 desktop PC or Laptop PC with external monitor
- Smart TV or Smartboard

Other technology requested by WUHS staff
- Elmo document camera
- Co-Writer for Special Education classes

Phone System

Schools nationwide are cutting costs and getting rid of antiquated systems with hosted cloud based Voice over IP (VoIP) phone services. Providers such as 8x8 and Ringcentral are E-Rate certified.

- With a hosted VoIP solution WUHS will avoid paying the huge up-front costs of an onsite PBX as well as the long-term, hidden costs of maintenance and expansion
- WUHS will substantially lower your phone costs utilizing existing Internet eliminating T1/PRI lines.
- Provides the VoIP extras that traditional phone systems lack—such as voicemail-to-email, web conferencing and Internet faxing.
- Maximizes uptime and quality of service (QoS)
- Onsite systems require support for everything from troubleshooting to adding new extensions, and manufacturer-specific training is required to service these devices. With hosted VoIP systems WUHS staff can manage the entire system online—no obscure certifications required for the I.T. staff.
- Hosted VoIP systems avoids any convoluted billing by receiving one bill for all users, locations and features. VoIP, fax, texting, voicemail, conferencing, virtual receptionist, desktop and mobile apps—everything is included in one monthly cost.

**Digital Forms**

Digital Forms will be used for WUHS free and reduced lunch applications and online registration/enrollment that automatically imports into MySchoolBucks and Aeries.

- In May of 2015 Eagle Software (Aeries) announced the ability to synchronize with Google Apps for Education. Integration between Aeries and GAFE will help streamline account management possibly eliminating the need to purchase a separate digital forms solution.
- GAFE does have built in forms that can be created to meet most online digital form needs, however, MySchoolBucks has nothing on its website stating integration. More research is needed.

**Security Cam Installations**

The Administration, Facilities and I.T. staff will implement a campus surveillance system.

**Benefits of School Video Surveillance**

- Ease of Installation - Modern security camera systems utilize IP cameras, which can be either wired or wireless over the existing WUHS network. Unlike older analog CCTV systems, IP cameras can be installed by WUHS I.T. staff and re-configured to fit changing needs. They also broadcast footage over the internet, making it easy to monitor and record campus activity.
- Safety - Security cameras will help you maintain safety the WUHS campus and discourage misbehavior. Conspicuously placed surveillance cameras help reduce threats of violence and vandalism.
- Visitor monitoring - By implementing school security cameras it will help administrative staff monitor visitors and make sure they are properly signed in.
- Vandalism/tampering - Surveillance systems are constantly under risk of vandalism but implementing a DVR system will capture the culprits during the act.
Labs, sound equipment, trophies, books, etc.

- Fixed cameras can be strategically placed in order to protect valuable items like computers.
- Cameras near exits and the parking lot can also help reduce fraud.

Wheeland Union High School District