

# Hacienda La Puente Unified School District Technology Master Plan

**2018-2021**



*July 2018 – June 2021*

*Superintendent*  
Cynthia Parulan-Colfer

*Board of Education*

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## District Goals, Vision and Mission Statements

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### *Mission Statement, Hacienda La Puente Unified School District*

*The Hacienda La Puente Unified School District is a community committed to developing lifelong learners who value themselves and the diversity of all people; apply decision-making skills leading to responsible actions; and use creativity, critical thinking, and problem solving in meeting the challenges of a changing society.*

Technology is a key element in guaranteeing a quality education for all students. Technology can provide information and communications that can help support better teaching, learning and collaboration. The purpose of this Technology Master Plan for July 2018 to June 2021 is to articulate a long range strategy for the uses of technology within the district – to identify the instructional and operational needs within the district for which technology can provide tools to complete academic and administrative tasks to support college and career ready graduates.

The purpose of a local educational agency (LEA) educational technology plan is to guide the use of technology, by establishing clear goals and a realistic, comprehensive strategy to improve education through technology. The strategy should include how professional development will support staff in the use of technology in the classroom, as well as how information technology assets and services will be managed to support learning. LEAs are strongly encouraged to develop and implement a technology plan in support of a comprehensive strategy to improve education.

On November 8, 2016, the \$148mm Bond Measure BB was passed by the voters by a broad 3-1 margin of approval with 75% approval rate by voters with the focus on:

- Focus on Upgrade Classroom Technology: Classrooms and learning spaces throughout the District will be updated to keep pace with existing & emergent technologies of 21<sup>st</sup>-Century Learning – upgrades include broadband Internet (wired and wireless), state of the art hardware, and modular, multi-purpose furnishings.
- Ensure our students are technologically conversant and competitive by enhancing instruction with interactive interfaces, up-to-date software, personalized learning aids and cutting edge-library technologies.
- Upgrade or replacing electrical wiring, data networks, and computers at all sites.
- Ensure Student Safety: Students, staff, community members will be better-protected with improved campus security systems; including video cameras, area lighting, additional fencing, emergency communication systems, smoke detectors, fire alarms & sprinklers.

*(Source: Board Presentation Bond Passed, Now What: "Action Steps to be Taken", January 4, 2017 Special Board Meeting)*

This plan incorporates recent and foreseeable needs in the support of California Standards. As defined by State Superintendent of Instruction Tom Torlakson in his May 7, 2015 message, the term “California Standards” covers not only English language arts and mathematics found with Common Core Standards but all subject areas including science (or the Next Generation Science Standards), English language development, history-social science, health, physical education, visual and performing arts, and career technical education. The Local Control Accountability Plan (LCAP), Local Control Funding Formula (LCFF) and online assessments are other developments that factor into the technology plan.

While programs such as the Federal Enhancing Education Through Technology (EETT) have passed and a technology plan is no longer required by E-rate, this plan is designed to plan for and fulfill the expected needs of future technology funding opportunities. Reaching critical goals depends on improving professional development support, infrastructure, and expanding funding. This plan carefully weighed the cost and benefits of what actions to take. Choices (what to do, what not to do) and Prioritization (what should be done first, second, etc.) were elements in the selection of technology initiatives to move forward and support.

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## Board of Education Goals

***To ensure every student’s success, the Hacienda La Puente Unified School District Board of Education goals are:***

**Goal 1:** All students in the Hacienda La Puente Unified School District will succeed in meeting high standards and achieving at high academic levels.

**Goal 2:** The Hacienda La Puente Unified School District will provide a supportive and innovative learning environment rich in the visual and performing arts and a challenging course of study to meet the unique needs of every student.

**Goal 3:** The Hacienda La Puente Unified School District will attract and retain quality personnel who demonstrate strong, positive leadership that promotes a culture of collaboration and teamwork and creates an environment in which all stakeholders feel respected, valued and are dedicated to every student’s success.

**Goal 4:** The Hacienda La Puente Unified School District will efficiently expend and effectively maximize all resources to fulfill educational priorities, while sustaining and maintaining long-term financial stability.

**Goal 5:** The Hacienda La Puente Unified School District will provide its students and employees with safe, orderly and clean schools and district sites.

**Goal 6:** The Hacienda La Puente Unified School District will continue to develop, sustain, recognize, and promote programs of excellence and strong partnerships with parents and the community which result in high levels of success for all students.

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## The Eight Areas of State Priority for the Local Control and Accountability Plan (LCAP)

- Student achievement
- Student engagement
- Other student outcomes
- School climate
- Basic Services
- Parental Involvement
- Course Access
- Implementation of Common Core State Standards

**LCAP Highlights:** The key features of the HLPUSD LCAP 2017-2020.

Working closely with stakeholders throughout the district, eight goals aligned to the eight state priorities have been identified for focus from 2017-2020.

Goal 1: Basic Services: All students, Pre-K through 12, including low income, English Learners, and foster youth, will have access to high quality, California Standards aligned materials, curriculum and instruction, provided by appropriately credentialed teachers, in effective, safe, attractive, positive and supportive learning environments, that prepare them for college and career upon graduation. 9 Actions/Services (LCAP plan, pp. 119-145)

Goal 2: Implementation of California Standards for All and EL Students: All students, including low income, English Learners, and foster youth, will have access to high quality, California Standards aligned curriculum and instruction, that incorporates 21st Century learning skills, and prepares them for college and career upon graduation. 7 Actions/Services (LCAP plan, pp. 146-165)

Goal 3: Parent Participation: All district parents and guardians will be actively engaged in meaningful collaboration and/or shared decision making, resulting in achievement of measurable goals for school climate, student engagement, and academic achievement, including English proficiency for English Learners, graduation rates, and college and career readiness. 7 Actions/Services (LCAP plan, pp. 166-186)

Goal 4: Student Achievement: All students, Pre-K to 12, including low income, English Learners, and foster youth, will achieve at high levels on performance assessments in

preparation to meet UC/CSU admission requirements and/or career pathways upon graduation. 21 Actions/Services (LCAP plan, pp. 187-247)

Goal 5: Student Engagement: All students, Pre-K through 12, including low income, English Learners, and foster youth, will be actively purposefully, and positively engaged in school and learning, resulting in increased student attendance and graduation rates. 13 Actions/Services (LCAP plan, pp. 248-279)

Goal 6: School Climate: All students, Pre-K through 12, including low income, English Learners, and foster youth, will be provided with safe, positive learning environments that result in decreased student suspension and expulsion rates, increased school safety rates, and a greater sense of school connectedness for all staff, students, parents, and community. 12 Actions/Services (LCAP plan, pp.280-308)

Goal 7: Course Access: All students, Pre-K to 12, including low income, English Learners, and foster youth, will be provided with a broad course of study that will prepare them for college and career upon graduation. 10 Actions/Services (LCAP plan, pp. 309-331)

Goal 8: Other Student Outcomes: All students, Pre-K to 12, including low income, English Learners, and foster youth, will have access to and meet performance outcomes in other subject areas, including Science, History/Social Science, Physical Education, Visual and Performing Arts, Health, Technology, World Language, and Career Pathways courses, in preparation to meet college and career requirements upon graduation. 13 Actions/Services (LCAP plan, pp. 332-359)

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Seven District Goals for Instruction: All Students, All Content Areas, Pre-K - Grade 12 (2017-2018) (Revised 7/24/2017)

**1. Continuum of Cognitive Rigor – Depth of Knowledge**

- Instruction and assessment at all Depth of Knowledge levels
- Students engage in cross-curricular learning activities and integrated performance tasks that embed the 3 R's:  
Rigor, Relevance, and Relationships

**2. Literacy in All Content Areas**

- Reading and writing strategies taught in all content areas
- Appropriately complex and rigorous reading material in all classes
- Students respond to questions, citing evidence from text
- Students write argumentative and informative essays, citing evidence from text and additional resources

### **3. Mathematics for Conceptual Understanding and Procedural Fluency**

- Essential Learning Standards
- Explicit connection to the 8 Math Practice Standards
- Students engage in performance tasks and assessments to demonstrate a progression of mathematical skills & reasoning

### **4. Instructional Lesson Design reflects the 4 C's: Critical Thinking, Collaboration, Communication, & Creativity**

- Collaborative Structures
- Layers of Facilitation
- Gradual Release of Responsibility (GRR)
- Next Generation Learning
- Essential Understanding and Questions

### **5. Multi-Tiered Systems of Support (MTSS)**

- Equity and Access
- Behavioral and Academic Rtl
- Onboarding
- Restorative Practices

### **6. Career Technical Education Pathways (CTE)**

- College and Career Readiness (CCR) exploration and preparation
- Instruction emphasizes 21<sup>st</sup> Century workplace skills:
  - 7 Survival Skills: Critical Thinking, Collaboration, Adaptability, Entrepreneurship, Communication, Accessing Information, Creativity

### **7. Science, Technology, Engineering, Arts, Math (STEAM)**

- Integration of STEAM in Math/Science instruction to prepare students for college and career success in STEAM fields

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## Technology Plan Goal

Technology is a key element in guaranteeing a quality education for all students. Technology can provide information and communications that can help support better teaching, learning and collaboration. To quote, "A 21st century plan for education should map out the policy, fiscal, technological and governance needs of the state's public schools, using our standards-based system as a foundation. A plan should emphasize how California's academic and content standards will be used to improve student learning, how decision making at the local level will accompany local accountability, how a plan will guide the implementation of education policy as opposed to a piecemeal approach to change, how technology will be implemented to advance these goals, and how the plan prioritizes recommendations included

dedicated funding sources" (Source: 21st Century Schools, Legislative Platform, ACSA EdCal 2/23/2015).

The purpose of this Technology Master Plan for July 1, 2018 to June 30, 2021 is to articulate a long range strategy for the uses of technology within the district and to identify the instructional and operational needs within the district. The next three years promise exciting developments for student achievement with a focus and implementation of California Standards, Career Technical Education (CTE), Science-Technology-Engineering-Arts-Math (STEAM), Next Generation Science Standards (NGSS), Visual and Performing Arts (VAPA) with Social Science and Science textbook adoptions and Measure BB Bond projects.

This technology plan will identify the foreseeable future instructional and operational needs within the district for which technology can provide tools to complete academic and administrative tasks in support of student achievement with college and career readiness.

### SAMR (Substitution, Augmentation, Modification, Redefinition) Model

Dr. Ruben Puentedura developed the SAMR model as a way for teachers to evaluate how they are incorporating technology into their instructional practice. The district and this plan use the SAMR model can be used to reflect upon how well technology is integrated the classroom. Is it an act of Substitution? Augmentation? Modification? Or Redefinition?

- Substitution (Enhancement): Technology acts as a direct tool substitute, with no functional change.
- Augmentation (Enhancement): Technology acts as a direct tool substitute, with functional improvement.
- Modification (Transformation): Technology allows for significant task redesign
- Redefinition (Transformation): Technology allows for the creation of new tasks, previously inconceivable.

The Federal Communications Commission (FCC) adopted the E-rate Modernization Order on July 11, 2014 and the Second E-rate Modernization Order on December 11, 2014. The Order adopted in July takes major steps to modernize and streamline the schools and libraries universal service support program (more commonly known as the E-rate program) and focuses on expanding funding for Wi-Fi networks in elementary and secondary schools and libraries across America. Since its inception in 1997, the E-rate program has helped ensure that eligible schools and libraries have affordable access to the Internet. In modernizing the program, the Order seeks to ensure that the program is geared towards meeting the broadband needs of schools and libraries in today's world of interactive, individualized digital learning. One of the streamlining steps was the eliminating of the Technology Plan Requirements (Order ¶¶ 197-198)



Beginning in funding year 2015, the Order eliminates the technology plan requirements for category two services. The FCC eliminated the technology plan requirements for Category 1 (then Priority 1) services in 2010.

(Source: <http://www.fcc.gov/page/summary-e-rate-modernization-order>)

There is no state mandate or funding for plan review. While this is a best practice, it is not a requirement. Plan review is a local LEA decision and activity. (Source: LACOE Tech Plan Builder Site)

Reaching critical goals depends on improving professional development support, infrastructure, and expanding funding. Federal and State funding sources for technology have opportunities available, such as the additional \$1 billion dollars allocated to E-rate Funding Years 2015 and 2016 to support increased wireless and broadband. The K-12 Ed Tech Voucher program and now defunct Enhancing Education Through Technology (EETT) initiatives are examples other funding opportunities that may arise in the future. This technology plan is designed to help HLPUSD to be ready to take advantage of those opportunities as they become available.

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## Curriculum, Instruction, and Assessment Technology Goals

- Students will have the necessary skills to be successful in higher education and/or the world of work.
- Students and staff will be provided with the skills to become 21st century learners.
- Students and staff will be encouraged to become lifelong learners.

## Overview and Stakeholder Groups

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### Community and School District Overview

The Hacienda La Puente Unified School District (HLPUSD) serves a diverse student community with the goal of preparing every student for college and career upon graduation. Our Pre-K-12 student population is 20% English Learner (EL), and 72% of students are classified as Low Income. Our LCFF Unduplicated pupil count is 75.6%. 78% of our EL students speak Spanish, 11.6% speak Mandarin, and additional languages include Cantonese, Vietnamese, Filipino, Korean, Japanese, and Arabic. Our student population is made up of many ethnicities with the majority of our students 80% identifying as Hispanic Latino, 12.7%

Asian, 3.4% White, 1.8% Filipino, 1% African American, 0.5% Two or More, 0.3% Pacific Islander and 0.1% American Indian. HLPUSD serves approximately 19,000 students in Pre-K through 12th grades at 32 quality schools: Seventeen elementary schools, six K-8 schools, four middle schools, four comprehensive high schools, one alternative high school, and an orthopedic unit for the physically handicapped. HLPUSD also serves the community through an extensive child development and adult education program. The 11.5 square mile district serves the diverse communities of City of Industry, Hacienda Heights, La Puente and portions of Valinda and West Covina. (Source: HLPUSD LCAP 2017-2020, pg. 1)

## Stakeholder Groups Input

- Education Technology Curriculum Committee
- Instructional Services Division (ISD) & Curriculum Committee Meeting Notes
- District Leadership Team
- Parent Advisory Group- Comments on LCAP – District Advisory Council (DAC) and District English Learners Advisory Council (DELAC).
- Technology Teachers on Special Assignment (TOSA)
- Student Major Themes and Trends (2018 DLT student presentation)
- Teacher feedback from HLP Professional Development class surveys

## Technology Goals and Objectives

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### Teaching and Learning

#### **GOAL 1**

**Students will have the necessary skills to be successful in higher education and/or the world of work.**

#### Objectives

- 1.1 Expand an HLPUSD scope and sequence of technology skills for all students based on the International Society for Technology in Education's National Educational Technology Standards for Students and the California Standards embedded technology standards.
- 1.2 Develop age and grade level specific lessons and activities which address the technology scope and sequence as outlined in the California Standards and provide students with engaging and effective 21st century skills.

- 1.3 Articulate technology lessons to teachers and provide training in embedding technology lessons into instruction and providing effective technology enhanced instruction.
- 1.4 Articulate what administrators need to know and do to support site technology enhanced instruction and district technology initiatives
- 1.5 Demonstrate and articulate collaboration tools and opportunities for teachers to use with students.

## **GOAL 2**

**Equip students with the 21st Century skills related to the ethical and appropriate use of information and Internet Safety to be literate citizens in a digital world.**

### Objectives

- 2.1 Update age and grade specific lessons for students related to ethical use, copyright, and fair use.
- 2.2 Update age and grade specific lessons for students related to Internet safety, information literacy, and social networking.
- 2.3 Confirm annual lesson completion by all students that provides for educating minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms, cyberbullying awareness, and response to meet E-rate funding requirements.

## **GOAL 3**

**Provide differentiated technology-based and online learning options to meet individual needs of students.**

### Objectives

- 3.1 Encourage staff and student collaboration as a resource to implement distance and online learning options.
- 3.2 Expand online high school course registration option through student information system.

## Professional Development

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### **GOAL 1**

**Use technology to support communication, collaboration, and effective sharing of resources.**

#### Objectives

- 1.1 Continue to provide training for staff in the use of district student information systems (e.g. Aeries, IO), business systems (e.g. LACOE Advantage BEST), data systems, cloud based systems (e.g. Microsoft Office 365, Google G-Suite) learning management systems and school, teacher, and student web pages.
- 1.2 Provide training on effective use of district communication and collaboration tools for classroom and online learning (e.g. MS Office 365 Skype, Google Hangouts, WebEx)
- 1.3 Continue to provide support for student Internet safety and ethical use lessons.

### **GOAL 2**

**Technology training shall be provided to all personnel in an effective, systematic, and on-going manner to improve user productivity and proficiency.**

#### Objectives

- 2.1 Provide a library of video tutorials to support user education and support for most common features in district academic and administrative systems.
- 2.2 Provide a library of short tutorial instructions for most common features in district academic and administrative systems.
- 2.3 Provide training in 21st Century technology integration and best practices.
- 2.4 Disseminate technology integration best practices and lessons across all grades and content areas.
- 2.5 Encourage staff collaboration using district provided online and cloud based collaboration tools.
- 2.6 Encourage site plans to be aligned with Local Control and Accountability Plan (LCAP) and district technology plans.

### **GOAL 3**

#### **Communication between home and school will continue to be encouraged.**

##### Objectives

- 3.1 Update of district web sites to be visually appealing and a useful easy to use source of current information, be mobile device friendly, and Section 508 Americans with Disability Act (ADA) compliant for electronic and information technology.
- 3.2 Increase teacher use of classroom based web pages, including posting of assignments, announcements, special events, and parent information.
- 3.3 Schools to maintain and update site web pages a minimum of three times per year (August – before the start of school, November – before the new year, and March – before the end of the year).
- 3.4 Expand site and district school to home communication using district provided Student Information System, district approved social media, communication tools, phone messaging system, and parent portal.
- 3.5 Promote anytime/anywhere parent access to current district and site information, e.g. Aeries Parent Portal and school, district, and system mobile apps.
- 3.6

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## Security, Hardware, and Infrastructure

### **GOAL 1**

#### **The infrastructure (systems) shall be secure, stable, reliable, inventoried, and well-maintained, including the employment of appropriate back-up systems.**

##### Objectives

- 1.1 Replace 20 year old fiber optic network cabling at school sites with current standard higher capacity fiber optic cabling to support future bandwidth needs.
- 1.2 Maintain, expand, and replace as needed network equipment and cabling to support district administrative and academic needs.
- 1.3 Ensure capacity of network infrastructure and services, including wireless network, supports high density use for instruction in support of all subject areas

of California State Standards (CCSS), Next Generation Science Standards (NGSS), Science Technology Engineering Arts, and Math (STEAM), and Career Technical Education (CTE).

- 1.4 Provide and obtain professional development of staff to support technology.
- 1.5 Improve network availability for disaster recovery with backup district circuit for Internet services, uninterruptible power supply (UPS), and generator for network data and voice server room equipment.

## **GOAL 2**

**Technological resources shall be utilized in a manner designed to maintain the highest level of security possible for confidential information.**

### Objectives

- 2.1 Maintain all security and filtering in support of the Children's Internet Safety Act (CIPA), network firewalls, including monitoring and prevention against emerging data threats.
- 2.2 Provide cloud based computing and data storage with appropriate policies and security.
- 2.3 Maintain student data security as per state and federal requirements, such as the Family Education Rights Policy Act (FERPA).
- 2.4 Data Security and Data Privacy – Policy, practices, education, systems.

## **GOAL 3**

**District policies will be reviewed and maintained to reflect the most recent changes in technology and social media.**

### Objectives

- 3.1 Create, publish and implement an updated opt out Acceptable Use Policy to reduce paperwork and encourage system integration.
- 3.2 Create, publish and implement a Social Media Policy with supporting user education.

- 3.3 Maintain and develop as needed new Board Policies in support of technology use.

#### **GOAL 4**

**Provide all schools with technology to support California Standards and 21<sup>st</sup> century classroom information to improve student learning and academic achievement.**

##### Objectives

- 4.1 Provide ancillary tools for California Standards in computer labs as required.
- 4.2 Construct and provide support for 21<sup>st</sup> Century Classrooms technology under the Measure BB bond project.
- 4.3 Monitor equipment for replacement cycle or as needed.

#### **GOAL 5**

**Technology shall be acquired and deployed in a cost-effective and efficient manner. Among the issues that shall be addressed will be: Total Cost of Ownership, long and short term needs (including the plan for repair and replacement of technology), and the availability and efficient use of resources used for technology.**

##### Objectives

- 5.1 Maintain district standards for teacher and student classroom computers and technology.
- 5.2 Maintain district standards and support for administrative and academic hardware, software and network technology.
- 5.3 Include as part of Total Cost of Ownership (TCO), site or department purchased software, systems and hardware must include district provided training-professional development.

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## District Goals

### **GOAL 1**

**HLPUSD shall provide core systems for both administration and education.**

#### Objectives

- 1.1 District will maintain all core infrastructure systems - network, file sharing and storage, voice, data, video, and security.
- 1.2 District will maintain all academic and administrative core software systems as needed:
  - Student Information System (SIS): Aeries
  - California Longitudinal Pupil Achievement Data System (CALPADS) for budgeting, assessment and demographics
  - Cloud Based Systems: Microsoft Office 365, Google G-Suite
  - Website System: School Loop
  - Learning Management System (LMS): Blackboard
  - Evaluation System: Netchemia
  - Human Resources: BOSS HR, LACOE BEST Project
  - Business Systems: BOSS, LACOE BEST Project
  - Special Education System: SIRAS
  - Food Services System: Meals Plus
  - Voice Over IP System-Public Address: Cisco & Singlewire
  - Transportation System: Edulog-Transtrak
  - Electronic Mail System: Microsoft Exchange/Outlook
  - Data Backup Systems: Dell Equallogic and EMC
  - Library/Textbook System: Destiny
  - Assessment System: IO/EADMS
  - Video Camera System: Milestone
  - Fire Alarm System: Silent Knight
  - Help Desk/Work Orders: iHeat and SchoolDude
  - Document Imaging System: Laserfiche
  - Substitute Management System: AESOP
  - Mass Notification System: School Messenger
  - Virtualized Servers & Desktops: VM Ware
- 1.3 HLPUSD will continue to provide professional development for Aeries features such as master scheduling, online new student enrollment, parent data



confirmation, summer school, parent and student portals, analytics and reporting/structured query language (SQL).

- 1.4 Each July, district will provide an annual professional development calendar to support effective use of district systems.

## **GOAL 2**

**HLPUSD shall provide Fire/Life/Safety systems for all students and staff, along with asset protection.**

### Objectives

- 2.1 The district will provide, upgrade, and maintain automated fire systems and alarm systems in accordance with code governing these systems.
- 2.2 The district will explore integrated solutions that combine internal and external public address systems and external speakers to provide coverage of the school site that comply with code governing these systems.

## Budget and Monitoring

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### **GOAL 1**

**HLPUSD shall provide budget resources to support the acquisition, operation, maintenance, repair and replacement of network equipment.**

### Objectives

- 1.1 HLPUSD will provide budget resources to support the acquisition, operation, maintenance, repair and replacement of network equipment.
- 1.2 HLPUSD will pursue state, federal and other funding opportunities that support district and technology plan objectives.
- 1.3 Through the annual Local Control and Accountability Plan (LCAP) process, the district will identify and allocate funding in support of ongoing technology operations and projects in support of the eight LCAP state priority areas.

## **GOAL 2**

**HLPUSD shall periodically monitor and review district technology, services, and systems for effectiveness, alignment to support achievement of district goals and objectives.**

### Objectives

- 2.1 Networking and Computer Services (NCS) will use input from existing stakeholder groups (e.g. District Leadership Team, Education Technology Committee, Curriculum Committees) to assist the district in using the tools of technology to accomplish the goal of providing a quality education described in the district objectives and technology plan.
- 2.1 During the budget planning process (January), NCS will review of annual and multiyear services and support agreements during budget planning period.
- 2.2 During the budget planning process (January), NCS review of replacement cycle of district network hardware and systems.
- 2.3 During the budget planning process (January), NCS will work with Instructional Services Division and Business Services to identify projects and funding for the coming year.
- 2.4 Create a cloud based or offsite backup disaster recovery site for protection of district data and systems and provide access in event of disaster.
- 2.4 Annually in April, the District Technology Committee will review technology plan and share progress in the areas of teaching, learning and professional development described in the district technology plan.
- 2.5 In 2020-2021, the District Technology Committee will begin the process to update the district plan for July 2022- July 2025.

## Appendix - References and Research

### **SAMR (Substitution, Augmentation, Modification, Redefinition) Model**

Dr. Ruben Puentedura developed the SAMR model as a way for teachers to evaluate how they are incorporating technology into their instructional practice. The SAMR model can be used to reflect upon how well technology is integrated the classroom. Is it an act of Substitution?

Augmentation? Modification? Or Redefinition?

- Substitution (Enhancement): Tech acts as a direct tool substitute, with no functional change.
- Augmentation (Enhancement): Tech acts as a direct tool substitute, with functional improvement.
- Modification (Transformation): Tech allows for significant task redesign
- Redefinition (Transformation): Tech allows for the creation of new tasks, previously inconceivable.

<https://www.commonsemmedia.org/videos/introduction-to-the-samr-model>

### **Consortium for School Networking (COSN): The Empowered Superintendent - Professional Learning and Practical Tools for Effective Technology Leadership**

<http://cosn.org/sites/default/files/pdf/CoSN%20Empowered%20Superintendent%20Executive%20Summary%20FINAL2.pdf>

### **New Media Horizons (NMC): Horizon Report K-12 Edition (2017)**

<https://www.nmc.org/publication/nmccosn-horizon-report-2017-k-12-edition/>

NMC Horizon Report > K-12 Edition broadened the reach of the NMC Horizon Report series to include primary, middle, and high schools. The K-12 Edition explores the key trends accelerating educational technology adoption in schools, the significant challenges impeding it, and emerging technologies poised to impact teaching, learning, and creative inquiry.

### **Reimagining the Role of Technology in Education (January 2017)**

2017 National Education Technology Plan Update

U.S. Department of Education: Office of Educational Technology

<http://tech.ed.gov>

### **International Society for Technology in Education (ISTE): Standards for Students (2016)**

<http://iste.org/standards>

### **Future Ready Schools (2014)**

U.S. Department of Education: Office of Educational Technology

<https://tech.ed.gov/futureready/>

<https://dashboard.futurereadyschools.org/framework/framework-overview>

### **Pearson Student Mobile Device Survey 2014** (<http://tinyurl.com/k73tjxs>)

National Report: Students in Grades 4-12, Conducted by Harris Poll Report: May 9, 2014

-(Source: Tech & Learning, [www.techlearning.com](http://www.techlearning.com), Page 8, November 2014)

Education Technology & School Innovations

Association of California School Administrators (ACSA) Magazine  
May/June 2018

Futures So Bright: Digital Tools Give Students A Better Chance at College and Career Readiness, Ed Tech Magazine (<http://edtechmagazine.com>), pp. 52, Spring 2018

Measure BB Bond Information (2016)  
Hacienda La Puente Unified School District  
<http://www.hlp schools.org/bond2016>

The Purposeful Classroom: How to Structure Lessons with Learning Goals in Mind, Douglas Fisher & Nancy Frey, Association for Supervision and Curriculum Development (ASCD), 2011.

Curriculum Assessment & The Common Core: Preparing for the Next Generation Science Standards, Association of California School Administrators (ACSA) Leadership Magazine, March/April 2015.

Innovate: A Blueprint for Science, Technology, Engineering and Mathematics in California Public Education, A report by State Superintendent of Public Instruction Tom Torlkason's STEM Task Force, <http://www.cde.ca.gov/pd/ca/sc/documents/innovate.pdf>, May 2014.

State Educational Technology Director's Association (SETDA), The Broadband Imperative: Recommendation to Address K-12 Educational Infrastructure Needs, at 2 (rel. May 21, 2012), [http://www.setda.org/wp-content/uploads/2013/09/The\\_Broadband\\_Imperative.pdf](http://www.setda.org/wp-content/uploads/2013/09/The_Broadband_Imperative.pdf). (SETDA Recommendation). Connectivity targets as reasonable predictions of near-term and longer-term needs, subject to refinement over time as warranted.

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