Tahoma School District's Strategic Plan for Technology

EMPOWERED LEARNING

Technology is used in authentic ways to design experiences that challenge, engage, and empower students to deeper levels of learning and demonstrating that learning.

FUTURE READY SKILLS

Students skillfully use digital tools to support and reflect upon their acquisition and demonstration of the Future Ready Skills both inside and outside of school.

FUTURE READY PLAN

Throughout elementary, middle, and high school, students build a vision for their valued, viable, and successful future-- actively exploring, refining and planning their next steps.

ACCESS

Students and staff have the tools, skills, and opportunities to leverage technology to improve learning and productivity.

SUSTAINABILITY

Technology decisions are made considering identified aspects of sustainability and align to district goals and priorities.

EQUITY

Efforts ensure that initiatives acknowledge and support the needs of different students, staff members, classrooms, and buildings in an equitable way

---
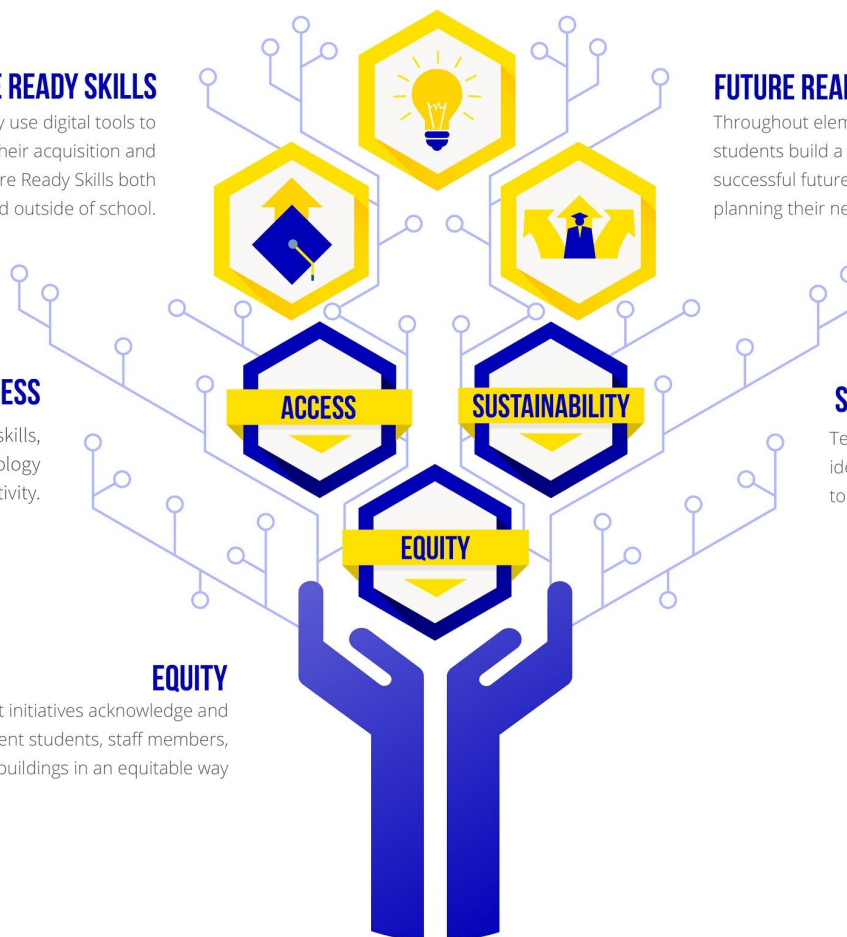
In the Tahoma School District, technology is leveraged and prioritized as a strategic investment to support empowered and engaging learning and teaching, and help ensure all students gain the Future Ready Skills necessary in order to leave our system with a valued, viable, and personalized plan for lifelong success. Technology use is prioritized where it can accelerate and improve student learning.

Our technology model, developed by the Tech Model Review Committee during the fall of 2018 and represented by the image above, emphasizes that technology be used in our district to support our three essential outcomes: Empowered Learning, Future Ready Skills, and the Future Ready Plan. The core values of Equity, Sustainability, and Access guide decision-making and priority setting.

We want all students to have the experiences, opportunities, and tools necessary to attain both our instructional goals and their own aspirations. This plan is integral to achieving our goals for students.

The goals outlined in this plan are significant and extend beyond the four years of this levy cycle. While we intend to make considerable progress toward achieving them over the four years of the levy, we know that realistically, many of the goals reflected in this strategic plan may take up to 10 years to realize.

Empowered Learning

Technology is used in authentic ways to design experiences that challenge, engage, and empower students to deeper levels of learning and demonstration of learning.

What does Empowered Learning look like when we leverage technology?

Students and teachers have and use appropriate digital tools, devices, applications, and resources to support empowered and efficient teaching and learning 24/7.

From our model:

- Best instructional practices, learning environments, and use of digital tools and resources are leveraged to empower students.
- Students use technology to explore interests and personalize and customize learning.
- Staff and students use technology to foster connections beyond school and involvement in the community.
- Technology is used to accelerate access to knowledge outside the classroom and cultivate student-driven learning.
- Technology is used to collaborate and connect the classroom to the broader world.
- Teachers use technology to redesign tasks to deepen learning or create new tasks that were previously impossible or impractical in a traditional classroom setting.
- Students use technology to produce original products and content that cannot be replicated by machines.
- A culture of creativity and innovation is promoted, allowing for opportunities to fail and learn from mistakes.
- Students use technology to lead learning and provide expertise in the classroom.
- Student choice (device, tools, media, method, pace, etc.) is prioritized when possible.
- Staff and students take advantage of technologies that make teaching and learning functions more efficient.
- Safeguards (digital citizenship and internet safety lessons, content filters, etc.) are in place to ensure students work in safe and appropriately protected digital environments.

What is our current reality? (Oct 2019)

Over the course of the last several years, technology use and integration has been encouraged, but remained largely invitational and optional. In only a few places is technology integration clearly identified and expected as a part of regular curriculum or instructional practice. Understanding and implementation of preferred practice for technology integration and use are not systemic. Although, many teachers have taken advantage of available tools and optional trainings, often using their own time to do so; for a variety of reasons (competing priorities, lack of time, etc.), many others have not. As a result, authentic and engaging use of tech tools and applications to enhance and empower learning varies from classroom to classroom. In addition, a clear vision for how technology can and should be leveraged to improve and empower learning has not been widely communicated.

Although there are many classrooms where technology is skillfully used to its full potential in authentic and meaningful ways, we know we have work to do to ensure that *many* becomes *every*. The variance among classrooms has resulted in inequities for students that we intend to correct.

What this plan wants to do

Students and teachers in every classroom should have the skills, resources, and knowledge to take full advantage of all that learning and teaching in the digital information age offers. To ensure all students in every classroom have experiences that allow them to use digital tools and resources in authentic, meaningful ways, we must design and redesign lessons and projects AND invest in building teachers' ability to integrate technology in intentional and engaging ways as part of their regular practice. A long-standing belief in Tahoma is that high expectations come with a responsibility for high support. One way to ensure this support is by providing easy, consistent access to the tools needed in classrooms, as well as designing curriculum to embed rich, authentic learning experiences, allowing students to build new skills for today's world and increase ownership of their learning. Also, we must shift from invitational to expected technology use and integration. To support that, we will use a variety of training methods including face-to-face; individualized, online resources; collaborative, online synchronous and asynchronous strategies; and job-embedded coaching. This variety of strategies allows us to differentiate depending upon the degree of change required, sophistication of use scenario, readiness and skill level of teachers, etc. to support increased expectations and use. As we build the knowledge and expertise of our teachers we will also need to increase the level of technology expertise of our administrators.

Empowered Learning (continued)

Technology is used in authentic ways to design experiences that challenge, engage, and empower students to deeper levels of learning and demonstration of learning.

Strategies for closing the gap between our current reality and our vision

Note: estimates rounded to nearest $10,000

Establish proficiency standards for teachers, coaches, and administrators based on ISTE and State technology standards. Provide differentiated professional development for teachers and administrators to achieve standards. Measure progress toward growth annually.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Proficiency Measures - Scope Training Needs, Measure Annual Progress	$80,000	$20,000	$20,000	$20,000	$20,000
Differentiated Staff Training to Increase Proficiency	$880,000	$200,000	$210,000	$230,000	$240,000
Technology Empowerment "Leave No Teacher Behind" for approximately 10% of staff—initially self-selected; later years principal/coach identified	$40,000	$10,000	$10,000	$10,000	$10,000

Provide on-going and targeted staff development, as well as just-in-time support.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Sub Release PD	$30,000	$10,000	$20,000		
Technology Teacher Leaders (up to 53 positions)	$200,000	$50,000	$50,000	$50,000	$50,000
Tahoma Technology Summer Conference - 2 day June summer tech conference for optional training	$40,000	$10,000	$10,000	$10,000	$10,000
Learning Labs/Demonstration Classrooms	$40,000			$20,000	$20,000
Instructional coaches (8 buildings * 0.5 FTE + HS 1.0 FTE)	$2,610,000	$630,000	$650,000	$660,000	$670,000
Tool Training - VR/AR (Virtual and Augmented Reality)	$20,000	$20,000			

Ensure students have ready access to digital tools needed to achieve learning goals. Purchase and integrate applications for identified purposes in curriculum to meet technology and content area standards with clear expectations for use that considers impact over time. Prioritization is given to core content, then to intervention and then to enrichment.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Secondary student devices (basic)	$1,420,000	$500,000	$430,000	$280,000	$210,000
Secondary student devices (upgraded)	$550,000	$190,000	$170,000	$110,000	$80,000
Elementary student devices (basic)	$910,000	$320,000	$270,000	$180,000	$140,000
Elementary student devices (upgraded)	$840,000	$290,000	$250,000	$170,000	$130,000
VR/AR Kits for elementary curriculum, secondary libraries	$140,000	$110,000	$30,000		
Health & Wellness: Elem pedometers, Elem-Sec Heart Rate Monitors	$60,000		$60,000		

Empowered Learning (continued)

Technology is used in authentic ways to design experiences that challenge, engage, and empower students to deeper levels of learning and demonstration of learning.

Strategies for closing the gap between our current reality and our vision (continued)

Identify where significant and authentic tech integration could be embedded in curriculum to achieve goals.   Design and redesign curriculum, projects, and units where necessary to ensure students are able to take advantage of digital tools and resources in ways that were previously impossible. Develop and embed assessments and new tools to measure progress toward expectations.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Redesign of curriculum to meet goals	$120,000	$30,000	$30,000	$30,000	$30,000
Update and develop technology progressions and identify measures for growth and achievement	$90,000		$30,000	$30,000	$30,000
Formative Assessment tools as add-in to G Suite (ex. Pear Deck)	$80,000	$20,000	$20,000	$20,000	$20,000

Purchase and integrate applications for identified purposes in curriculum to meet technology and content area standards with clear expectations for use that considers impact over time. Prioritization is given to core content, then to intervention and then to enrichment.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Video Streaming Content Resource	$60,000	$10,000	$10,000	$20,000	$20,000
Elementary Keyboarding	$20,000	$5,000	$5,000	$5,000	$5,000
Elementary Reading and Math Software for Differentiation	$340,000	$80,000	$80,000	$90,000	$90,000
Instructional/Curricular Software for Secondary Students	$80,000	$20,000	$20,000	$20,000	$20,000

Continue investment in technology leadership/coordination staffing and add assistive technology specialist.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Tech Coordination (leadership, coordination, support 1.5 FTE)	$920,000	$220,000	$230,000	$230,000	$240,000

Ensure Instructional Coaches, Administrators, and Technology Teacher Leaders stay current in advances in the field and increase proficient to provide leadership to meet ISTE and State technology standards and expectation. Differentiate for needs to achieve proficiency.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Administrator and Coach Training and Capacity Building	$420,000	$100,000	$100,000	$110,000	$110,000
Tech Leadership Capacity Building Professional Organization subscriptions, workshops	$20,000	$5,000	$5,000	$5,000	$5,000
Tech Leadership Capacity Building - regional and national workshops and conference	$140,000	$30,000	$40,000	$30,000	$40,000

Future Ready Skills

Students skillfully use digital tools to support and reflect upon their acquisition and demonstration of the Future Ready Skills both inside and outside of school.

What does it look like to leverage technology in developing Future Ready Skills?

Throughout their time in the Tahoma School District, students improve their capacity in the Future Ready Skills, including their ability to accurately describe their strengths and growth areas with supporting evidence from their life and school. Curriculum and experiences consistently and authentically teach to specific Future Ready Skill development with increasing sophistication as students increase in grade level. Specifically, technology tools are strategically incorporated in authentic ways to support emerging digital tools that transform our abilities in these specific Future Ready Skills: Collaborative Teammate, Creative Innovator, Effective Communicator, Quality Producer, Self-Directed Learner, and Strategic Problem-Solver

From our model:
- Students, both independently and in collaboration with others, use technology tools to identify strengths and areas of growth. Strengths and progress are tracked over time through self-reflection and collecting evidence.
- Technology purchases and digital tools:
  - Are harnessed to promote authentic collaboration
  - Reflect a culture of creativity and innovation
  - Promote strategic problem-solving
- Students learn about and make responsible decisions in digital environments.
- Students use technology to adapt communication effectively for different audiences and applications, reaching authentic, global audiences whenever possible and appropriate.
- Students/classrooms engage with experts near and far for real-world applications.
- Students become informed, resourceful, and active citizens in our democracy.

What is our current reality? (Oct 2019)

While we have Future Ready Skills embedded in some lessons in various disciplines across our system, this has largely been through efforts of individual teachers and has not been systematically identified in documented curriculum in a comprehensive way. We also lack vertical progressions for skill development from grade level to grade level. Future Ready Skill integration has been encouraged and invitational. We are in a novice stage in our understanding of how technology might be best leveraged to support Future Ready Skills, and as a result have a developing understanding in how to integrate and leverage technology to support Future Ready Skills. With the failure of our technology levy in 2018, nearly all of this work has been put on hold and progress we had been making at that time has largely been paused.

We have developed a digital platform for student reflection on the Future Ready Skills but are just beginning implementation and use of that platform with students and parents in support of student self-reflection, goal setting, and progress monitoring for each of the Future Ready Skills.

What this plan wants to do

In order to fully realize our vision for the Future Ready Skills, we know we need to more fully engage students, their families, and the community-at-large around the importance of these skills. We believe digital resources can help students reflect on their strengths and areas for growth and track growth over time. To that end, we envision fully operationalizing the Future Ready Skill Portal for secondary students over the next couple of years. This online portal allows students to reflect on their abilities, collect evidence of proficiency, and seek feedback from others. Similarly, we are exploring digital portfolio tools such as Seesaw for elementary students to collect and share their abilities with each other and their parents. In addition, we know that technology provides rich opportunities to practice and refine many of the Future Ready Skills through authentic integration into most areas of curriculum and learning. Our plan is to identify and support those opportunities through both curriculum design and re-design as well as increasing the knowledge and skill level of our staff.

Future Ready Skills (continued)

Students skillfully use digital tools to support and reflect upon their acquisition and demonstration of the Future Ready Skills both inside and outside of school.

Strategies for closing the gap between our current reality and our vision

Students use a digital portfolio that is visible to parents to track progress and showcase evidence of learning and progress in Future Ready Skills. Students use increasingly sophisticated tools (at secondary Future Ready Skill Portal) to reflect on strengths, weaknesses, growth, and share with parents and others.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Future Ready Skills Portal Enhancements	$30,000		$20,000		$10,000
Elementary Student Digital Portfolio/Journal (Seesaw, Class Dojo)	$80,000	$20,000	$20,000	$20,000	$20,000

Provide access to information and technology-enabled applications that support integration of Future Ready Skills into regular instruction for all students.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Library Management software	$40,000	$10,000	$10,000	$10,000	$10,000
Access to e-books	$40,000	$10,000	$10,000	$10,000	$10,000
Information resources—access to online subscriptions	$20,000	$5,000	$5,000	$5,000	$5,000
New, non-standard technology tools for R&D to support specific Future Ready Skill development	$120,000	$30,000	$30,000	$30,000	$30,000

Future Ready Plan

Throughout elementary, middle, and high school, students build a vision for their valued, viable, and successful future—actively exploring, refining, and planning their next steps.

What does it look like to leverage technology in supporting students to create and realize a viable and valued Future Ready Plan?

Throughout elementary, middle, and high school, students build a vision for their valued, viable, and successful future--actively exploring, refining, and planning their next steps.

From our model:
- Students' digital footprint and personal branding support achievement of personal and career goals.
- Use of digital tools fosters planning and communication with parents and others.
- Students use technology to explore interests and identify skills and strengths, illuminating multiple options for possible pathways to success.
- Students are lifelong learners, accustomed and prepared for constant change.

What is our current reality? (Oct 2019)

Using our last technology levy, we invested in development of an application supporting all students in career pathway exploration. Using this information, students begin to design a high-school-and-beyond plan that is updated annually beginning in eighth grade. We have developed a scope and sequence of lessons and experiences that span grades 6-12 which include academic planning, financial planning, post high school planning, Future Ready Skills, as well as career exploration and research. Our College and Career Readiness advisory team has recommended that we continue to expand use of the application and form a deeper partnership with parents. We are working to shift the paper and pencil versions for student planning and course registration over to the digital application during the 2019-20 school year with full digital alignment realized in spring 2020. Ensuring adequate staff training and increasing cross-platform fluency is necessary for clerical support, counselors, teachers, and administrators to embrace the new applications.

What this plan wants to do

Technology plays some role in nearly every career or job; we want our students to graduate with a strong foundation in technology skills and know-how necessary to successfully enter the workforce or pursue additional education and training. Just as important is knowing how to skillfully manage one's digital footprint in order to create and maintain an appropriate digital presence. We believe we can instill best practices and help students make good choices by directly teaching digital citizenship lessons K-12. In addition, technology can help students discover, explore, and refine their career interests in new and exciting ways by connecting them with the most current information about careers and training, as well as exploring post-secondary options. We will develop and integrate experiences that allow students to leave our system with a strong sense of who they are and what they are prepared to do next.

Future Ready Plan (continued)

Throughout elementary, middle, and high school, students build a vision for their valued, viable, and successful future—actively exploring, refining, and planning their next steps.

Strategies for closing the gap between our current reality and our vision

Develop comprehensive, age-appropriate digital citizenship lessons and experiences for students and identify measures to be used to monitor progress for students' attaining proficiency.					
	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning design and redesign of curriculum cost estimates					

Provide structures to pull and integrate data from various student information systems for information to be easily available for teachers, students, and parents in tracking and understanding individual and collective progress toward Future Ready for all students. Revise and adapt front-facing applications for students to mirror real-world applications when applicable and relevant (ex. revise Future Ready Skills Portal and allow students to develop "LinkedIn-ish" profiles that are shared within our system, and outward-facing for older students).					
	Plan Total	Year 1	Year 2	Year 3	Year 4
Student Info and Data - Homeroom Portals, Classroom, Career Planner, 4 Yr Plans, Student Learning Plans, Parent Notifications	$410,000	$100,000	$100,000	$100,000	$110,000
Recognition Student and Staff (Badging software tools)	$15,000		$5,000	$5,000	$5,000

Core Value: Equity

Efforts ensure that initiatives support the diverse/particular needs of different students, staff members, classrooms, and buildings in an equitable way.

What does Equity look like in our strategic technology plan?

We recognize that particular and diverse needs exist across our system. Ensuring that all students and staff have the skills, tools, and resources to meet our goals doesn't necessarily look the same for every building, staff member, or student. As we develop and implement initiatives, make purchasing decisions, and prioritize needs, we'll do so with an equity mindset. Core to this value is the question: *Does everyone have what they need to be successful?* In our efforts to answer "yes" to this question, we will work diligently to ensure that we have considered the particular needs and varied solutions for each group's unique needs. Equitable access to the tools and resources staff and students need to be successful is just one aspect of equity. Indeed, without clear expectations for staff and students, as well as adequate support and training, we will not be able to ensure that technology is being leveraged for learning in all classrooms.

From our model:

- State technology standards inform technology integration and student and staff expectations.
- Ongoing staff training and expectations ensure all staff have the skills and tools necessary to leverage technology for learning.
- Students and staff have the digital fluency, literacy, and citizenship skills to safely and successfully use technology, access resources, and engage others.
- Purchasing, implementation plans, and decisions ensure equitable access and use across schools, classrooms, staff, and students, responding to each group's unique needs.

What is our current reality? (Oct 2019)

Assistive Technology

- While we have some assistive technology tools available for both special populations as well as general education students, training has primarily focused on special education staff. Relatively little to no training has been available beyond a small number of invitational offerings for all staff. We want to ensure all students have access to the tools we currently have and we also need to expand our tools as new assistive technologies become available and are proven to work.

Curriculum and Instruction (gap closing addressed in Empowered Learning)

- Inadequate access and training to ensure ease of use has resulted in uneven integration in core curriculum and inequitable availability of technology devices across content areas and classrooms.

Technology Integration

- With few exceptions, core experiences and lessons that integrate technology and address the state technology standards have not been identified in curriculum.
- We have several "bright spots" where teachers and students are leveraging technology in authentic and engaging ways, but those instances are largely dependant on individual teachers' preferences, styles, and skill level.
- In many places, using technology to support learning is hindered by lack of devices or lack of the right device.
- Digital fluency, literacy, and citizenship skills vary from teacher to teacher and student to student.
- Clear expectations for how technology should be used for learning are not in place.
- Parent/Teacher Communication (gap-closing measures addressed in Empowered Learning expectations and training)
  - Elementary: inconsistent use of SWIFT, sometime up-to-date, sometimes not, some use of Instagram or other social media.
  - Secondary: inconsistent use of SWIFT, lack of standardized method for communication with parents—Skyward messenger, Google Classroom, SWIFT, Remind, etc.
  - Secondary parents frustrated with lack of consistent and standard practices among teachers.

Core Value: Equity (continued)

Efforts ensure that initiatives support the diverse and particular needs of different students, staff members, classrooms, and buildings in an equitable way.

What this plan wants to do

At the heart, we want equitable opportunities for all students across all schools and classrooms. Essential experiences should happen for every student. We want all students to seamlessly and effortlessly be able to select the appropriate and necessary digital tools and use those tools to improve learning and growth both at school and at home. Staff and students must have the digital fluency, literacy, and citizenship skills to safely and successfully use technology, access resources, and engage others. With the level of digital access necessary to access and complete schoolwork in middle and high school, all students must have access needed at home to work at learning, explore interests, and complete homework tasks.

Teachers must be empowered with easy-to-use tools and training on best practices to communicate classroom expectations, learning goals, assignments, progress, grades, etc. with parents and students.

Strategies for closing the gap between our current reality and our vision

Establish proficiency standards for teachers, coaches, and administrators based on ISTE and State technology standards. Provide differentiated professional development for teachers and administrators to achieve standards. Measure progress toward growth annually.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Provide on-going and targeted staff development, as well as just-in-time support.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Ensure students have ready access to digital tools needed to achieve learning goals. Purchase and integrate applications for identified purposes in curriculum to meet technology and content area standards with clear expectations for use that considers impact over time. Prioritization is given to core content, then to intervention and then to enrichment.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Identify where significant and authentic tech integration could be embedded in curriculum to achieve goals. Design and redesign curriculum, projects, and units where necessary to ensure students are able to take advantage of digital tools and resources in ways that were previously impossible. Develop and embed assessments and new tools to measure progress toward expectations.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Purchase and integrate applications for identified purposes in curriculum to meet technology and content area standards with clear expectations for use that considers impact over time. Prioritization is given to core content, then to intervention and then to enrichment.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

10

Core Value: Equity (continued)

Efforts ensure that initiatives support the diverse and particular needs of different students, staff members, classrooms, and buildings in an equitable way.

Strategies for closing the gap between our current reality and our vision

Ensure access to tools that remove barriers and provide access for students to meet learning goals and targets. Improve understanding of the use of assistive technologies for special populations as well as all students.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Special ed devices	$160,000	$40,000	$40,000	$40,000	$40,000
Adaptive tools to meet needs and provide access for special populations	$240,000	$50,000	$60,000	$60,000	$70,000
Assistive technology (leadership and coordination 0.5 FTE)	$280,000	$70,000	$70,000	$70,000	$70,000

Bring improvements from new construction for standardized classroom set up to classrooms across the district in the most cost effective way possible when improvements are shown to support improved student experience and functionality of classroom.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Classroom A/V interface and amplification (reduced price solution that is not integrated – amplification and projection separate)	$600,000	$150,000	$150,000	$150,000	$150,000

Core Value: Sustainability

Technology decisions are made considering identified aspects of sustainability and align to district goals and priorities.

What does Sustainability look like in our strategic technology plan?

Processes are streamlined, impacts are evaluated, cost-saving and waste-reducing strategies are employed, and continued investments in infrastructure, support, and human resources are made to ensure our program and goals are sustainable and supportable.

From our model:

- Student learning, high-quality curriculum, best practices, and the efficient, effective operations of the district drive investment decisions.
- New investment factors include impact on learning, cost, life cycle, training needs, potential scaling, anticipated level of use, anticipated impact on tech operations, and compatibility/viability with existing structures and systems. Efforts to ensure smooth transitions from one technology to another are considered.
- Infrastructure anticipates and supports projected needs.
- Tools and experiences maximizing student outcomes are prioritized and then periodically evaluated to ensure return on investment continues.
- Decisions consider on-going and new funding to ensure maintenance of existing equipment, refresh cycles, etc. and still allow for new projects, research, and development.
- Decisions are fiscally responsible and reflect the values and beliefs of the community.
- Options with the least impact on the environment are prioritized when possible.
- Structures and processes allow for flexibility and adaptation as technology changes to meet emerging needs.
- Effective collaboration between Tech Operations, Teaching and Learning, and Educational Leadership Team ensure core values drive decision making.

What is our current reality? (Oct 2019)

Infrastructure, Storage and Internet Bandwidth

- Network Infrastructure: 802.11N wireless access point (WAP) in every classroom and most common areas still provide adequate access for most uses. (TSHS has 802.11AC WAPs.) Most WAPs are 6 years old. Most network switches are 5 years old.
- Data Centers: We currently have two data centers for improved failover and access to services in case one becomes unavailable. Internet access is served through one data center.
- Maple View servers and storage are 5 years old and will no longer be supported by the manufacturer next year. The Maple View UPS system will not be supported by the manufacturer for much longer.
- Internet Bandwidth: The district has two ISPs. We currently use 200Mbps and 2000 Mbps bandwidth. We can increase our usage up to 1000 Mbps and 10,000 Mbps in the future. Our bandwidth is sufficient to meet our needs.

Data / Network Security

- Security has become a focus as school districts are increasingly targeted. More resources need to be leveraged to ensure data protection and integrity.

Device Refresh

- Most devices are older than their originally defined refresh cycle. These devices are slower, affecting productivity, and break down at a higher rate, increasing the number of service requests and repair cost. (See chart on next page.)

Core Value: Sustainability (continued)

Technology decisions are made considering identified aspects of sustainability and align to district goals and priorities.

Device Type and Age	Purchase 2014	Purchase 2015	Purchase 2016
	5 yrs old	4 yrs old	3 yrs old
Student laptop	1616	543	295
Student Chromebook	1883	70	1158
Staff laptop	284	319	98
Staff desktop	30	75	126
* Numbers do not include 500+ classroom presentation laptops which are past refresh date by multiple years (6+ yrs old)			

Printing
- Devices can print to copiers and network printers at each building. There are a number of local printers used for confidential printing. Network printers are on a Managed Print Service contract to manage toner and repairs. Statistics show that we print too much and that there is too much supply waste impacting both fiscal and environmental sustainability.

Classroom Projection
- Most classrooms have interactive projectors with bright displays connected to both a document camera and a presentation laptop. Some classrooms are still functioning without interactivity or are using technology that is 7 or more years old. Many of these projectors are no longer bright enough and look washed out. Wireless projection is not widely used and is not commercial grade where it is used. Most projectors are not connected to the network and not managed.

Physical Security
- After the summer of 2019, all buildings will have access control on outside doors and video surveillance to improve physical security.

Phones and Intercoms
- Phone System: IP phones are in every classroom and other appropriate locations. USB phones are used in most offices.
- Intercom: Most school intercoms were installed at the time of construction or major remodel .These intercom systems are failing more regularly and parts are getting difficult to find.

Support/Personnel
- Tech Operations Staffing: 13.3 people support 9398 devices, 500 classrooms, and 11 sites. Currently, additional desktop support is not needed, but system engineer support is inadequate to meet our needs.
- We use a help desk model to facilitate staff and student support and work orders. Current tool used to track this work is outdated and doesn't allow us some operability that would improve work order details, requestors' ability to see status and provided more accurate reporting.

What this plan wants to do

Sustainability is a core value in our technology model. The best ideas, innovative plans, and key improvements are only viable if they are sustainable. To ensure sustainability, we must carefully consider financial as well as other impacts to our system. Though we may start with *Can we afford it?,* we will ask ourselves other important questions connected to a project/purchase/initiative's impact on our system, such as *Can we maintain and sustain it over time/long enough to meet our goals? What other costs might we incur? What do we imagine the impacts will be if we realize the full potential? What are the unintended impacts on other priorities in our system? What are the impacts on the environment? Can the system bear and thrive under the addition of this project/purchase/initiative?*

Core Value: Sustainability (continued)

Technology decisions are made considering identified aspects of sustainability and align to district goals and priorities.

Strategies for closing the gap between our current reality and our vision

Establish key performance indicators aligned to outcomes identified in the Technology Strategic Plan and monitor annually. Evaluate impacts to inform updates and revisions to the plan, inform annual work plans and spending decisions, and communicate to staff and community.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Program Evaluation – consulting	$10,000	$5,000		$5,000	
Database administrator / data analyst – increase time to support increased student information management, analysis, enterprise data management	$200,000	$50,000	$50,000	$50,000	$50,000
Levy Issuance Election Costs – continuation of tech investment	$110,000				$110,000

Ensure security of the network and staff and student data with increased security threats to school districts, with esources leveraged to ensure data protection and integrity.

	Plan Total	Year 1	Year 2	Year 3	Year 4
System Engineer – security emphasis	$550,000	$130,000	$140,000	$140,000	$140,000
Network security software	$400,000	$100,000	$100,000	$100,000	$100,000

Continue staffing levels, training to keep skills current, and consulting time (as needed), allowing technology operations staff to provide system support.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Technology Operations salaries and benefits	$840,000	$200,000	$210,000	$210,000	$220,000
System Engineer training	$40,000	$10,000	$10,000	$10,000	$10,000
Consultant time as needed for back-end upgrade projects	$120,000	$30,000	$30,000	$30,000	$30,000

Stop-loss encourages and incentivizes staff and students to take extra care of devices to ensure longevity and use.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Stop-loss	$80,000	$20,000	$20,000	$20,000	$20,000

Core Value: Sustainability (continued)

Efforts ensure that initiatives support the diverse/particular needs of different students, staff members, classrooms, and buildings in an equitable way.

Strategies for closing the gap between our current reality and our vision

Implement appropriate refresh cycles for all equipment and software to ensure a well functioning, sustainable environment for tools and devices for efficient and effective operation of the district.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Network switches	$500,000			$500,000	
Wireless – all schools except TH	$200,000		$200,000		
Intercom systems refresh ($75,000/school except LW, TH, CR)	$460,000		$230,000	$230,000	
Refresh internet router / firewall	$90,000	$90,000			
Add router and firewall at TSHS Data center for redundancy	$90,000	$90,000			
Server and storage refresh - TSHS data center	$300,000				$300,000
Radio communications replacement	$200,000			$200,000	
Microsoft School Agreement: Windows, Office, network client	$400,000	$100,000	$100,000	$100,000	$100,000
Safety and Security - access control and video surveillance updates	$100,000	$25,000	$25,000	$25,000	$25,000
External monitor in classroom	$30,000	$30,000			
Phones	$90,000		$30,000	$30,000	$30,000
Bulbs and batteries	$20,000	$5,000	$5,000	$5,000	$5,000
Refresh student iPads	$320,000	$80,000	$80,000	$80,000	$80,000
Staff devices refresh	$620,000	$180,000	$240,000	$160,000	$40,000
Staff tablet device for identified needs	$20,000	$20,000			
Document camera refresh	$20,000	$5,000	$5,000	$5,000	$5,000
Projector refresh	$40,000	$10,000	$10,000	$10,000	$10,000
Managed print service	$60,000	$15,000	$15,000	$15,000	$15,000

Contingency allows for an unforeseen event, circumstance, or need emerging that we have not factored into the 4-Year plan (2% overall)

	Plan Total	Year 1	Year 2	Year 3	Year 4
Contingency	$400,000	$100,000	$100,000	$100,000	$100,000

Core Value: Access

Students and staff have the tools, skills, and opportunities to leverage technology to improve learning and productivity.

What does Access look like in our strategic technology plan?

All students and staff have and use the age/context-appropriate device(s) and tools necessary to support Empowered Learning, develop and reflect on the Future Ready Skills, and build their Future Ready Plan. At the heart, we want all students to seamlessly and effectively select appropriate and necessary digital tools and use those tools to leverage learning and growth both at school and at home. Secondary students must have the tools and access (internet and curriculum resources) needed at home to work at learning, explore interests, complete tasks, thus closing the homework gap. Infrastructure and devices are maintained and refreshed according to industry standards. Systems and strategies provide easy and ready access to digital tools for students and staff.

From our model:

- Students and staff have available, and use, the devices, software, and tools best suited for the task.
- Students and staff have access to devices, the internet, and digital learning resources at and away from school, allowing for real-time teaching and learning.
- Systems and structures are implemented to support student learning as well as communication with students and parents.

What is our current reality? (Oct 2019)

Curriculum and Instruction (gap closing addressed in Empowered Learning)

- Inadequate access and training to ensure ease of use has resulted in inequitable availability of technology devices across content areas and uneven integration in core curriculum.

Professional Development

- Current practices typically isolate technology professional development from regular and ongoing professional development (PD) addressing district and building goals, initiatives, etc.
- In nearly every case, technology-related PD is invitational and voluntary. In some cases, PD may involve sub-release time, but is still invitational, not required. As a result, we have many staff members who take advantage of these opportunities and many who don't, creating a widening gap between those who have the skills necessary to leverage technology for empowered teaching, learning, and working and those who don't. (Also an equity issue.)
- Current instructional technology coaching and support (1.5 FTE) for staff and students is inadequate to support aspirations and goals for empowered learning and teaching.
- Competing initiatives and competing demands on PD time (2 days/Aug + 15 Fri Early Release days/year) have limited our ability to make significant progress on increasing knowledge and skill level of all staff with technology. Sub release has been used for small groups (~15/day) over time. Limitations on number of times we want teachers out of the classroom as well as limited sub availability does not make this a scalable solution. State apportionment has not invested in increasing the professional learning time for teachers.

Student Access Away from School

- Most secondary students have devices available to use at home, though in many families, the device is a shared one, so students may have to wait to do homework, have only limited time to use the device, or resort to using their phone.
- A small percentage (less than 10%) of secondary students do not have internet access at home.
- Lack of consistent and reliable access at home results in a homework gap for many of our students.

Core Value: Access (continued)

Students and staff have the tools, skills, and opportunities to leverage technology to improve learning and productivity.

What this plan wants to do

Students and staff must have ready access to the tools and experiences necessary to leverage technology in ways that truly improve learning and productivity if we are to realize our Tahoma vision for powerful learning and teaching as well as smart, sustainable business practices. This means that students and staff have available, and use, the devices, software, and tools best suited for different tasks. Students and staff must have access to devices, the internet, and digital learning resources at and away from school, allowing for real-time teaching and learning. Systems and structures must be implemented to support student learning and effective communication with students and parents.

Staff and students must have the digital fluency, literacy and citizenship skills to safely and successfully use technology, access resources, and engage others. With the level of digital access necessary to access and complete schoolwork in middle and high school, all students must have access needed at home to work at learning, explore interests, and complete homework tasks.

Teachers must be enabled with easy to use tools and training on best practices to communicate classroom expectations, learning goals, assignments, progress, grades, etc. with parents and students.

Strategies for closing the gap between our current reality and our vision

Establish proficiency standards for teachers, coaches, and administrators based on ISTE and State technology standards. Provide differentiated professional development for teachers and administrators to achieve standards. Measure progress toward growth annually.					
	Levy Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Ensure students have ready access to digital tools needed to achieve learning goals. Purchase and integrate applications for identified purposes in curriculum to meet technology and content area standards with clear expectations for use that considers impact over time. Prioritization is given to core content, then to intervention, and then to enrichment.					
	Levy Total	Year 1	Year 2	Year 3	Year 4
Reflected in Empowered Learning					

Ensure access to tools that remove barriers and provide access for students to meet learning goals and targets. Improve understanding and use of assistive technologies for special populations as well as all students.					
	Levy Total	Year 1	Year 2	Year 3	Year 4
Reflected in Equity					

Core Value: Access (continued)

Students and staff have the tools, skills, and opportunities to leverage technology to improve learning and productivity.

Strategies for closing the gap between our current reality and our vision

Provide safe and effective access to content and communications through the internet for students and staff.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Content filtering	$100,000	$25,000	$25,000	$25,000	$25,000
Skype for Business	$40,000	$10,000	$10,000	$10,000	$10,000
Additional hardware	$40,000	$10,000	$10,000	$10,000	$10,000
Internet access (Internet Service Provider costs)	$120,000	$30,000	$30,000	$30,000	$30,000
Classroom Collaboration and Communications - Conference Cameras and microphone systems	$20,000		$10,000		$10,000

To increase the number of computers to meet increased needs for access for students, our primary strategy is 1:1 in classrooms, allowing us to put the right device for the right purpose in place across the system. Ensure equitable access to devices from projected student enrollment growth and resulting staff increases.
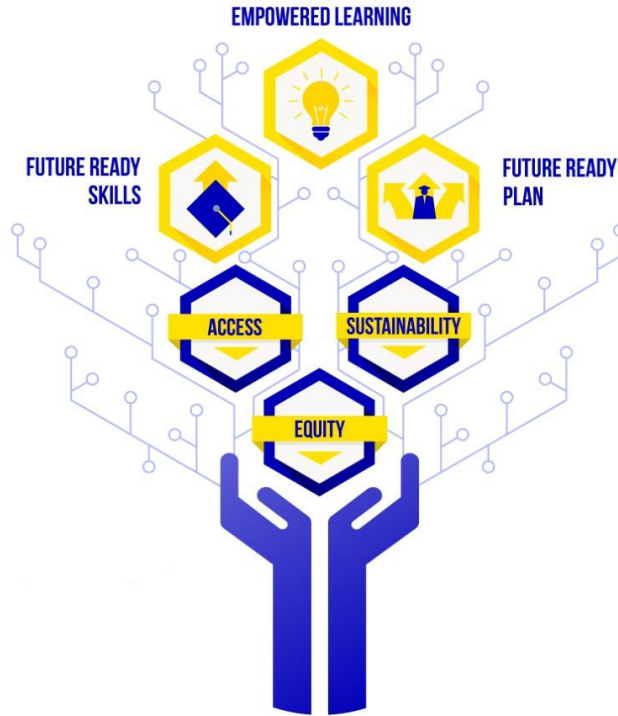
	Plan Total	Year 1	Year 2	Year 3	Year 4
Additional carts	$160,000	$60,000	$50,000	$30,000	$20,000
Additional student devices for enrollment growth	$200,000	$50,000	$50,000	$50,000	$50,000
Additional classrooms for enrollment growth	$60,000	$15,000	$15,000	$15,000	$15,000
Additional certificated staff for enrollment growth	$12,000	$3,000	$3,000	$3,000	$3,000

Using a classroom 1:1 model at secondary, provide loaner devices for students who do not have access at home. Problem-solve solutions for students who do not have internet access at home and work with community organizations and businesses to provide guest wireless access to our students.

	Plan Total	Year 1	Year 2	Year 3	Year 4
Hot spot students w/out home internet access	$120,000	$30,000	$30,000	$30,000	$30,000
Student device loaners - take home (13.4% of student F&R lunch)	$245,000	$230,000	$5,000	$5,000	$5,000

Tahoma School District

Together, provide the tools and experiences every student needs to create
an individual, viable, and valued path to lifelong personal success

Overview of Tahoma Technology Plan Investment

	Plan Total	Year 1 2020-2021	Year 2 2021-2022	Year 3 2022-2023	Year 4 2023-2024
Empowered Learning	$10,150,000	$2,880,000	$2,750,000	$2,330,000	$2,190,000
Future Ready Skills	$330,000	75,000	$95,000	$75,000	$85,000
Future Ready Plan	$425,000	$100,000	$105,000	$105,000	$115,000
Equity	$1,280,000	$310,000	$320,000	$320,000	$330,000
Sustainability	$6,310,000	$1,295,000	$1,600,000	$2,025,000	$1,390,000
Access	$1,117,000	$463,000	$238,000	$208,000	$208,000
Total	**$19,612,000***	**$5,123,000**	**$5,108,000**	**$5,063,000**	**$4,318,000**

Note: While we have broken things out by Essential Outcomes and Core Values to make it easier to summarize and see the overview at a glance, there is substantial overlap between and across the outcomes and values.

*In order to reduce the levy ask by nearly 3 million dollars, the cost of refreshing our oldest computers ($2,527,000) and increasing student devices in the most needed areas ($286,000) was moved to general fund reserves. The remaining $16.8 million is funded through technology levy dollars.