Portland Public Schools
Technology Plan
2012-2015

Enhancing teaching and learning through service, innovation and partnerships.

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Executive Summary

The Portland Public Schools (PPS) Technology Plan outlines the multi-year strategic goals for technology in Oregon's largest school district, enrolling approximately 47,000 students. This plan presents a vision, and serves as a blueprint, for use of technology to help fulfill the mission adopted by the PPS Board of Education, which is to support all students in achieving their very highest educational and personal potential, to inspire in them an enduring love for learning, and to prepare them to contribute as citizens of a diverse, multicultural, and international community. By articulating a clear vision for technology integration that is shared across the district, the plan will promote greater understanding and stronger partnerships among all of the groups with a stake in PK-12 educational excellence: teachers, students, parents, administrators, civic organizations, higher education, and the business community. The results will include expanded use of technology resources to support data driven decision-making, communication and collaboration, more equitable access.

The PPS Technology Plan supports the District's Milestones Framework (Attachment: A) by focusing on what is required to support rigorous PK-12 curriculum and instruction, effective and efficient school and district operations, and a robust technology infrastructure. Furthermore, we believe the plan will propel PPS into the forefront of technology-applied educational governance and decision making.

As a responsible and innovative leader in providing quality educational services to a diverse community, and to prepare our students for success in the 21st century, PPS must become more proficient in the use of technology as a tool to support our mission and strategic goals. PPS must be proactive in planning technology integration, in securing the broad-based support necessary to implement the plan successfully, and in monitoring and evaluating its outcomes. The goal for PPS is to increase the number of students and staff who have a sound understanding of and ability to use technology effectively and efficiently in order to: communicate and collaborate; demonstrate new ideas, knowledge, and skills by producing high-quality products; and conduct research, make decisions, and solve problems. PPS graduates must understand technology applications and technical terms. PPS graduates must know how to use technology tools and apply them to solve problems in authentic, real-world contexts. Finally, PPS must prepare students to become life-long learners who can readily adapt to an increasingly sophisticated global economy.

Equity of access and opportunity is one of the guiding values of both the PPS Milestones Framework and the Technology Plan. Technology is an important equalizer: It is by nature non-discriminating to end users and offers unlimited access to vast amounts of information. Conditions or circumstances that might otherwise limit access to learning can be offset, in many cases, by the appropriate application of technology. Technology is thus recognized by PPS as an essential tool in closing achievement gaps and accelerating learning for a large student enrollment from diverse backgrounds and circumstances.

Over the years the Internet has increasingly influenced the way people communicate, work, and collaborate. Advances in the emerging technologies will continue to have a

profound effect on occupational and leisure activities in our society and on educational institutions in particular. To graduate students with the skills needed for future careers and informed decision making, PPS must keep pace by planning for use of new and emerging technologies and – equally important – must provide the infrastructure, professional development, and resources to support these technologies.

Alignment of Technology Plan Goals

The 2012-2015 Strategic Plan organizes district work and continuous improvement planning around the Milestones Framework Priority Action Areas: (1) Effective Educators, (2) Rigorous, Relevant Programs for All, (3) Collaboration with Families and Communities, (4) Individual Student Supports, with the focal point being "Every student succeeds, regardless of race or class. This plan outlines a set of goals and major activities that align with each of these key work areas.

Technology Budget Strategies

PPS is committed to a long-term funding solution that provides students, teachers, and administrators with appropriate technology to support high-quality learning and efforts to accelerate the learning of all students. Financial uncertainties pose an enormous challenge in planning for technology acquisition, deployment, support, and professional development. Provisions of the No Child Left Behind (NCLB) Act and corresponding federal and state accountability standards are increasing the demands on district technology resources. The district's unwavering commitment to address technology equity issues for students and schools culminated with a capital funding effort in 2009. This effort helped upgrade essential instructional technology in many of our high needs schools enabling teachers in those environments to better access and delivers core components of curriculum adoptions and leverage digitally rich supplemental resources to more effectively engage students and differentiate learning. This effort also established a strong foundation for the Ed Box (Attachment B) which will ultimately translate to a web-centric environment to support many of the teaching, learning, grading, assessing, reporting, communication and collaboration. This strategy is foundational as we seek to propel PPS into the 21st century and meet the needs of all learners.

Monitoring and Evaluation

The district's progress in meeting the goals outlined in the Technology Plan will be monitored against a set of clearly defined benchmarks, and aligned with the PPS Milestones Framework and other district strategic and continuous improvement planning efforts. The PPS Office of Information Technology conducts regular assessments of the technology infrastructure (telecommunications services, hardware, software, and other resources). The Office of Information Technology has a number of mechanisms for

communicating and consulting with key stakeholders. ITEC, The PPS Information Technology Executive Committee (Attachment C) is a supervisory and advisory committee responsible for the planning, budgeting, prioritizing and governance of certain Information Technology projects and initiatives as they support the District's Educational Milestones and vision of modernizing schools. The Ed Box steering committee consisting of cross functional team of technical, operational, and instructional leadership and frequently provides insights and direction on projects, initiatives, and strategic direction. The Office of Information Technology has also established a Portland Association of Principals and School Administrators Information Technology advisory committee (PAPSA IT) and coordinates regularly with leadership from the Office of Teaching and Learning, the Superintendent's Leadership Team. Each of these groups within our organization play a unique role but in concert with each other provide us a lens into priorities and a voice in how technology strategies, processes and solutions can enhance teaching and learning.

Introduction/Rationale

Portland Public Schools is Oregon's largest urban school district, serving approximately 47,000 students from pre-kindergarten through grade 12. The district operates more than 100 schools and programs over a 152-square-mile enrollment area and employs over 6,500 personnel. The district's mission, adopted by the PPS Board of Education in 2011, is to support all students in achieving their very highest educational and personal potential, to inspire in them an enduring love for learning, and to prepare them to contribute as citizens of a diverse, multicultural, and international community. "Rigor, equity, personal attention" is the new Strategic Plan approved for 2012-2015 by the PPS Board of Education. Teachers, principals, support staff, students, school board members, parents, union representatives, and community/business representatives were all involved in developing the plan, which sets forth the following district goal: "By the end of elementary, middle, and high school: Every student by name meets or exceeds academic standards, and is fully prepared to make productive life decisions."

Information literacy and the ability to use technology are critical to the academic success of all students in the 21st century. Aligning PPS Technology Plan goals with the PPS Milestones Framework will help ensure that appropriate technologies are: a) accessible to all staff and students; b) integrated into PK-12 curriculum, classroom instruction, and assessment practices across the district; and c) understood and supported by teachers, administrators, families, and community partners. The Technology Plan will guide district-wide efforts to ensure students and staff has equitable access to technology and will compliment parallel efforts in the curriculum and instruction to ensure all students have the essential digital literacies and can effectively make good decisions with and about technology.

The PPS Information Technology Department works to help all of the stakeholders understand that technology is a critical tool in raising student achievement and in improving all aspects of curriculum development and instructional delivery. The Ed Box is a case study in collaboration and provides an exemplar for how IT can be a strategic partner and contribute to efforts ensuring that technology is effectively integrated into the PK-12 curriculum and continuous improvement practices.

National Standards

In *National Technology Standards for Students: Connecting Curriculum and Technology,* the U.S. Department of Education and International Society for Technology in Education (ISTE) describe the following "essential conditions" that are required to create learning environments conducive to powerful use of technology(Attachment D):

- Shared Vision Proactive -
- Implementation planning -
- Consistent and Adequate Funding -
- Equitable Access -

- Skilled Personnel -
- Ongoing Professional Learning -
- Technical Support -
- Curriculum Framework -
- Student-Centered Learning -
- Assessment and Evaluation -
- Engaged Communities -
- Support Policies -
- Supportive External Context -

State Standards

The Oregon Department of Education has also adopted the Oregon Educational Technology Standards (Attachment E) that provide districts with a compass from which to guide decision-making and core curriculum integration strategies.

1. Creativity and Innovation

2. Communication and Collaboration

3. Research and Information Fluency

4. Critical Thinking, Problem Solving and Decision Making

5. Digital Citizenship

6. Technology Operations and Concepts

Essential Skills for Students

In June of 2011 ODE adopted new graduation requirements that are designed to better prepare each student for success in college, work, and citizenship. These "essential skills" are what Oregon students will need to successfully complete the credit requirements, demonstrate proficiency, and meet the personalized learning requirements. Item # 6 from this document (http://www.ode.state.or.us/teachlearn/certificates/diploma/essential-skills-definitions.pdf) states "Use Technology to learn, live and work". This skill includes all of the following:
- Use creativity and innovation to generate ideas, products, or processes using current technology.
- Use technology to participate in a broader community through networking, collaboration and learning.
- Recognize and practice legal and responsible behavior in the use and access of information and technology.
- Use technology as a tool to access, research, manage, integrate, and communicate ideas and information.

PPS Instructional Technology Standards

The PPS Office of Information Technology in collaboration with our Teaching and Learning staff will establish and advisory committee to revisit and align the standards with the key projects and initiatives currently underway across the District.   This committee will consist of teachers, administrators, technology specialists, and other district staff who are linked to our instructional priorities and technical initiatives. The resulting PPS Student Education Technology Standards (Attachment F) aligned to the "refreshed" NETS will be recommended for district adoption and support, and do represent a foundational element of this PPS Technology Plan. Long-term, PPS should examine the National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers (Attachment G) describing the essential skills and knowledge teachers need to help their students achieve a high level of proficiency in the use and application of technology.

Innovation and Partnership

Portland Public Schools will select technology and resources to advance instructional goals. As a teaching tool, technology should be implemented only where it supports our academic objectives. As previously described, PPS has drafted standards for students that are based on the NETS and designed to support district curriculum and state standards and benchmarks for all content areas (e.g., English/language arts, mathematics, science, social sciences, the arts, second/world languages).

Online Teacher/Student Resources

By providing better access to data and training, PPS can provide teachers and administrators with the necessary scaffolding for employing technology to support instructional goals. Technical systems and resources include:

- IT provides necessary infrastructure and bandwidth to ensure resources such as; Discovery Streaming, Learn360, and the numerous web-based resources that have accompanied curriculum adoptions.
- The Portland Learning Campus is our e-learning platform that provides "anytime/ anywhere" training on existing and emerging technologies. The campus is also used to manage almost all instructor-lead training provided by our schools and departments.
- Web Publishing and portal resources provide opportunities for role-based communication and collaboration, allowing users to publish information to the web and supports the vision for a distributed model for web authorship.
- EdBox and the associated solutions that come with that initiative will be the link to all of the district's curriculum area websites, which provide resources such as lesson plans, scored student work samples, professional development information, recommended books and articles, and various online resources.

Student Assessment and Tracking

Technology in PPS supports assessment and tracking of student progress in meeting the content standards and performance benchmarks required to earn a diploma. The PPS Technology Plan will also support assessment and tracking of student progress in meeting national and district technology standards. IT continues to take a leadership role in this space as adaptive and assessment technology matures and more web-based solutions are adopted by Teaching and Learning. District resources include:

- The web-based electronic student information system allows access to real-time student data, an essential element for individualizing instruction.
- Use of a variety of server and web-based formative assessment tools to inform instruction at the classroom level.
- Use of ODE OAKS and English Language Proficiency Assessment (ELPA) testing
- PPS Data Warehouse is a regional initiative to aggregate relevant student data and provide key stakeholder with real time access via a dashboard..

Student and Community Linkages

Effective communication with all of the community's stakeholders (students, families, school board members, employers, and civic leaders) is necessary to meet the district's student achievement goals and support continuous improvement efforts. Technology resources to improve communication to students, families, and the community include:

- Web-based content management system and portal will keep parents abreast of new developments and provide a place for their feedback.
- Greater access to e-mail via a web-based email solution for our community of learners, as well as for educators.
- Web-based collaboration tools for all stakeholders.
- EdBox Viewer (Gradebook) web portal to provide parents/guardians with access to information on student progress.

For a technology-supported education model to function effectively, academic standards and instructional objectives must be clear and rigorous, assessments must be linked to these standards and objectives, and schools must teach a curriculum that embeds the standards. Teachers must have resources to improve classroom instruction using technology and electronic communication tools must be in place to support professional learning communities among educators and better dialogue among all of the stakeholders in the community.

PPS Information Technology Mission, Vision, and Organizational Structure

The following page summarizes the PPS Office of Information Technology mission, vision, and values. The adopted mission "We enhance teaching and learning through service, innovation and partnerships".

To achieve this mission, it is essential we establish and embrace high expectations of ourselves as professional educators, and continue to find and develop innovative and effective ways of motivating and teaching students. Our current information-oriented society no longer provides us with the luxury of viewing technological competence as an optional skill, and any person involved in the education of students in PPS should be knowledgeable and skilled at using technology as a tool for instruction, learning, and management.

PPS IT R.E.P.S.…

- Reliable – Exceed customer expectations
- Ethical – Act openly, honestly, and with integrity
- Progressive – Lead and innovate to meet the evolving district needs
- Strategic – Align technology with educational goals

Mission

We enhance teaching and learning through service, innovation and partnerships.

Vision

We will provide a proven portfolio of solutions and services benefitting the PPS community.

Values

PPS IT *R.E.P.S.…*

- Reliable – Exceed customer expectations
- Ethical – Act openly, honestly, and with integrity
- Progressive – Lead and innovate to meet the evolving district needs
- Strategic – Align technology with educational goals

Overview of PPS Information Technology Infrastructure

Infrastructure/Hardware Deployment – Data Network

Portland Public Schools operates more than 90 schools and the Blanchard Education Service Center (BESC) central administration building. All locations connect to a Metro Area Fiber Optic. Every classroom has at least one data outlet that can also be used for in and out phone service. Most offices have multiple data and phone outlets. The data network consists of high-speed routers at every location that is used to connect the site to the Fiber Ring. A combination of switches within each building is used to interconnect each classroom and office. As a result of a bond measure approved by Portland voters, Grants awarded by MHCRC, and Erate Funding; between 2007 and 2009, Cisco routers and switches were installed to replace devices that were out of support and needed updating.

All Schools and the BESC are connected by a fiber ring as part of INET telecommunications efforts. The current bandwidth configured on this network is 400 megabits to the schools and 1 gig to the BESC. At all schools each network segment is connected to the routers with high-speed switches. The interconnection between router and switch is a 1 gigabit connection, and the switches provide 100 megabit connections to the desktop. The Data Center is connected to the internet with redundant paths provided by Integra directly out of the BESC and fiber that runs from the Data Center to the Pittock Internet Exchange where we connect to CTA (Cascade Technology Alliance).

Infrastructure/Hardware Deployment – Voice Network / Unified Communications / Mobility

The PPS Unified Communications network includes various elements of Cisco Voip solution in the Data Center and at all schools. The District leverages Emergency Responder for 911 accuracy, Informacast for broadcast messaging and paging, and Unity Connections for VoiceMail. All classrooms have in and out phone service with time of day call routing to ensure class is not interrupted. PPS has identified Unified Communications and Mobility as a priority for 2011 and beyond.

Infrastructure/Hardware Deployment – Wireless Network / Mobility / UC

The PPS Wireless network consists of 2500+ Cisco Wireless Access Point at 95+ locations. The District has achieved a 90% wireless footprint at each of its School locations. This wireless coverage provides a ubiquitous wireless network that provides easy network access for Students and Staff.

Infrastructure/Hardware Deployment – Desktop Equipment

The district uses a mixture of Apple and PC-compatible computers. PCs account for approximately 75% of all computers in the district, including laptops and desktops.

Many elementary school environments are primarily Apple, although some schools are migrating to PCs as new acquisitions and refresh opportunities arise. Our middle schools are mixed environments, but with the migration to a Novel-managed desktop solution our middle schools are about 80% PC. Most high schools use PCs, except for desktop publishing and multimedia instruction, where Macintosh computers are the tool of choice.

Infrastructure/Hardware Deployment – Operations Center

The PPS Data Center is housed at the BESC, where it shares space with Information Technology support units. The Data Center contains phone equipment, network equipment, and application servers. It is protected by air conditioning, fire-proofing, a battery-uninterruptible power supply, and a back-up generator. All racks and equipment is earthquake secured. A monitoring system provides rapid notification of abnormal environmental conditions. The room housing the Data Center has a raised floor and combination-locked doors for limited secure access. The disaster recovery component and plan are in line with public sector data center and are considered a model by which other educational entities can point to as best in class.

Infrastructure/Hardware Deployment – Servers

Our enterprise servers consist primarily of Hewlett-Packard hardware and are located in the Data Center along with a number of ancillary web, file, print, and network management servers.   Currently, over 160 servers are supported locally and remotely across the PPS network. In the past two years, IT has embarked on an effort to transition a significant number of servers to a virtual solution. This consolidation has significantly reduced our current hardware footprint with close to 280 virtual servers now online. Efficiencies in this space reduce the total cost of ownership of associated hardware and enterprise application services and the "greening" of a data center that now uses significantly less energy to maintain the similar volume of services. The majority of storage has been moved from direct attached arrays to and EMC storage environment.

Application Deployment – Web Applications

The district maintains a content management system that all PPS web content is managed with. This solution supports a distributed authorship approach allowing departments, schools, and teachers to create and maintain their respective web presence. As PPS looks to the future role-based content and portal-based technology is currently being developed. This will enable the end user to personalize the PPS experience and for the District to deliver role-based content and users to subscribe to content.

Application Deployment – E-mail

PPS migrated all mail over Microsoft Live@edu representing a thematic effort across IT to move to a cloud based strategy. This done in conjunction with a migration to Active Directory will be woven into a broader unified communications framework and expand voice, messaging, video, and mobility into a single "presence".

Application Deployment – Student Information Systems

PPS is in a transition period with student information system with the Pearson acquisition of AAL our current student information system provided. A state RFP has resulted in the selection of Edupoint, thought the transition to that platform would not occur until the 2013 school year at the earliest. As this technology and solution providers evolve opportunities may arise in the 2012-2013 School that we have not anticipated.

Support/Maintenance Structure – Infrastructure Maintenance

The network infrastructure is monitored and maintained by the Information Technology Technical Operations group. The network combines leased and purchased components with vendor service agreements as well as staff that perform a variety of monitoring tasks and activities to ensure the ongoing integrity of the applications and services provided by IT.

Support/Maintenance Structure – Desktop Operating System   and Application Support

PPS Information Technology maintains a comprehensive service desk tasked with supporting almost all building based technology and resources.   The underlying support philosophy is anchored in the standards set forth by the Information Technology Infrastructure Library (ITIL) and is a set of concepts and policies for managing information technology (IT) infrastructure, development and operations. The IT service desk is the single contact point for our customers to surface their problems. Our service desk is then responsible for resolution and escalation as needed.   A comprehensive tracking system documents these events and all information is captured in a data base for easy reference and tracking.

Application Services

The PPS Application Services group is responsible for the implementation and maintenance of the district's support service systems and proprietary application development initiatives. These consist of a number of enterprise systems as well as numerous department-centric solutions used by a small sub-set of users. When possible cloud-based solutions are encouraged and the opportunities in that space continue to evolve. This group is also instrumental in supporting the evolution of our

web presence and will be expanding capacity in staff to execute more .net programming contribute to the implementation of SharePoint.

PPS Enterprise Needs, Priorities:

- Moving to take advantage of mature Enterprise Resource Planning systems (i.e., employee self-service, online time and labor, and eventually electronic procurement/supply chain management).
- Accelerating implementation and adoption of portal technology to serve a catalyst to improve communication and collaboration.
- Leveraging portal technologies to support data-driven decision making via tight integration with data warehouse
- Ensure information architecture of content is adaptive and representative of the variety of roles and activities assigned to staff.

PPS Learning Campus – Learning Management System

The PPS Learning Campus is an enterprise Learning Management System (LMS) that provides the district with the ability to manage, deliver, and track training participation in online or traditional instructor-led courses. This system addresses the challenges associated with training a large and widely dispersed workforce. An online system of courses and testing enables staff to learn at their own pace on selected technology applications. The PPS Learning Campus facilitates management of professional development through features such as online course catalogs and new training announcements, registration, testing, training history logs, evaluation survey forms and course completion certificates, and access to Quick Reference Guides for custom PPS courses. This is a vendor hosted service.

Document Management System

PPS has implemented a document management solution in an effort to: address issues related to security, reduce risk of loss, increase accessibility, and reduce access time. The Document Management System (DMS) is a combination of hardware and software that allows for the creation of a electronic version of each document, stored on hardware in the central office and backed up on a nightly basis for disaster recovery in case of damage. The flexibility inherent to this solution supports document scanning, storage, archiving, searching, and retrieval online and on-demand. Access is managed via identification of staff roles and job function, with the capacity to manage data down to the individual document level.

Equity and Access Guidelines

Portland Public Schools is committed to providing equitable and just access to information technology to all students, families, staff, and community members.

Accessibility must be considered when procuring, developing, or implementing information technologies, including web-based information and applications, hardware, software, multimedia, and when designing the environment. District approaches and guidelines for ensuring accessible information technology are described in (Attachment H)

PPS Acceptable Use Policy (Attachment J)

The Children's Internet Protection Act (CIPA), enacted December 21, 2000, requires recipients of federal technology funds to comply with certain Internet filtering and policy requirements. Schools and libraries receiving funds for Internet access and/or internal connection services must also meet the Internet safety policies of the Neighborhood Children's Internet Protection Act (NCIPA) that addresses the broader issues of electronic messaging, disclosure of personal information of minors, and unlawful online activities.

Analysis of the Current Environment for Technology in PPS

Along with other school districts in the region, Portland Public Schools faces a number of challenges in implementing its technology initiatives. Some of the major factors affecting these initiatives are described below:

Nature of Technology

Technology initiatives are typically expensive and often have short life spans. It is not unusual for a new technology to become outdated soon after it is implemented. In some cases, newer versions replace a technology *as* it is being implemented. The ever-changing and evolving nature of current technology is a positive factor because it offers new learning and information management opportunities. It is also a negative factor, however, because it increases costs.

Available Funds

Like other school districts in and around the metropolitan area, Portland Public Schools does not have sufficient funds to address all of its needs. Technology is one among many competing demands on available district funds, including salary equity, increased facilities costs, and priorities for program expansion and innovation. Over the past few years reductions in the number of librarians and media specialists in the schools have encouraged the district to look to information technology for solutions which entail additional costs. These costs are primarily in the domain of professional development on technology integration, but the current support model falls well short of what is needed to effectively train and compensate teachers. Efforts are underway to address this across the organization and as technology becomes more prevalent in our classrooms strategic delivery of support to our instructional staff is of the utmost importance.

Federal e-Rate Funding

PPS IT continues to actively pursue eRate reimbursements, specifically focusing on infrastructure improvements to deliver upgraded in/out phone service to all classrooms via voice over Internet protocol (VOIP) technologies.

Staff Salaries and Retention

Salaries for PPS Information Technology staff have undergone some transformation over the past few years as a result of a joint effort between IT and our Human resources department. Historically, the contrast between public and private sector salary packages made it attractive for key developers and support personnel to leave PPS, given the competitive market for these coveted skill sets. Most salaries in IT are now fairly competitive with public sector entities resulting in more stable pool of staff than we have seen in prior years.   Other factors to consider in attracting and retaining

qualified staff are opportunities for ongoing professional growth and training, and to work with more current technology.

Location

The district's geographic location is both a positive and a negative factor. Close proximity to Portland State University and other colleges/universities provides access to a pool of motivated graduates and job seekers who have needed technology skills and experience. However, the growing number of leading-edge technology companies and employers in the Portland metropolitan area also creates a more competitive hiring environment.

2012-2015 Technology Plan Goals and Strategies

1. Effective Educators

1.1 Enhance Access and use of student systems which facilitate instructional improvement (Grading, assessing, and reporting tools)

Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
1.1a	Implement a web-based interface for viewing student academic, attendance, and graduation information and progress	IT, OTL	IT	2012-2015	
1.1b	Implement an district-wide electronic grade book solution	IT, OTL	IT, OTL	2012-2015	-Gradebook Technical Build -CMS Integration -Usage Data
1.1c	Continue to develop and enhance training opportunities available to staff using key systems	IT,OTL	IT	2012-2015	-PD Offerings data -PD Attendance data -Qualitative session data
1.1d	Develop and implement technology strategies and solutions with an equity lens	IT,OTL	IT, OTL	2012-2015	-Anlysis of technologies and impact of access to resources

1. Effective Educators

1.2 Improve data integration and access to combined data to support instructional focus and school improvement planning (data warehousing)

Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
1.2a	Expand data warehouse solution to additional instructional stakeholders	IT, OTL	IT,OTL	2012-2015	-Qualitative and quantitative analysis of "District" dashboard -Requirements defined for "Teacher" dashboard view -Implementation of "Teacher" dashboard view
1.2b	Develop and implement interagency hosting and partnership agreement for student information system.	IT	IT	2012-2015	-Establish shared services agreement -Implement technical environment

2. Rigorous, Relevant Programs for All					
2.1 Improve student and teacher access to appropriate technology tools which support instructional outcomes (TESA, ELPA, labs, curricular software)					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
2.1a	In collaboration with Office of Teaching and Learning develop requirements for an enterprise instructional management system	IT, OTL	IT	2012-2015	-Project Team Work Plan -RFP Release and Award -IMS Technical Build -IMS Content by Curriculum
2.1b	Continue implementation of technology bundle for PPS classrooms	IT	IT	2012-2015	-Establishment of standardized technology bundle -Deployment of standard bundles to classrooms -Qualitative feedback from teachers and students
2.1c	In collaboration with OTL, implement a digital resource review process	IT, OTL	IT, OTL	2012-2015	-Definition of review process -Implement and communicate review schedule -Analysis of reviewed resources -Establish data base of instructional resources

2012-2015 Technology Plan Goals and Strategies

3. Collaboration with Family & Communities					
3.1 Engage the community and families through use of technology enabled communication tools (Parent viewer, CMS access, and web portal)					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
3.1a	Provide all schools with the support and resources to access parent-centric tools and resources.	IT, OTL	IT	2012-2015	-Parent access data -School participation rates
3.1b	Identification of student information system and implementation of relevant tool and resources in conjunction with that solution.	IT, OTL	IT	2012-2015	-Implementation plan for SIS solution -Pilot project implemented and data analyzed
3.1c	Implement a web-based special education sytem and develop an implementation plan for district-wide access	IT, OTL(SPED)	IT, OTL	2012-2015	-Definition of system requirements -Implementation of web-based SPED management system

3. Collaboration with Family & Communities					
3.2 Leverage business and community partners for joint IT investment which benefits our community (Data network, wireless networks, data center)					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
3.2a	Active development and management of the IRNE county-wide collaborative	IT	IT	2012-2015	-Identification of priorities and implementation of infrastructure upgrades.
3.2b	Continue to leverage Mount Hood Cable Regulatory Commission Community Access Capital Grant Program to fund priority projects and initiatives	IT	IT	2012-2015	-Continued analysis of existing PPS priorities and pursue strategic funding to support those efforts.
3.2c	Provide leadership and direction to state-wide data quality and integration initiatives.	IT,OTL	IT	2012-2015	-Participation data in advisory group -Strategic collaboration with regional and state-wide stakeholders.

4. Individual Student Supports					
4.1 Provide leadership in use of technology to support district objectives, instructional improvement and operational efficiency					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
4.1a	Implement asset management monitoring strategy, gather baseline data from all sites, and generate a district-wide gap analysis.	IT, OTL	IT	2012-2105	-Implementation of a solution that enables real-time data -Development of a proposal that would guide cyclical investments aligned with priorities
4.1b	Develop a student technology procurement strategy in alignment with Teaching and learning goal and priorities	IT	IT	2012-2105	-Long term plan for instructional and assessment technology that would inform infrastructure and student computing investments.

4. Individual Student Supports					
4.1 Provide leadership in use of technology to support student-centric learning and assessment practices					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
4.1b	Establish a process to review, test, and implement innovative tools and resources including mobile and student-centric solutions.	IT,OTL	IT	2012-2105	-Process established and implemented -Documented examples of solutions progressing through the lifecycle to implementation
4.2b	Contribute to conversation around planning for Smarter Balanced Assessment Consortium.	IT,OTL	IT	2012-2105	-Identification of IT dependencies and strategic inclusion in planning framework

FOUNDATIONAL ELEMENTS – SUPPORTING PRIORITY ACTION AREAS

5.Modernize Infrastructure					
5.1 Provide students and staff with access to relevant technologies and resources to support District goals and initiatives					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
5.1a	Leverage VoIP backbone to further evolve IP-based technologies that will enhance teaching, learning, and school-based operations.	IT	IT	2012-2015	-Expansion of broadcast capabilities -Exploration and targeted use of bells, public address, and clocks over IP.
5.1b	Development of a unified communication framework and strategic investments to align and unify current disparate technologies.	IT, FAM	IT, FAM	2012-2015	-Requirements defined for a IP public address solution -RFP released if needed -IP PA implementation data
5.1c	Continue to evolve and grow current school-wide and district-wide wireless network to accommodate the growth of mobile and community based technologies	IT, FAM	IT, FAM	2012-2015	-Analysis of industry standards and development of strategic wireless roadmap capable of supporting current and future mobile computing needs.
5.1c	Continue to expand and evolve the IT Client Advocacy Program (CAP)	IT	IT	2012-2015	-Continued analysis of qualitative and quantitative measures Program proposal for expansion to dedicated CAP staff

2012-2015 Technology Plan Goals and Strategies

5. Modernize Infrastructure					
5.2 Exceed availability, service level and satisfaction targets					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
5.2a	Update all service level agreements	IT	IT	2012-2015	-Analysis of existing service level agreements -Development and implementation of systematic service level update process
5.2b	Meet or exceed service level agreements for all systems and processes	IT	IT	2012-2015	-Establish key performance indicators for IT systems and align to agreed upon service level agreements
5.2c	Develop and deliver customer satisfaction surveys and report out on IT QOS	IT	IT	2012-2015	-Development of IT Staff survey -Development of customer satisfaction survey -Delivery of survey and analysis of data

4. Modernize Infrastructure					
5.3 Provide project leadership to technology supported business process improvement efforts, resulting in completed projects which are on time, within budget and deliver scope					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
5.3a	Continued strengthening and support for IT governance model	IT, FAM, Finance, OTL	IT	2012-2015	-Ongoing Information Technology Advisory Committee (ITEC) -Ongoing consultation and direction from ED Box Steering committee.
5.3b	Implement and apply Project Lifecycle Methodology to all IT mediated projects and initiatives.	IT	IT	2012-2015	-Data relative to project intake and completion mediated via project lifecycle methodology -Establishment and tracking of key performance indicators for all projects

4.Excellence in Operations and Services					
4.4 Continued Focus on reducing cycle time for key processes					
Goals	Activity	Key Stakeholders	Resources	Time Frame	Assessment
4.4a	Identify key IT benchmarks and establish improvement goals, and tracking methodology.	IT	IT	2012-2015	-Service Desk call center data -ITIL standards established and key Service desk data benchmarked against those standards
4.4b	Improve IT order to receipt resolutions for key performance areas	IT	IT	2012-2015	-Baseline indicators established -Key performance levels established and monitored throughout life of plan

5.Continuous Learning Ethic					
5.1 Provide improved access to online and virtual learning tools and resources to enhance management and delivery of professional development					
Goals	Activity	Key Stakeholders	Resource	Time Frame	Assessment
5.1a	Upgrade Portland Learning Campus	IT	IT	2012-2015	-Migration of content from old campus platform to new campus platform -New system brought online and rolled out to all PPS staff
5.1b	Increase the number of staff participating in IT-sponsored training	IT	IT	2012-2015	-Portland Learning Campus registration data disaggregated by curriculum and department
5.1c	Identification of key performance indicators and roll-up of those data to IT KPI framework and analysis of trends	IT	IT	2012-2015	-Portland Learning Campus curriculum manager data capturing session offerings disaggregated by curriculum and department

5.Continuous Learning Ethic					
5.2 Support skill enhancement through expanded opportunities for cross training					
Goals	Activity	Key Stakeholders	Resources & Funding	Time Frame	Assessment
5.2a	Provide IT staff access to online courses to support existing job role or aligned to existing IT systems and groups	IT	IT	2012-2015	-Development of job family profession growth framework -Participation and course evaluation data of all IT participants
5.2b	Provide opportunities for IT staff to apply the skills and knowledge they have gained through professional development and training.	IT	IT	2012-2015	-Staff survey data -Feedback from employee goal setting and evaluation process

Budget Strategies to Acquire and Maintain Components of the PPS Technology Plan

Portland Public Schools is committed to securing a long-term funding solution that will provide students, teachers, and administrators with the technology needed to support high-quality, standards-based learning and to accelerate student achievement. As we move forward in strategizing technology acquisitions and deployments, the current financial uncertainties have numerous implications. Acquisition of needed technology involves more than the initial purchase price: we must also factor in infrastructure implications, ongoing support, and projected upgrade strategies. Ongoing, sustained, and job-embedded professional development is critically important, and appropriate resources need to be dedicated to the use of equipment and software. Equity is another issue that has carried through from the previous technology plan.

Our challenge is to prepare all of our students for life and learning in the 21st century. It is therefore imperative that staff and students have access to the resources that will enable them to acquire the knowledge and skills that research and experience have shown us are necessary for post-secondary success and responsible citizenship. Because of funding issues at the local and state levels, PPS faces an uphill climb in providing needed technology resources. Effective coordination, leadership, and communication among all of the stakeholders at the school, district, and community levels will help address this challenge.

Universal Service Fund (e-Rate)

The Telecommunications Act of 1996 requires the Federal Communications Commission (FCC) and the states to ensure that affordable and high-quality telecommunications services are available to all Americans. Consistent with the congressional mandate, the FCC has set in motion universal service policies that will ensure that all citizens, including low-income consumers and those who live in rural, insular, or high-cost areas, shall have affordable service and will help connect eligible schools, libraries, and health care providers to the global telecommunications network.

PPS will continue to pursue e-Rate funding opportunities as a means to ensure the equitable distribution of technology-related resources. The strategic use of these resources has enabled PPS to make dramatic in-roads in reducing the existing "digital divide" in our district, and these investments at our high-poverty schools have significantly improved the quality of education. We will continue to analyze our poverty data via student free and reduced lunch numbers, and will plan for and prioritize use of e-Rate funds to benefit populations and locations with the highest need for technology resources. Current e-Rate funding is used for:

- Network infrastructure improvements
- Telephone service
- Data connections and 400 Mbps wide area network (WAN) service, as well as improvements in connections/connectivity in the classroom

Monitoring and Evaluation Process

Effective technology planning must include mechanisms for ongoing monitoring and evaluation of the district's progress in reaching clearly defined goals and performance benchmarks. Formative evaluation activities will guide ongoing improvement and fine-tuning of the PPS Technology Plan as it is implemented. Summative evaluation activities will help determine the extent to which the plan has met its targeted goals. This planning and review process for technology integration in PPS will be coordinated with other stakeholders and aligned with the key performance goals identified in the most recent Continuous Improvement Plan (CIP), as well the PPS Strategic Plan.

The district's governance structure includes central offices and oversight committees whose work is aligned to the PPS Strategic Plan. As the goals and strategies outlined in the Technology Plan are implemented, key progress monitoring and evaluation data will be reported to the appropriate district stakeholder groups, such as the Office of Information Technology, Office of Teaching and Learning, the Superintendent's Leadership Team. As appropriate, other district offices and committees will also be informed of the relevant progress of the PPS Technology Plan.

Process for Ongoing, Long-Term Technology Planning

The nature of technology in the 21st century requires large organizations to remain fluid and flexible, and it is neither realistic nor wise to specify exactly where we expect PPS to be five years – or even three years – down the road in terms of technology. Factor in the current local funding crisis and it is even more difficult to forecast with specificity more than a year in advance. PPS will continue to evolve the IT governance structure, which will in turn help us analyze and prioritize individual projects and initiatives. Key internal IT performance indicators aligned to the PPS Technology Plan Goals and Strategies will be reviewed on a regular basis while the entire plan will be reviewed and updated annually.