PIERCE COLLEGE

Information Technology

Technology Replacement Plan

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Overview

Pierce College is committed to providing the highest quality instructional services to students, faculty, and staff. The technology infrastructure is a critical element necessary for the delivery of, and access to, instructional services and resources. The District's growing technology needs must compete for limited resources and increasing numbers of other priorities. The Information Technology Department (IT) is committed to work within these constraints while pursuing long-term solutions, with implementation schedules of two to five years.

Users expect the network services to function reliably and be available 24-hours a day, seven days a week. In addition, security and student privacy rights are of great concern due to exponentially growth; while the IT Department's operational budget to maintain, support, and replace the aging technological infrastructure has been significantly reduced.

The Pierce College IT Department has developed a "Technology Replacement Plan" (TRP) to ensure that computing, telecommunications, network, and classroom technology equipment is kept current with accepted industry standards and future capabilities to enable mission fulfillment.

The TRP is a series of projects that uses industry standards, best practices, and proven capabilities. The goal is to maintain a comprehensive technology infrastructure that provides the foundation for the delivery of voice, video, and data services necessary to support the District's educational mission with cohesive architecture that enables expansion and change when needed.

In the past, only student desktop computers were upgraded or replaced on a regular cycle utilizing student technology fees. Over the past several years we have been able to obtain one-time funding to replace most of the desktop and laptop computers over five years old throughout the District. Network equipment, server systems, printers, and classroom equipment are not under any formal replacement plan. The risks of *not having* a proactive and timely replacement plan are:

- Network systems (firewall, routers, switches, etc.) in use beyond recommended end-of-life cycles that are not capable of supporting newer operating systems that require higher bandwidth (i.e., VoIP, Virtual Desktop Infrastructure (VDI), faster wireless, etc.)
- Server and telephone systems inadequate to implement newer versions of operating systems and growth, i.e., (memory, disk space, faster hard drives, CPU capacity etc.)
- Inefficient printing capabilities (single sided printing, high toner costs, compatibility issues, etc.)
- Inability to anticipate and meet future capacity requirements before business processes are impacted
- Increased security and privacy risks
- Inability to leverage discounts when buying or leasing products in volume

To address these issues, there is a need to develop a replacement plan for server systems, telephone systems, network equipment, printers, and classroom technology equipment. There are six separate life cycle categories to replace technology:

1. Workstation Computers (including laptops)
2. Server Systems
3. Network Equipment
4. Telephone Equipment
5. Printers
6. Media Systems (TV Monitors, Projectors, Smart Desks), etc.

Intent

The TRP documents how IT equipment will be systematically replaced to ensure that students, faculty, and staff continually possess the equipment needed to succeed and complete their assigned course of study or job responsibilities effectively and efficiently.

The TRP identifies key projects that provide necessary technology-related upgrades, replacements, and new installations. It specifically identifies the District's information technology infrastructure systems, defines budgets and estimates costs.

Vision

The TRP enhances and supports the educational process by establishing and maintaining current and relevant technologies that:

- Strengthen instructional strategies that enhance student achievement
- Increase opportunities for staff development and student research
- Sustain expanding access to the Internet
- Provide access to District educational and business applications/data and educational partners
- Deliver and support rich media
- Enable and enhance on-line learning
- Develop mechanisms for greater communication between students, staff, and other agencies

Goals

The TRP will:

1. Assure that appropriate telecommunications, media, and computing resources are available to support the mission of the district;
2. Assure that each faculty and staff member who uses telecommunications, media, and computing resources in his or her position has sufficient capability to fulfill his/her job responsibilities;
3. Implement standards for equipment and promote uniformity of technology;
4. Present a framework for the effective, ongoing, sustainable funding of IT infrastructure;
5. Provide for cost effective and timely purchasing while taking into account all equipment costs including warranty and support;
6. Reduce downtime for replacement parts and installation of new equipment;
7. Attain substantial cost savings on hardware due to volume and standardized purchasing;
8. Create a predictable and on-going baseline for a lease-purchase analysis;
9. Improved service and support due to standardization and focusing on effective processes;
10. Consistent access to evolving technology security strategies.

Useful Life Cycle

Industry Standard Useful Life Recommendations & Information Sources:

Type of Equipment	Industry Average	Gartner Group	WA State Equipment Guide (State Administrative & Accounting Manual 30.50)
Workstation Computers	3-5 years	4 years	4 years
Laptops	2-3 years	3 years	4 years
Servers & Storage	4 years	3 years	4 years
Network Equipment			4 years
Telephone Equipment			7 years
Printers			4 years
Media Systems			5 years

Useful Life - The period that the equipment can be used in the technically most efficient manner by an IT organization. The equipment will be fully compatible with leading edge applications and hardware. The newest equipment may have some additional functionality while the old equipment may not adequately meet increased production requirements.

Basic Equipment Replacement

This equipment replacement cycle covers basic equipment life cycles and does not address periodic equipment upgrade/replacement requirements for specific operations.

Pierce IT Equipment Replacement		
Area	**Replacement Cycle**	**Current Equipment Age**
Computer & Peripheral Equipment		
Workstation Computers	4 Years	Avg. Age: 3 years old
Laptop Computers	4 Years	Avg. Age: 3 years old
Printers	5 Years	Avg. Age: 5 years old
Copiers (tied to leases)	3 Years	Lease w/varying expiration
Network Infrastructure		
Servers	5 years	Avg. Age: 4 years old
Switches	6 Years	Avg. Age: 7 years old
Routers	6 Years	Avg. Age: 6 years old
Firewall	6 Years	Avg. Age: 2 years old
Wireless Network Hardware	6 Years	Avg. Age: 1.5 years old
Telecom		
Private Branch Exchange (PBX)	20 Years	Installed 1992, software upgrade in 2000. Is 17 years old-projected end of life 2020.
Voice Mail Systems	Integrated into VOIP	Avg. equipment 2 yrs. old
Video Conferencing Hardware	7 Years	Avg. equipment 3.5 yrs. old