Strategic Plan
of the
Information Technology Services Department

Revision 1.0

Release date: December 16th, 2003

Prepared by: Carmen A. Rahm
Senior Director, Information Technology Services

Approved by: Richard E. Corona
Vice President, Business & Financial Affairs
### REVISION PAGE

<table>
<thead>
<tr>
<th>Revision</th>
<th>Purpose</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Strategic Plan for ITS Department’s support of IT at CWU</td>
<td>Dec, 2003</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS

- Information Technology at Central Washington University 4
- Purpose 4
- Revision 1.0 Scope 5
- Plan Overview 6
- Summary of Goals 8
- Funding 9
- Definitions 10
- Plan Structure 10
- Goals, Objectives and Strategies 11
  - Goal 1: Customer Service 11
  - Goal 2: Communication 13
  - Goal 3: ITS Staff 15
  - Goal 4: Data and Information 17
  - Goal 5: Classroom and Computer Laboratories 19
  - Goal 6: Voice, Video and Data Infrastructure 21
  - Goal 7: Client Hardware, Software and Services 23
  - Goal 8: Integrated IT Services and Systems 25
- Summary 26
- Appendix A: Glossary of Terms and Abbreviations 27
- Appendix B: IT Organizational Structure at CWU 29

### MISSION STATEMENT

"The ITS Department provides quality IT services and systems to meet the current and future information technology requirements of Central Washington University’s staff, faculty, and students in support of the academic mission of the University"
Information Technology at Central Washington University

Information Technology is an integral part of all facets of daily operations and activities for Central Washington University (CWU) and the six University Centers. There are four primary goals for Information Technology in relation to the overall strategic objectives of the University. These goals are as follows:

1. **CAMPUS ENVIRONMENT**: Distinguish CWU as a modern and innovative University that provides a quality and state-of-the-art learning and living environment for students.
2. **ACADEMIC AND RESEARCH**: Enhance the academic and research activities of CWU faculty by providing innovative and modern technology tools, and unrestricted access to academic and research information.
3. **STUDENT LEARNING**: Provide an environment where technology enriches the learning experience of CWU students; prepares them for technology use in their careers; and provides for anywhere, anytime scholastic access.
4. **ADMINISTRATION AND STUDENT SERVICES**: Create an efficient and productive administrative and student services environment that minimizes the University’s operational costs while maximizing the services provided to University stakeholders.

Revision 1.0 of this document focuses on the Information Technology Services (ITS) Department in providing the overall Information Technology (IT) infrastructure for CWU. Subsequent revisions to this document will expand the scope to encompass all areas of Information Technology at CWU.

**Purpose**

While there are currently several departments at CWU responsible for providing various IT services, the ITS Department is responsible for the development, implementation, and support of systems used throughout the university in support of the overall IT goals identified above. The department’s Strategic Plan is intended to accomplish two distinct tasks.

1. Provide a vision and roadmap to ITS Department personnel and partners that are inline with the Strategic Plan of CWU and the University’s overall IT goals. This will empower ITS employees and ITS business partners to make decisions and take appropriate actions during their normal business activities.
2. Provide documentation to ITS Department stakeholders and customers as to the vision, goals, and initiatives of the Department to ensure that these efforts are inline with the IT goals and vision of the University. This will provide an opportunity for continual input and updating of the ITS Plan to ensure it remains consistent with changes at the University.
NOTE: Data used in the development and maintenance of the ITS Strategic Plan was acquired from a variety of sources. These sources include, but are not limited to:

- Interviews with key stakeholders throughout the University, including students, faculty and administrative staff.
- Interviews and input from all members of the CWU ITS Department.
- ASCWU Board of Directors 2003-2004 Agenda
- Review of several documents and ITS plans including:
  - “The Direction of Computing for CWU”, 1999 by Dr. David Kaufman
  - “Information Technology at CWU: Points to Consider”, date unknown, author unknown.
  - “A Vision for Information Technology in Higher Education Institutions”, date unknown, author unknown.

**Revision 1.0 Scope**

The ITS Department recognizes that there are several departments within CWU responsible for providing various components of IT support (refer to Appendix B). While Revision 1.0 of this plan is intended to focus on the ITS Department, future revisions to this document will expand the original scope to include all areas of Information Technology at CWU.

Inclusion of areas outside of the ITS Department responsibilities or areas that other groups also have a role in, in Revision 1.0 of the plan, is not intended to recommend that the ITS Department assume these duties or that ITS has sole responsibility for these duties, but is intended to either focus on the ITS component of that responsibility, or to show areas where ITS must partner with the other IT organizations at CWU to achieve the overall IT goals of the University. Only through input and involvement from all IT stakeholders, and through collaboration and cooperation between the various IT support departments at CWU, can the overall IT goals and the mission of CWU be achieved.
Plan Overview

The Strategic Plan for the CWU ITS Department is summarized by the primary goals outlined in the following pages. The goals focus on the major components that comprise all ITS projects/systems. These components are:

?? **The Customer:** The ITS Department recognizes that the customer is the most important component of any IT project, and the ITS Department has numerous and diverse customer groups to support, both on and off campus, and at the six University Centers. These customers include:

- CWU Students (current and prospective)
- CWU Faculty
- CWU Staff
- CWU Alumni
- Other stakeholders that utilize CWU IT services and tools (tenant organizations located at CWU, conference attendees, etc.)

The ITS Department also views the local community and businesses as significant customers. Supporting CWU approved programs and initiatives that benefit the economic and social development of the Ellensburg community is a function of the ITS Department.

?? **The Technology Infrastructure:** The technology infrastructure is comprised of the major hardware components of any IT system. These components include, but are not limited to:

- CWU Data Center (Wildcat Center)
- Central servers, peripherals and operating systems
- Client hardware, software and peripherals (desktop computers, printers, etc.)
- Local Area Network (LAN)
- Wide Area Network (WAN) including the Internet and private point-to-point network connections.
- Communication hardware (VoIP, Analog, Cellular, etc.)

The technology infrastructure is the component responsible for the housing and execution of the software and data, the interfacing of the various components of a system, and the delivery of this software and data to the end-user. The infrastructure for voice, video, and data are all components of this element.

?? **The Application Software:** Primary application software resides on the CWU central servers and is accessed via the LAN and WAN infrastructure. These services may reside on servers located within CWU at the Wildcat Center and be supported by ITS Staff or other CWU employees, or they may be provided from outside of CWU via Application Service Providers (ASP). Primary central applications utilized at CWU include, but are not limited to:

- PeopleSoft Enterprise Resource Planning (ERP) System
- Novell GroupWise Messaging System (Email, Calendar, etc.)
- Blackboard Online Course Management System
- Diebold Card System
- Web Services (Apache)
- Unified Communication Applications

**The IT Staff:** The ITS Department Staff has responsibility for the success of any IT project or system assigned to the department, the maintenance of these systems, and for ongoing customer support. The ITS Staff at CWU is responsible for coordinating all phases of the IT System Life Cycle including Strategy, Requirements, Design, Build/Test, Implementation, and Maintenance.

**The Data/Information:** Data and ultimately information are the basic components of any IT system and the underlying reason for its existence. This component of the system not only includes the raw data that is stored and manipulated within the system, but also the systems ability to transform the data into useful and accessible information, and the ability to deliver this information in an appropriate format to the customers. Data security, integrity, availability, and accuracy are all key aspects of this system component that ITS shares responsibility with the end users and the data owners.
Summary of Goals

While there are numerous activities and technical accomplishments that the ITS Department must achieve to fulfill the overall IT goals of the University, these items have been combined into the following eight major goals.

1. **Customer Service**: The ITS Department will be recognized as the model for proactive and efficient customer service across CWU, including the six University Centers. This superior customer service will encompass all aspects of the project or service component from conception, to maintenance, and operational support stages.

2. **Communication**: The IT Department will identify and implement technologies that will result in superior communication at the university; will assist individual groups across the university with regards to their unique communication needs; and will be recognized as a model on the campus for communication with our stakeholders.

3. **IT Staff**: The ITS Department will recruit, develop, and retain an IT staff that are motivated, knowledgeable, and productive. We will develop an IT organization that functions as a team, shares information, is focused on the goals and interests of CWU, and has the tools to accomplish their assignments.

4. **Data and Information**: The ITS Department will provide the services and technology, and work directly with the data owners to ensure that data stored on CWU IT systems is secure, available, easily accessible, and accurate while minimizing data redundancy.

5. **Classroom and Computer Laboratories**: The ITS Department will maintain and support classroom and computer laboratory environments that provide access to modern, reliable, and quality technology to ensure the highest level of educational delivery by faculty and the highest level of educational experience by students.

6. **Voice, Video and Data Infrastructure**: The ITS Department will implement and support a reliable and capable technology infrastructure in support of voice, video and data while allowing for near anywhere/anytime system access via available technology and services.

7. **Client Hardware, Software, and Services**: The ITS Department will define, support and assist with provision of a reliable, capable and compatible desktop/client computing environment for CWU faculty and staff to ensure they are able to accomplish their educational, career, and research activities.

8. **Integrated Information Technology Services and Systems**: The ITS Department will strive to maximize user productivity, minimize data redundancy, and maximize data integrity by continuing to identify opportunities for system integration and executing these efforts where appropriate.
Funding

Implementing the vision and accomplishing the goals of the ITS Department cannot be accomplished without substantial effort and investment. While the management of the ITS Department will pursue every opportunity to execute these strategies with available resources, ITS management will also work closely with organizations and departments across the university and the State of Washington (and beyond) to pursue other forms of external funding or collaboration to support these initiatives. These will include:

?? Pursue vendor “In Kind” support for technology purchases and upgrades
?? Maximize the use of State Contracts, Volume Purchase Agreements, and other volume purchase opportunities to maximize the potential of existing funding
?? Partner with Academic Departments to pursue technology funds via grants that require technology components that reach beyond normal CWU operational IT support
?? Pursue dedicated technology grants that are not specific to academic or research initiatives
?? Partner with the other Washington State Institutions of Higher Education for economies of scale savings, and to share under-utilized technology capabilities.
?? Review existing practices and budget structure to identify where savings can be realized without impacting customer support or degrading system performance/reliability.
?? Work with CWU stakeholders and management to approve and prioritize ITS initiatives to ensure that executed projects and initiatives are those that provide the greatest benefit to the University
?? Continually review Total Cost of Ownership (TCO) for CWU supported systems and pursue all avenues to reduce IT TCO throughout the University, such as implementing Open Source technology.
Definitions

GOALS: Goals are the primary areas of focus that the ITS Department will pursue. Goals help to define the vision that the Department has in order to fulfill the Department’s mission and to help execute the overall strategic plan of CWU. A goal, by itself, does not identify the specific objectives that will be sought, nor does it identify any individual strategies that will be undertaken.

OBJECTIVES: Objectives are more detailed elements that identify examples of specific areas and achievements that will be pursued in an effort to achieve the goals identified. Objectives help to clarify “what” sort of initiatives will be executed and help to identify the relationship between these objectives and the specific goals that they support.

STRATEGIES: For this Strategic Plan, strategies are specific elements that help to identify the types of actions and tasks that may be undertaken to help ITS achieve its objectives and goals. If approved, these strategies will be the basis for projects and tasks to be assigned to the appropriate personnel and groups associated with ITS.

Note: Since this is a Strategic Plan, not an Operational Plan, specific details on how each strategy will be achieved are not included. If the goals, objectives, and strategies of the plan are approved by the CWU community, the ITS Department will pursue the appropriate solutions.

Plan Structure

The ITS Department has identified numerous strategies and objectives to be considered and accomplished in order to achieve the established goals. It is understood that many of the strategies and objectives are relevant to multiple goals and will assist in achieving these goals.

To keep this plan as manageable and succinct as possible, most strategies and objectives have only been identified with the goal for which it is felt they will have the most impact. Readers should not assume that because a strategy or objective is not listed under a specific goal, that it is assumed to have no impact on that goal.
**Goals, Objectives, and Strategies**

**Goal 1: Customer Service:** The ITS Department will be recognized as the model for proactive and efficient customer service across CWU including the six University Centers.

**OBJECTIVES & STRATEGIES:**

**OBJECTIVE 1:** Continue to improve and expand HelpDesk functions to provide true One-Stop Tier I and II level service to ITS Customers.

- Maximize the number of HelpDesk calls that are answered by a human and that are resolved during initial contact with our customers by training HelpDesk staff, documenting routine processes and procedures, and providing Tier II support with the HelpDesk.
- Implement tools to allow customers to submit calls and receive call statuses online.
- Implement and utilize call assessment and feedback processes with our customers to continually monitor and improve performance.
- Implement and maintain online tools and services for customers that maximize “self-help” opportunities such as Frequently Asked Questions, Technology Tips, Informational web links, etc.
- Modernize and utilize an Automated Call Distribution (ACD) system to track HelpDesk metrics for workload leveling to maximize customer service.
- Implement processes and tools to ensure that the IT HelpDesk has all necessary information and tools to maximize service to the customers.
  - HelpDesk staff aware of all planned and unplanned outage statuses
  - HelpDesk provided tools and accesses to Tier I and Tier II support

**OBJECTIVE 2:** Minimize the impact and disruption to our customers and stakeholders during all Tier II and Tier III repair, maintenance and upgrade initiatives.

- Implement and upgrade policies and procedures to ensure that all ITS related outages are publicized and scheduled in advance, with maximum customer involvement in scheduling, when possible.
- Schedule repairs, outages, and maintenance activities so as to minimize disruption to customer activities.
- Maximize the number of HelpDesk calls that are completed without the need for a desktop visit using available tools and calls that are closed on the first visit if such interaction is required.
- Increase our awareness of how our customers use technology in their daily activities and tailor support accordingly.

**OBJECTIVE 3:** Continually strive to reduce customer reliance on direct IT support.

- Expand the use of FAQ’s and Online Help features to provide “self help” tools for customers.
- Provide notification to customers as to the work completed, actions taken, etc. with regards to all HelpDesk calls.
- Provide tips and educational information online for all IT customers.
- Continue to provide scheduled training on standard software tools that IT customers use in their daily activities at CWU.
e. Educate customers on technology and initiatives that will improve their technology use.
f. Promote “Subject Matter Experts” and “Building Contacts” within the various departments and facilities across CWU.

**OBJECTIVE 4:** Develop and implement performance standards and metrics to track ITS performance in relation to customer expectations, and to ensure continual improvement  
   a. Document and publicize the services, response times, and performance standards that ITS supports  
   b. Implement processes to prioritize HelpDesk calls based on problem type, number of users affected, etc.  
   c. Implement customer feedback processes for HelpDesk services, projects, and other support provided by ITS  
   d. Monitor our level of success with regard to fulfilling our service commitments with our customers, and improving processes as necessary.

**OBJECTIVE 5:** Collaborate and cooperate with other IT support providers at CWU (Academic Computing, Library Computing, Educational Technology Center, etc.) to ensure that all our customer’s IT needs are being addressed  
   a. Identify and document responsibility for all IT areas on campus via Service Level Agreements  
   b. Consolidate services where appropriate to improve overall customer service  
   c. Share tools, information, and other processes with other CWU IT support departments to improve overall service and reduce IT support costs.

**OBJECTIVE 6:** Improve the leveling of workload throughout the year to eliminate peaks and valleys, and to improve consistency of support to customers.  
   a. Implement incentives to reduce high volume of work in September  
   b. Implement technologies to reduce/eliminate unplanned workload impacts  
      i. Unscheduled software updates to computer laboratories  
      ii. Virus outbreaks  
      iii. New system delivery and configuration

**OBJECTIVE 7:** Partner with other CWU Departments to meet cost, schedule, and performance objectives on all projects and initiatives.
Goal 2: Communication: The ITS Department will identify and implement technologies that will aid communication at the University; assist individual groups across the campus with regard to their communication needs; and be recognized as a model for communication with our stakeholders.

OBJECTIVES & STRATEGIES

?? OBJECTIVE 1: Be a model for providing innovative and cost-effective tools for timely, accurate, and appropriate communication throughout the University.
   a. Identify and work with Media Relations to expand the functionality and services available via the CWU Internet Site for sharing and providing information to personnel around the world.
   b. Design and implement a CWU Intranet Site for sharing internal information and increasing communication between faculty and staff.
   c. Implement technologies to reduce the reliance on “internal Spam” as an official form of communication with faculty, staff, and students.
   d. Investigate and pursue (if appropriate) the development and implementation of a Student Portal for information access, thus reducing reliance on GroupWise and minimizing the need for CWU Spam to students.
   e. Expand and modernize the University’s current messaging infrastructure for calendaring, collaboration, communication, and cooperation.
   f. Continually investigate and pursue other IT tools to improve communication across the University.

?? OBJECTIVE 2: ITS will be a model for communication at CWU
   a. Expand the use of Web technology to deliver timely project updates and statuses on support requests.
   b. Develop and maintain an ITS Department Website that is the model for information access and web tools/services.
   c. Continue to publicize IT goals, plans, and accomplishments via news articles and other media to increase customer awareness of technologies and tools available on the campus.
   d. Understand our audience and their level of technology knowledge, and tailor communication accordingly

?? OBJECTIVE 3: Ensure an educated and knowledgeable ITS customer base
   a. Utilize online technology to assist customers to be self-supporting
   b. Communicate resolutions and information to customers during Tier I, II, and III HelpDesk responses.
   c. Implement innovative services and tools to train and educate ITS customers
   d. Expand the use of ITS sponsored educational sessions on software applications, hardware usage, telecommunication services, etc.

?? OBJECTIVE 4: Promote and publicize the accomplishments and initiatives of the ITS Department to the entire CWU community.
   a. Utilize the Functional Experts and Departmental Subject Matter Experts of our customers to promote ITS accomplishments and initiatives within their departments
   b. Expand ITS involvement and leadership in University Information Technology Committee (UITC) and University Communications Team (UCT)
c. Provide regular information to ITS customers via Media Services and other avenues of news and publicity at CWU.

**OBJECTIVE 5:** Ensure that CWU IT users are aware of scheduled preventive maintenance outages, and unplanned event outages that affect them
a. Ensure that all scheduled outages are announced to customers proactively and professionally
b. Educate all customers with regard to unplanned outages and events
   i. Inform customers as to what situation occurred
   ii. Inform customers as to what was done to correct the situation
   iii. Inform customers as to what ITS will do to prevent future occurrences

**OBJECTIVE 6:** Provide timely and professional communication to CWU Students regarding ITS services and tools.
   a. Ensure that students are aware of what services and tools are available to them (and not available to them) from ITS, such as RESNET, etc.
   b. Clearly publicize and document the level of service that ITS will provide students, the level of systems that ITS will support, etc.
   c. Ensure that students are aware of rules and regulations regarding Appropriate Use of Technology at CWU

**OBJECTIVE 7:** Document and maintain all ITS procedures and standards on the ITS Website for use by ITS staff, and reference by ITS customers
Goal 3: ITS Staff: Recruit, develop, and retain an ITS staff who are motivated, knowledgeable, and productive. Develop an ITS organization that functions as a team, shares information, is focused on the goals and interests of CWU, and has the tools to accomplish their assignments.

OBJECTIVES & STRATEGIES

?? OBJECTIVE 1: Ensure that ITS personnel are current with technology, can identify technologies that will assist CWU, and can support/maintain the technologies utilized by ITS customers.
   a. Ensure that training and educational requirements are included in grant applications originating in and outside of the ITS Department.
   b. Identify required training for ITS personnel annually, develop ROI models and benefits analysis for training, and incorporate needed training into Personnel Training Plans and ITS annual budgets.
   c. Expand use of online training opportunities to maximize training exposure and manage training and travel expenditures.
   d. Ensure that opportunities for growth and advancement occur within the ITS Department to provide avenues for all employees to advance

?? OBJECTIVE 2: Minimize turnover of ITS personnel at CWU.
   a. Develop compensation packages for ITS staff that are commensurate with similar positions in other regional industries.
   b. Work with Human Resources to ensure that all ITS personnel are assigned to correct positions at correct levels, and that staff are being compensated in accordance with CWU policies and goals.
   c. Treat employees with respect and as professionals to recognize their unique job challenges and their support hours/flexibility.
   d. Ensure maximum correlation between performance and compensation.
   e. Implement processes to ensure that all ITS personnel receive annual performance reviews and evaluation criteria identify the important aspects of their positions at the university, department, and employee level.

?? OBJECTIVE 3: Ensure backups exist for key functions, and that barriers to productivity across departmental structures are minimized.
   a. Align customer expectations with ITS resources
   b. Implement prioritization processes to ensure staff are working on university approved initiatives
   c. Identify, train, and set expectations for backup personnel for all key assignments

?? OBJECTIVE 4: Maximize employee empowerment and freedom to accomplish the tasks they are assigned.
   a. Develop and implement processes and guidelines as bases for employee information to make decisions.
   b. Establish and publicize a clear ITS Vision and Strategic Plan that supports the overall goals of CWU.
   c. Align employee authority with responsibility and capability.
   d. Trust employees and treat employees as professionals.
OBJECTIVE 5: Make Deming’s Six Management Objectives the model for ITS Department activities, and promote this philosophy throughout CWU.
   a. Use positive reinforcement.
   b. Ask what questions, problems, and concerns ITS employees have, and how you can help.
   c. Ask for input prior to making decisions.
   d. Provide information and feedback in a timely manner.
   e. Don’t over or under manage.
   f. Treat employees and all people with respect.

OBJECTIVE 6: Ensure that all positions within ITS have clear Position Descriptions and expectations
   a. Utilize these descriptions as the basis for employee performance assessment
   b. Utilize these descriptions to ensure that the best candidates are hired for any open positions within ITS.
   c. Utilize these descriptions to ensure that all employees (regardless of race, creed, gender, etc.) are treated fairly within the ITS workplace.

OBJECTIVE 7: Ensure that ITS employees understand the big picture and clearly understand the importance of their role and involvement in the overall success of the University.
   a. ITS management provides regular information and updates to all ITS employees regarding university initiatives and activities.
   b. Develop and implement cross-departmental ITS teams to ensure that appropriate ITS employees are involved in projects that affect their areas.
   c. Evaluate and reward employees based on their teamwork, as well as on individual achievements and accomplishments.

OBJECTIVE 8: Maximize use and productivity of CWU student employees
   d. Utilize Work Study Program as appropriate
   e. Ensure that all Student Employees have clear job descriptions, work assignments and supervision.
   f. Make student employment an educational opportunity by working with students on work ethics, productivity, customer service, etc.
Goal 4: Data and Information: ITS will provide the services and technology to ensure that data stored on CWU systems is secure, available and accurate, while minimizing redundancy.

OBJECTIVES & STRATEGIES

?? OBJECTIVE 1: Procedures and systems exist to ensure that critical CWU data can be recovered in the event of a disaster.
   a. Implement appropriate processes and technology to ensure that all required systems are backed up and recoverable.
   b. Work with end users to identify the unique systems they have, and identify how these systems can be backed up.
   c. Maintain and publicize a comprehensive IT Disaster Recovery Plan.
   d. Develop and implement systems and/or processes to ensure that client based data are backed up and recoverable.
   e. Implement redundant/mirrored architectures where appropriate to maximize availability.

?? OBJECTIVE 2: Information and data located on CWU computer systems will be consistent and accurate
   a. Support and assist with the development and implementation of processes within the PeopleSoft and other environments to maximize data integrity and accuracy
   b. Support and assist with the Implementation and enforcement of Configuration Management processes and procedures

?? OBJECTIVE 3: CWU Information and Data will be secure and will not be accessible to individuals for whom it is not intended.
   a. Desktop systems will utilize operating systems, password standards, and technologies that maximize security.
   b. Data transported across the CWU Local Area Network, and CWU Wide Area Network services will be encrypted and secure as required.
   c. Data stored on central servers and storage systems at CWU will be administered to ensure the highest level of information security.
   d. Develop, maintain and enforce a University IT Security Plan.
   e. Firewalls and similar technologies will be implemented to protect CWU from Internet vulnerabilities
      i. Security breeches
      ii. Denial of Service Attacks
      iii. Unauthorized access
   f. Maximize cellular and standard phone communication security.

?? OBJECTIVE 4: CWU data and systems will be protected from viruses and other destructive technology threats.
   a. Technologies will be implemented to guarantee that all CWU desktop computers have updated anti-virus software with the latest virus definitions.
      i. Central management of anti-virus software and licensing.
      ii. Automated definition updates to all desktop computers.
      iii. Removal of non-compliant system from the CWU network.
b. ITS will maintain technologies at the server and application level to minimize the potential for virus, denial of service, and related attacks to CWU systems and data.
   i. Implement server/application level anti-virus protection
   ii. Implement Firewall and related technology

?? OBJECTIVE 5: Minimize the presence of old and unnecessary data on CWU information systems.
   a. Implement and enforce Record Retention policies and practices.
      i. Information stored on central servers.
      ii. CWU Email Records Retention standards.
   b. Archive information that is required for future audit and review, but is not required for daily operations at CWU.

?? OBJECTIVE 6: Ensure that the Central Computer Facility (Wildcat Center) is operating at the highest level of efficiency and with minimal potential for a service outage.
   a. Verify that utility infrastructures are sufficient for un-interrupted operation of the Wildcat Center.
      i. Air Conditioning must provide N+1 redundancy.
      ii. Power sources including battery backup and generator power must meet necessary power requirements of entire center.
      iii. Fire Suppression equipment is adequate and protects technology investment.
   b. Implement technology and/or staff to ensure timely identification of and response to system and center performance anomalies, and environmental issues.

?? OBJECTIVE 7: Implement technologies and policies to ensure physical security of all critical ITS resources including the Central Computer Facility, COM Rooms, etc.
   a. Implement processes and procedures to manage and control approved activities in all critical ITS facilities.
   b. Implement appropriate physical security measures to prevent and/or detect unauthorized access to all critical ITS facilities.
Goal 5: Classroom and Computer Laboratories: Maintain and support a classroom (computer laboratory) environment that provides access to modern, reliable, and quality technology to ensure the highest level of educational delivery by faculty and the highest level of educational experience by students.

**OBJECTIVE 1:** Provide for a modern, efficient, and technologically capable computer classroom and laboratory experience for students and faculty
   a. Review and align (as necessary) computer laboratories to ensure that they are in locations and available the hours to best serve the University’s academic mission.
      i. Potential changes in the number of laboratories
      ii. Potential changes in some laboratory locations
      iii. Potential implement of full time Open Laboratories
      iv. Potential “virtual laboratory” in new Student Union
   b. Ensure that computer equipment in laboratories is modern and that a process exists for preventive maintenance and replacement
   c. Ensure that computer laboratories are outfitted with the necessary software to support the academic courses supported by the labs.
   d. Review and define work scope, procedures, guidelines, etc. for laboratory monitors and train appropriately.

**OBJECTIVE 2:** Collaborate and cooperate with Academic Computing to provide for necessary computer technology and curriculum delivery equipment for all classrooms
   a. Ensure that computer equipment in classroom “consoles” is modern and that it meets the curriculum delivery needs of faculty
      i. Replace aging equipment as required
      ii. Implement preventive maintenance and upgrade processes
   b. Ensure that audio-visual and related equipment in classrooms is modern and meets the curriculum delivery needs of faculty
      i. Identify funding source for equipment upgrades, maintenance and replacement
      ii. Replace aging equipment as required
      iii. Implement preventive maintenance and upgrade processes
   c. Consolidate and centralize management and support of classroom computer console and audio-visual curriculum delivery equipment.

**OBJECTIVE 3:** Collaborate with the academic departments within the University to identify and provide special instructional and research computing needs for faculty and graduate students.

**OBJECTIVE 4:** Ensure that laboratories are available and configured with correct software prior to requirements of faculty for instruction
   a. Implement processes to ensure that ITS has sufficient notification of faculty lab requirements
   b. Utilize network tools and services for remote support of laboratories and for remote software delivery

**OBJECTIVE 5:** Investigate opportunities to continually reduce reliance on traditional laboratories for student usage
a. Investigate feasibility of “IBM University” or similar program to require all students to have laptops, implement wireless technology, and eliminate excess laboratory space.
b. Investigate opportunities for implementing larger open laboratories for dedicated student usage.
Goal 6: Voice, Video and Data Infrastructure: Implement and support a reliable and capable technology infrastructure in support of voice, video and data while allowing for near anywhere/anytime system access via available technology and services.

OBJECTIVES & STRATEGIES:

?? OBJECTIVE 1: Ensure network access is available “where needed” to maximize productivity and to ensure a high quality educational and instructional experience at CWU.

a. Implement and expand wireless technologies in “community” and other common areas
   i. Library
   ii. Student Union Building
   iii. Key Academic and Administrative Buildings
   iv. Commons areas and Athletic venues.

b. Improve remote/web access capabilities to provide off-campus LAN and Internet access for faculty, staff, and students
   i. Pursue implementation of Web Portal
   ii. Dial-In Services
   iii. Virtual Private Networks (VPN) access
   iv. Mobile access and computing via PDA technology

?? OBJECTIVE 2: Implement and support a high bandwidth and reliable Local Area Network capable of supporting data, voice, and video requirements for all IT customers

a. Upgrade and maintain the campus LAN backbone by providing high bandwidth and redundant fiber between all buildings
   i. Provide connectivity via the campus LAN where appropriate
   ii. Support dedicated point-to-point network connectivity where needed

b. Continue to upgrade the cable plant in all buildings to provide a minimum of dedicated 100baseT to each networked component, as required
   i. Upgrade network in highest priority buildings by replacing CAT-III cabling (Hebeler, Psychology, etc.)
   ii. Upgrade network in all buildings that are not supported by CAT-5 wiring or higher

c. Implement secure wireless networking where appropriate to maximize mobility and productivity of students, faculty, and staff

d. Implement Quality of Service and Network Management & Monitoring Systems to maximize performance and proactively identify and address network constraints.

?? OBJECTIVE 3: Provide sufficient and cost-effective Internet and Wide-Area Network bandwidth to support all faculty, staff, and student activities while providing low latency and high availability service.

?? OBJECTIVE 4: Ensure that Network and related projects are executed to provide maximum benefit to CWU

a. Implement an ITS Work Request & Prioritization Process to ensure that all network related projects are inline with CWU goals and provide maximum ROI to the University
b. Convene and IT Infrastructure Advisory Committee and CWU IT Steering Committee to prioritize and sponsor all network related projects and initiatives.
c. Utilize the University Information Technology Advisory Committee to assist in the review and strategy planning for infrastructure initiatives at CWU.

**OBJECTIVE 5:** Provide continuous enhancements, upgrades, and maintenance to the voice communication system at CWU to support planned growth and provide new services:
a. Continue to investigate and implement VoIP as appropriate
b. Continue to expand CWU provided telecommunication services to additional Residence Halls at CWU
c. Continually pursue opportunities to improve telecommunication services and reduce TCO

**OBJECTIVE 6:** Support and continually improve quality of service (QoS) and quality of experience (QoE) for the Resident Network (RESNET) for student data, Internet Access, and voice communications.

**OBJECTIVE 7:** Support CWU's growth initiatives and building upgrades/development by assuring that cost, schedule, and performance objectives are achieved for all IT related services.
a. Implement and support VoIP initiatives
b. Implement and support Structured Cabling initiatives
c. Implement and support Wireless Technology initiatives
d. Develop and implement an AVVID structure at CWU
Goal 7: Client Hardware, Software, and Services: Provide and support a reliable, capable and compatible desktop/client information technology environment for CWU faculty & staff to ensure that they are able to accomplish their job/educational activities.

OBJECTIVES & STRATEGIES

**OBJECTIVE 1:** Ensure that faculty and staff employees have desktop IT equipment required to achieve the performance goals of the University.

a. Work with campus community to identify funding sources and develop maintenance & technology refresh program for faculty and staff desktop computers and phones
b. Expand the types of hardware and peripherals that are centrally funded and provided by ITS to improve overall service to customers
   i. Cables
   ii. Storage devices
   iii. Spare parts (memory, disk drives, etc.)
c. Investigate and implement “Thin Client” technologies where appropriate to increase hardware performance and lifecycle, reduce desktop support costs, and increase service to customers.
d. Continue to identify, justify, and enforce a limited number of desktop hardware configurations and standards for computing and telecommunication services
   i. Minimize support costs and TCO
   ii. Maximize ITS customer service

**OBJECTIVE 2:** Define and publicize standards for other client equipment such as Personal Digital Assistants, Printers, Phones, etc. to increase support and reduce TCO.

**OBJECTIVE 3:** Implement client software standards and software upgrade policies to provide maximum benefit to CWU IT customers

a. Identify and enforce a standard set of desktop operating systems and applications for CWU employees, to maximize compatibility and productivity
b. Develop a set of standard desktop “images” to be used by all IT Support Specialists to maximize compatibility and minimize TCO.
c. Continue to pursue and implement site licenses for client software where applicable, and where substantial cost savings can be realized
   i. Anti-Virus software
   ii. Microsoft Site License
   iii. Others (Statistical Software, Graphics, Web Development, etc.)
d. Investigate and implement Thin Client technology, where applicable, to reduce software licensing and support costs.

**OBJECTIVE 4:** Implement technologies and tools to maximize the level of customer support for desktop computing services

a. Expand the ability of customers to resolve own client computing & telecommunication issues via training, education, and online IT tools and information
b. Develop and publicize Service Level Agreements to align customer expectations and IT capabilities
c. Expand the use of remote tools such as ZenWorks for Support Specialists to maximize client support
i. Remote Control/Management
ii. Remote Software Distribution
iii. Remote Desktop Computer Inventory
iv. Etc.

?? **OBJECTIVE 5:** Implement processes to provide high quality and timely support for desktop environment from deployment to retirement.
   a. Streamline and formalize new equipment processes for procurement, configuration, delivery and setup of desktop equipment.
   b. Formalize procedures and processes for onsite customer support
   c. Formalize procedures and processes for remote (via the network) support of desktop environments

?? **OBJECTIVE 6:** Ensure that ITS Support Specialists & Telecommunication Specialists have equipment commensurate with the desktop equipment and software that they will be supporting for their customers.

?? **OBJECTIVE 7:** Implement preventive maintenance processes for desktop/client equipment to increase reliability for and productivity of end-users
   a. Printer preventive maintenance
   b. Desktop computer preventive maintenance
   c. Phone Service preventive maintenance
**Goal 8:** Integrated Information Technology Services and Systems: The ITS Department will strive to maximize user productivity, minimize data redundancy, and maximize data integrity by continuing to identify opportunities for system integration, and executing these efforts where appropriate.

**OBJECTIVES & STRATEGIES**

?? **OBJECTIVE 1:** Continue to assess and eliminate legacy systems, and integrate functionality into existing CWU computing environments.
   a. Eliminate legacy and standalone systems with functionality that can be incorporated into the CWU EIS.
   b. Eliminate all existing systems with functionality that can be provided via the University’s messaging system or provided via web technology
   c. Utilize Application Service Providers (ASP) as appropriate to minimize reliance on older technology, to reduce support and ultimately TCO.

?? **OBJECTIVE 2:** Develop, integrate and implement systems that meet customer requirements, but that minimize ongoing operations and maintenance costs
   a. Minimize unique changes and custom code/modifications to supported applications and systems
   b. Implement systems and support structures that minimize TCO and user costs by maximizing use of “vanilla” applications and systems
   c. Inform users of the benefits of changing business practices to take advantage of system capabilities

?? **OBJECTIVE 3:** Ensure application level and related projects are executed to provide maximum benefit to CWU
   a. Implement an ITS Work Request & Prioritization Process to ensure that all PeopleSoft and related projects are inline with CWU goals and provide maximum ROI to the University
   b. Convene an EIS Advisory Committee and CWU IT Steering Committee to prioritize and sponsor all application related projects and initiatives.
   c. Utilize the University Information Technology Advisory Committee to assist in the review and strategy planning for application initiatives at CWU.

?? **OBJECTIVE 4:** Implement structured processes for all ITS supported applications to minimize potential for unplanned outages and to ensure systems are maintained at optimal performance level.
   a. Configuration Management Process
   b. Patch Upgrade Process
   c. Implement and publicize maintenance and upgrades schedules and processes

?? **OBJECTIVE 5:** Develop and cultivate relationships with vendors of major applications & systems
   a. Provide feedback and recommendations for improvements to service and systems
   b. Identify opportunities to partner to reduce costs, provide Beta testing, etc.
SUMMARY: As noted on page 4 of this document, there are four overall IT goals for CWU that must be achieved for CWU to meet its overall strategic goals and its academic mission. These IT goals are:

1. CAMPUS ENVIRONMENT: Distinguish CWU as a modern and innovative university that provides a quality and state-of-the-art learning and living environment for students.
2. ACADEMIC AND RESEARCH: Enhance the academic and research activities of CWU faculty by providing innovative & modern technology tools and unrestricted access to academic and research information.
3. STUDENT LEARNING: Provide an environment where technology enriches the learning experience of CWU students; prepares them for technology use in their careers; and provides for anywhere, anytime scholastic access.
4. ADMINISTRATION AND STUDENT SERVICES: Create an efficient and productive administrative & student services environment that minimizes the University’s operational costs while maximizing the services provided to University stakeholders.

The intent of Revision 1.0 of this document is to focus on how the ITS Department will accomplish its responsibilities in support of these goals and the mission of the CWU. Future versions of this document will expand to become an overall IT Strategic Plan for all IT areas of CWU.

While some areas of the CWU computing infrastructure supported by the ITS Department are in good shape, other locations and areas are in need of substantial attention and investment of time and/or funding. The ITS Department’s plan, as noted in the previous pages, is to combine world-class customer service and communication with support for new and existing systems in support of the academic mission of the University.

The ITS Department can not accomplish this strategic plan alone. It can only be achieved with input, involvement and commitment from all IT stakeholders of CWU, and with cooperation and collaboration between the ITS Department and the other CWU departments that provide IT support.
## APPENDIX A: Glossary of Terms and Abbreviations

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACD</td>
<td>Automated Call Distribution system</td>
</tr>
<tr>
<td>ASP</td>
<td>Application Service Provider. Third party company that provides access to an application via the web/Internet.</td>
</tr>
<tr>
<td>AV Software</td>
<td>Anti-virus Software</td>
</tr>
<tr>
<td>AVVID</td>
<td>Architecture for Voice, Video and Integrated Data. This architecture consolidates the delivery of audio, video and traditional data over an IP network. Audio/Voice in AVVID is not limited to telephony services.</td>
</tr>
<tr>
<td>CAT-III cabling</td>
<td>Network copper cabling environment (twisted pair) that supports 10Meg bandwidth (10baseT)</td>
</tr>
<tr>
<td>CAT-V cabling</td>
<td>Network copper cabling environment (twisted pair) that supports 100-150Meg bandwidth (100baseT)</td>
</tr>
</tbody>
</table>
| Classroom        | Lecture room for the delivery of instruction. Classrooms may have a console with a computer workstation and other support equipment, or they may have no IT equipment to support instructional delivery. Classrooms that are filled with computer workstations for student access are defined as “Laboratories”.
| Computer Laboratory | Instructional room that is filled with computer workstations for student usage. Laboratories can be used to supplement lecture courses requiring occasional access to computers for students or they can be the primary room where instruction is delivered. |
| Configuration Management Process | Structured process to ensure that all changes to IT systems are reviewed, prioritized, accomplished, tested, implemented and maintained in accordance with good IT practices. |
| CWU              | Central Washington University                                               |
| EIS              | Enterprise Information System or Executive Information System               |
| FAQ              | Frequently Asked Question                                                   |
| In Kind Support  | Assistance in the form of free equipment, hardware, software or technical support/consulting that is provided by a vendor free of charge or at significantly reduced costs. |
| Laboratory       | See Computer Laboratory                                                     |
| Life Cycle       | The six primary stages in the life of an IT system that include Strategy, Requirements Analysis, Design, Development, Implementation and Maintenance |
| Local Area Network (LAN) | Network that is limited in size to a small geographic area such as a building or a small group of buildings or campus. |
| N+1 Redundancy   | Architecture that ensures that there is enough capacity to maintain operations if any single unit fails. N+1 redundancy for air conditioning would mean that if N air conditioners are needed to cool the data center, that there is 1 additional unit for failover. |
| PDA              | Personal Digital Assistant or Personal Data Assistant                        |
| ROI              | Return On Investment                                                        |
| Stakeholder      | Any individual or group of individuals with a relationship to IT at CWU. Stakeholders include service providers, community members, business partners, faculty, staff, students, vendors, etc. |
| Subject Matter Experts | IT customers in various departments across the University who are experts in their field, and in how their department utilizes IT |
resources to accomplish their jobs. These personnel are often involved in user training and IT assistance in their areas.

<table>
<thead>
<tr>
<th>TCO</th>
<th>Total Cost of Ownership. The total cost over the lifetime of an IT system including hardware and software acquisition, deployment, maintenance, training, licensing, follow-on support, user operations, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thin Client</td>
<td>Computing architecture that returns most of the processing to the server, and reduces the need for computing power at the client. This reduces the need to upgrade/replace many older desktop computers, but places greater reliance on the network.</td>
</tr>
<tr>
<td>Tier I Support</td>
<td>The most basic level of IT support that is usually associated with the HelpDesk or Call Center assistance via the phone or email.</td>
</tr>
<tr>
<td>Tier II Support</td>
<td>The second level of IT support that is usually associated with in-house technicians or support specialists who resolve problems in person or via network tools.</td>
</tr>
<tr>
<td>Tier III Support</td>
<td>Technical IT support that is usually associated with vendor or specialized individuals involved in problem resolution.</td>
</tr>
<tr>
<td>UITC</td>
<td>University Information Technology Committee. A committee at CWU made up of representatives from key departments across the University, to advise the University on IT initiatives and goals.</td>
</tr>
<tr>
<td>VoIP</td>
<td>Voice over Internet Protocol, associated with providing telephony services over a data network, to support additional features and to provide both services on a single cabling infrastructure.</td>
</tr>
<tr>
<td>VPN</td>
<td>Virtual Private Network. Network structure that simulates a private/secure network over a public network.</td>
</tr>
<tr>
<td>Wide Area Network (WAN)</td>
<td>Network that covers a large geographic area connecting multiple Local Area Networks. Wide area networks can be public (Internet), or dedicated (owned/leased).</td>
</tr>
<tr>
<td>ZenWorks</td>
<td>Novell suite of tools to provide technical support and capabilities for IT specialists via the network. Tools include remote desktop management, remote software delivery, remote system imaging, remote inventory management, etc.</td>
</tr>
</tbody>
</table>
Yellow boxes identify departments within the CWU Organization that are responsible for an IT service component for the University.