Colorado State University-Pueblo

Technology Plan

2003 - 2006
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I. University Mission and Technology

A. University Mission Statement and Strategic Plan 2002-2007

The University’s name, mission, and role were changed by the Colorado Legislature effective July 1, 2003. From House Bill 02-1324, May, 2002, the University’s new Mission Statement is:

There is hereby established a University at Pueblo, to be known as Colorado State University – Pueblo, which shall be a regional, comprehensive university, with moderately selective admissions standards. The University shall offer a broad array of baccalaureate programs with a strong professional focus and a firm grounding in the liberal arts and sciences. The University shall also offer selected Masters level graduate programs.

The University’s Strategic Plan 2002-2007 contains technology and technology-related goals that guide the work of Information Technology Services and technology decisions across the campus. The plan identifies eight major goals of the University, each of which requires development and support of campus technology. Goal 5 directly addresses technology needs:

<table>
<thead>
<tr>
<th>Goal 5: Information and Technology</th>
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<tr>
<td>Integration of appropriate technologies into the university curriculum and services to prepare students for success, and expansion of access to educational resources and information</td>
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</table>

5.A. Improve student access to on-line services.
   5.A.1. Develop web-based student services including registration, admission and transcripts, student billing and financial aid, degree planning and audit.
   5.A.2. Enhance the student portal to improve services and access for students.
   5.A.3. Develop a “help-desk” system for students with questions about hardware, software and on-line services.

5.B. Support faculty development and integration of technology into the curriculum.
   5.B.1. Develop a plan to continue to phase the appropriate faculty development activities of the Instructional Technology Center from the Title III support to university support.
   5.B.2. Formulate a plan for the routine life-cycle replacement of technology.

5.C. Increase utilization of digitized information and further develop electronic information
   5.C.1. Improve electronic access to library services.
   5.C.2. Improve electronic access to (and distribution of) key University reports.

5.D. Expand library learning materials and research resources in support of the University’s mission.

5.E. Improve the university network infrastructure and Internet connectivity.
5.F. Explore opportunities for joint software licensing agreements, databases, sharing of technical expertise or help desk environments, coordination and consolidation of distance learning activities with other state educational institutions.

B. CSU-Pueblo Technology Vision Statement

Colorado State University-Pueblo will promote and sustain an advanced, integrated, technologically rich administrative environment, and learning environments that prepare graduates in information access, utilization, communication, and creation. This environment will be characterized by

1) access to technology-enabled learning opportunities ranging from the face-to-face classroom experience to the virtual university;

3) access to institutional data and management information systems that support data-assisted decision-making options for the University community;

4) access to online and web-based student services and information; and

5) implementation of technology to enable learning opportunities that provide comparative advantage for students and graduates.

C. Role of Educational Technology

Technology is vital to the mission of the University. Not only must the teaching, research and service components of the university reflect the growing technological character of the world, but our students must be trained in and become familiar with the technologies that support their disciplines and their careers.

Technology offers the opportunity to improve access to necessary and relevant information while promoting communicative skills vital to any career. That is, the university experience, enhanced by current information technologies, provides students transferable skills to any career. Thus, the importance of an information technology plan that crosses disciplinary lines, raises the quality of learning experiences and allows students the effective use of this experience is integral to the mission of a modern university.

Technology also gives the institution increased capabilities to serve the needs of the southern Colorado region by providing remote access to programs and information and by facilitating partnerships in the region. Technology also allows the university community to function more efficiently. In particular, ready access to student and campus information provides the basis for a coherent advising process and promotes student success.

1. The primary roles of technology at our institution include:
   • providing students and faculty with skills needed for the 21st century
   • supporting excellence in teaching by providing tools for enrichment of course content, creation of learning resources, and use of innovative pedagogies
   • providing access to world wide information
   • providing access to specialized research tools and information databases
   • providing equal access to a technology-rich learning for the region's large minority and low-income student populations
• serving the educational needs of the southeastern Colorado community through on-site, distance, and outreach programs to existing and new markets
• promoting lifetime literacy and learning skills
• enhancing opportunities for basic and applied research by faculty and students
• facilitating communication among students, faculty, staff and community
• allowing more effective advising and student support services
• improving efficiency of institutional operation
• providing an administrative information infrastructure for internal and external customers
• placing the university in a competitive position vis-a-vis private and out-of-state institutions
• contributing to economic and industrial growth in the region by fostering linkages and educating business and community leaders

2. CSU-Pueblo envisions a future where:
• students have options in terms of both time and place to access course content and information
• unique programs are offered through distance learning
• technological literacy is the norm for students and faculty
• campus, student and faculty information is readily available
• the campus is linked in dynamic ways to local business and industry
• an integrated technology environment supports both compatibility and diversity
• software, hardware and faculty expertise are maintained at a level consistent with the standard in each academic discipline
• there is sufficient access to technology at four levels:
  1) Internet & general productivity
  2) library and other information resources
  3) discipline specific technology
  4) administrative data accessible through Web-based technology
• an electronic work environment eliminates duplication of effort and augments traditional media
• technology enables timely and effective decision-making

D. Services Provided by Information Technology Services

Information Technology Services is responsible for the University’s computing and communications infrastructure. In addition to this responsibility, the department provides direct services to the campus community as described below.

1. Generates and maintains central accounts for the campus and remote sites including PSAS South, and the Continuing Education Office in Colorado Springs and other remote sites.
   • Electronic mail accounts for faculty, staff, and students.
   • Administration Information Systems (AIS) accounts for faculty and staff.
   • Web services for faculty, staff, students, and departments.
   • Blackboard Courseware accounts for faculty and courses.

2. Supports workstations and peripherals including software and hardware on campus and at remote locations.
   • Office workstations for faculty and staff.
• Classroom computer and multimedia equipment.
• Computer laboratories.

3. Supports academic course activity.
   • Delivers A/V equipment to classrooms.
   • Provides satellite downlink services.
   • Provides software for statistics, online courseware tools, and other by request.
   • Manages the Instructional Technology Center.
   • Engineers and installs new classroom technology configurations.
   • Administrates environment for academic student programming.

3. Plans, develops, and supports the campus information and telecommunications infrastructure including voice and data networks, servers, software, backup systems, power backups, and other systems.

4. Provides university web services through the campus Webmaster and manages the University’s web presence on the Internet.

5. Develops and maintains institutional database, backups, and associated programs including AIS, financial aid, Blackbaud, EMAS, PowerFaids, and many other departmentally unique software applications.

6. Provides telephone service and switchboard services to the campus and remote locations including PSAS South.

7. Provides technical planning support and installation for building remodels for information and telecommunication systems.

8. Provides information technology expertise, leadership, and vision to the campus and community through campus committees, alliances, grants, and individual consultations.

9. Pursues outside funding to support infrastructure and service delivery resources.

II. Planning Process

The explosion of technology on campus, both in the functions it performs and the scope of its use, has necessitated fundamental changes in the way technology planning is done. CSU-Pueblo has responded to these changes by expanding the pool of individuals involved, so that all aspects of institutional operation are represented in the planning process. In 1997, the Provost charged a Faculty Senate Ad Hoc Committee to review current computing technology at the university to determine faculty needs and their perception of related campus strengths and weaknesses. The committee examined existing technological resources and analyzed data collected from faculty via surveys and focus groups. The final report included an overview of the current state of technology and made recommendations as to future technology needs and support. These recommendations were included in the development of the Technology Plan. The Teaching and Learning Technology Roundtable (TLTR), comprised of a representative cross section of academic, administrative, and student communities was also established in 1997. It served as a collaborative planning vehicle for developing, sharing, and using
technology for teaching and learning and expanding access to education online and in the classroom. In Fall 2002, the Provost replaced the TLTR with the Instructional Technology Advisory Committee (ITAC) with a charge to study and advise Academic Affairs concerning the implementation of distance learning and instructional technology, and in 2004, the Faculty Senate formed the Information Technology Board that replaced the ITAC.

The University’s Administrative Computing Advisory Committee is composed of members from key administrative departments, and provides information and direction regarding administrative institutional priorities. It meets on a regular basis to discuss topics and issues that face the administration and use of university data today and in the future.

This document represents a plan that will continuously evolve to reflect the ever-changing face of technology and technology needs of the campus consistent with the University’s Strategic Plan. With the continuing development of comprehensive, coordinated and coherent guidelines for technology, resources will be deployed and utilized with maximum effectiveness and efficiency.

III. Existing Technology and Usage

A. Overview

Faculty and students at the Colorado State University-Pueblo have access to over 1,450 desktop computers on campus. Students access campus computing resources in two public and twenty-seven departmental lab facilities. Network facilities deployed to all campus buildings provide connectivity to all central computing resources maintained by Information Technology Services (ITS) including productivity software, electronic mail, the Internet, web services, and administrative databases containing student, human resource/payroll, and financial information. Access to discipline-specific software is supplied by related departments or colleges on a limited basis. Campus-wide standardization of office productivity software and classroom systems provides a common tool for collaboration and support, as well as a common interface for users.

The Colorado State University-Pueblo computing and network infrastructure consists of the main campus; Pueblo School for the Arts and Sciences (PSAS), a charter school located on the south side of Pueblo; and Continuing Education extension offices Colorado Springs. In addition to the campus functions, partnerships include the County of Pueblo, the Arkansas Valley Library District, St. Mary-Corwin Medical Center, Arkansas Valley Connect Colorado Network, Pueblo School Districts 60 and 70, and the CSU System. Off-campus access includes a Web presence with university information including academic programs, admissions, registration and campus events, news, and directories. Web accessible syllabi and other course-related materials are available through the University’s web presence or Blackboard Courseware. Library resources include card catalogue and electronic index searches with Web-based access. Electronic mail access is available through a web-based service to all students and faculty. The following chart provides data concerning information technology on the campus.

<table>
<thead>
<tr>
<th></th>
<th>1998/99</th>
<th>1999/00</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002/03</th>
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<tr>
<td>Total campus computers</td>
<td>1,049</td>
<td>1,250</td>
<td>1,275</td>
<td>1,450</td>
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<tr>
<td>Campus servers supported</td>
<td>19</td>
<td>32</td>
<td>29</td>
<td>28</td>
<td>36</td>
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<tr>
<td>Total AIS accounts</td>
<td>140</td>
<td>300</td>
<td>500*</td>
<td>600</td>
<td></td>
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<tr>
<td>-------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Active Network connections</td>
<td>1228</td>
<td>1350</td>
<td>1850*</td>
<td>1900</td>
<td></td>
</tr>
<tr>
<td>Student accessible computers</td>
<td>427</td>
<td>491</td>
<td>518</td>
<td>558</td>
<td></td>
</tr>
<tr>
<td>Computer laboratories</td>
<td>34</td>
<td>34</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multimedia classrooms</td>
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<td>22</td>
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<td></td>
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<tr>
<td>Movable multimedia carts</td>
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<td>14</td>
<td>16</td>
<td></td>
<td></td>
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<tr>
<td>Web CT/Blackboard courses</td>
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<td>34</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Interactive Video rooms</td>
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<td>1</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Technology Services Budget</td>
<td>$1,036,995</td>
<td>$1,062,816</td>
<td>$998,138</td>
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<td>Operating Budget</td>
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<tr>
<td>Staff FTE (General Fund budget)</td>
<td>19.0</td>
<td>18.0</td>
<td>20</td>
<td>20</td>
<td></td>
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</tbody>
</table>

** One-time funding from State

$185,463 for spec. projects

B. Campus Technology Infrastructure

The campus backbone consists of a star topology, fiber optic-based network with the Administration Building as the central hub and the Library building as a satellite hub for the west side of the campus. The campus has implemented Gigabit Ethernet as resources and utilizes intelligent switched hub network technology. The Central Computing Center servers are available for both administrative and academic use, providing access to the institutional database, electronic mail services, office productivity software, web services, Blackboard Courseware, academic computing software, Library, financial aid programs, alumni and development, and other services. Network operating systems include UNIX and Microsoft.

The campus Administrative Information System (AIS) is based upon an Oracle database and has a three-tiered platform architecture using a database management information system (DBMS) and a Windows client/server environment. AIS provides information for purposes of student, financial, and human resources/payroll services, and University resource decision-making. A number of other client/server administrative applications interface with the AIS including admissions, records, financial aid, development and alumni, and housing.

Off-campus access to information is provided for several university departments and affiliates via WAN access including:
- The Pueblo School for the Arts and Sciences
- District 60 High Schools Library access
- Continuing Education - Colorado Springs office
- School District 70 Library access
- The Greenway and Nature Center access to the Internet.
The University telephone system consists of a Fujitsu 9600 XL series PBX, voice mail hardware and software, and supporting wiring infrastructure. In addition to handling campus needs, the phone system extends via dedicated T-1 circuits to University affiliates such as the Pueblo School for Arts and Sciences (PSAS) and the Pueblo Greenway and Nature Center. The switch provides service for approximately 2,000 telephones, modems, and FAX machines.

Other technology infrastructure includes: Diesel-powered backup generator for the central computing facility and telephone system; T-1 circuits for point-to-point communications, long distance services; data communications; analog and digital trunks for voice communications; and campus intra building wiring and electronic classroom equipment. Satellite services are utilized at the University for the wireless reception of voice, data and video transmissions.

IV. Current and Future Needs

The following sections contain lists of current and future technology needs at CSU-Pueblo. These bullets represent values and ideas for technology access, content, and support roles developed through collaborative work among campus constituencies. The last two sections of Part IV include goals and investment needs.

A. Access

1. Student access is critical to CSU-Pueblo’s ability to provide equal opportunity to all students. To accomplish this, CSU-Pueblo needs
   • Fully networked classrooms with 20-35 computer workstations and projection capability
   • Class time access to the use of instructional technology fully integrated into the classroom
   • Classrooms with instructor computer, network access and projection capability
   • Computer laboratories with discipline-specific software and hardware
   • Supervised and secure labs and classrooms to allow expanded use.
   • General purpose labs
   • Robust Internet connectivity
   • Remote access to courses and course information
   • Local and remote access to university information and e-mail
   • Subscription based on-line research databases and related document retrieval
   • Internet and campus network connectivity from residence halls
   • Online access to registration and other student services and information.

2. Faculty access to technology can be maximized with
   • Technology to support research by faculty
   • Robust Internet connectivity
   • Local and remote access to university information and e-mail
   • Technology Instructional Design Resource Center
   • Full-time Instructional Designers
   • Faculty offices with multimedia equipped systems
   • Subscription based on-line research databases and related document retrieval

3. Administrative access is critical to the administration’s smooth functioning, with
• Internet and Web-accessed services
• local and remote access to university administrative information and e-mail

B. Content

1. Community programs can be enhanced through the use of
   • distance learning
   • university information/expertise.

2. Classrooms and laboratories give teachers and students a chance to work with technology after hours, and on weekends with
   • technology integrated into the curriculum
   • new classroom teaching methodologies
   • new classes that teach technology
   • new laboratory experiences
   • modern multi-media materials and equipment.

3. Other learning environments are important, too, such as
   • on site independent learning
   • information/library databases
   • modern multi-media materials and equipment.

4. Faculty and Staff functioning can be improved by
   • effective communication
   • efficient institutional operation
   • course enrollment information
   • advising and student information
   • financial information and processes.

5. General
   • workplace/research technology access
   • Internet information
   • administrative services through the Web for faculty, staff and students.

C. Support

1. Student support
   • lab and network resources
   • trained lab monitors
   • Help Desk
   • online information and service

2. Faculty support
   • Instructional Technology Center (training in technology and related pedagogy, incentives, technical assistance in classrooms and offices, upgrades of hardware and software, training and support materials)
   • maintenance of office and network resources
   • Help Desk

3. Staff support
   • technology training
• technical assistance in offices and library
• upgrades of hardware and software
• user training and support materials
• maintenance of office and network resources
• Help Desk

4. Technology Services support
   • professional development
   • technical staffing to support Help Desk
   • upgrades of hardware and software

D. Goals

The University’s mission has three primary components: teaching (preparing students for productive careers and life); research and scholarly/creative activity (necessary for the advancement of knowledge and high-quality teaching); and service (contributing to the development of the city and the region). The goals with respect to the use of technology are related to the fulfillment of the University’s mission and are described below.

1. Teaching with technology can offer faculty a way to
   • to provide all students with a base of general and discipline specific technological skills and experiences commensurate with those expected by the academic and professional world
   • to provide students with ready access to information needed for course work and remote access to degree programs
   • to provide students with current laboratory experiences
   • to allow students to experience the use of technology as an instrument of communication and learning
   • to provide an alternative or supplemental means of delivery of instruction
   • to provide faculty with the technological tools and methodologies required to support excellence in teaching, including the use video and computer technology
   • to allow faculty to utilize a variety of technologies and pedagogies

The expected outcomes of achieving these goals are many, including
• more marketable graduates
• improved student learning, satisfaction and success
• ability of students to function in a rapidly changing technological environment
• recruitment of students
• increased retention rate
• graduates that are information-literate lifelong learners
• a curriculum in line with needs of employers
• maintenance of a competitive edge in the distance learning environment

2. Research and Scholarly/Creative Activities
   • to provide the most effective tools to support excellence in research and scholarly/creative activities
   • to provide ready access to information resources
   • to facilitate the communication essential for collaboration in scholarly activities
The expected outcomes of achieving these goals are:
• more undergraduate research opportunities
• more collaborative research ventures
• increased faculty research productivity
• increased funding of research grants

3. Service
• to provide technological tools to support service activities
• to provide the technological infrastructure, applications, and administrative information systems required to support the above goals

The expected outcomes of achieving these goals are:
• increased visibility of the institution
• facilitation of community/business partnerships
• better communications in support of the decision making process
• more efficient use of resources through the use of technology
• more efficient use of technological resources

E. Investments

1. Hardware/equipment
• computer equipped classrooms
• video projector equipped classrooms
• computer laboratories and similar learning environments
• distance learning classrooms and resources
• technology/distance learning/instructional design center

2. Infrastructure
• university Intranet
• network connectivity for laptops and wireless nets
• increased network bandwidth
• improved server/back-up capabilities
• updated wiring and network technology

3. Software/subscriptions
• upgrades
• e-mail system
• improved administrative Web-based systems
• broader distribution of software beyond office productivity
• easier and broader access to information databases

4. Personnel
• increase technical support staff to keep pace with technology growth
• academic/distance learning support staff
• training and development support staff
• student employment

5. Professional development
• incentives
• release time
• travel funds
• training programs

V. Capital Expenditure Prioritization

Since the purpose of the university is to educate students, we believe that pedagogical use of technology should receive the highest priority. However, technology-rich classrooms and labs will not produce the desired results without the infrastructure and equipment, faculty and staff development, and technical staff to support them. Below is listed what is currently required, along with an assessment of current funding practice: Adequate, Marginal, Inadequate, or None.

Technical Support Staff: Existing levels of support staff do not meet current needs. Major technical support needs include staff for web-based information systems, distance education, network security, desktop technical support, distance learning systems, and data management. Current funding: Inadequate.

Required annual operating budget: existing + 280,000

Discipline specific software and hardware: The use of technology in instruction is no longer considered innovative or experimental. For this reason, external funding for instructional technology projects is becoming more and more difficult to secure. Due to the unique nature of the technology used many disciplines, either the software or the hardware available in general purpose labs is insufficient to meet instructional needs. As technology moves into the mainstream, so must the necessary funding. Current funding: Marginal.

Required capital investment (hardware): 50,000
Required annual operating budget: 186,000

Instructional Technology Center: To continue to incorporate technology into the curriculum, create an Instructional Design Resource Center with discipline-trained instructional designers to assist faculty and to provide a production facility for multi-media authoring must continue to be available on the campus. (Title III grant ended 2005.) CSU-Pueblo MUST Assume costs to continue the service.

Required annual operating budget with staffing: $75,000

Distance learning: Technology to support this function includes additional video capabilities both on campus and to the student in their homes and places of business. Support is required for both synchronous and asynchronous distance learning environments. Specifics include advancements in bandwidth to off-campus, as well as enhancements in firewalls to promote security. Current funding: Marginal.

Full-time staff position (annual): 50,000
Required annual operating budget: 40,000
Network and central computing infrastructure: A robust, fast, secure, dependable, and responsive infrastructure is a necessity. Improvements to the campus backbone and to building network infrastructures are necessary to meet the needs of the institution. Current infrastructure is not adequate to support future demand including the growth in the use of video, distance education, wireless networking, and web-based information distribution across the main campus and to remote sites. Current funding: Inadequate.

Maintenance/upgrade of existing computing resources: Technology becomes obsolete in a matter of a few years. Recent expansions in the use of technology cannot continue without ongoing funding. A continuous budget cycle needs to be established, such that approximately one third of the technology related equipment and software is replaced or upgraded each year to maintain currency. Current funding: Inadequate.

- Required annual operating budget per 1,000 computers: $600,000

Information Support Services functions: The University Administrative Information System (AIS) and other mission critical information systems have been integrated and are supported by client/server windows based applications. These systems serve as the primary administrative information resource systems for the University. Level of support for current operation: Inadequate.

Administrative technology will be developed with the understanding that CSU-Pueblo will be providing instructional and business services through the world wide web. The provision of these administrative services requires the investigation, evaluation, and deployment of technologies and tools necessary to move the services to the Internet while maintaining security and functionality. Other services and technology will also be integrated to increase support of the administrative and academic information functions of the University.

- Required annual operating budget: $90,000

Technical staff development and training: On-going staff development is critical to the development and deployment of all technologies necessary to accomplish the mission and goals of the academic and administrative functions. Current funding: Inadequate

- Required annual operating budget: $30,000

Help Desk: With the increase in the number of users and the breadth of applications of technology there is demand for technical assistance beyond a regular 40 hour work week. This service should be provided for faculty, students, and staff on a widely available basis. A staff help desk available seven days a week for approximately 12 hours per day with fully deployed help desk software is needed to provide a reasonable help desk function for the campus community, and provision of technical staff backup is required for evenings and weekends. Current funding: Inadequate

- Required annual staff funding: $120,000
VI. Cost/Benefit Analysis

A. Returns to Colorado

The long-term benefits derived from this investment extend far beyond the immediate benefits to our students. They include the ability to prepare the educators of tomorrow's citizens, to offer qualified employees to industry and to attract new businesses, as well as the provision of assistance for many Colorado residents to make the transition from being dependent on public funding to being taxpayers. As the primary educational resource for this region, CSU-PUEBLO prepares students to contribute to Colorado's economic growth in an increasingly competitive global market. Investment in technology at CSU-Pueblo is an investment in the future fiscal health and quality of life of the region and the State of Colorado. This kind of investment will reap long term rewards that go far beyond specific immediate and predictable benefits.

B. Viability and Commitment of the Institution

Individuals and departments have worked hard to achieve maximum benefits from available resources. Despite underfunding, they have demonstrated extraordinary commitment to serving students well, using creativity and innovation for which some have achieved national recognition. The immediate cost of funding CSU-Pueblo's plans for developing technological resources is negligible compared to the cost of failure to do so. At stake is our future as an institution with a polytechnic emphasis in the next century, and perhaps even our future as an institution.

C. Needs of Employers

Surveys of graduates and employers from several of our programs have clearly shown the need for producing computer-literate graduates that are well-versed in their disciplines. In the technical fields as well as in most other majors, those students well-grounded in the use of computer tools and/or information technology find well-paying summer jobs early in their academic careers and upon graduation are sought by employers. Students without these skills are at a disadvantage in today's job market. Tomorrow the disadvantage will be even greater.
D. Demand and Support by Students

Students in all fields and disciplines are expected to use technology in their work in a way that reflects current practice in business, industry and academia. In many classes students required to make oral presentations choose to use computerized presentation tools. In the sciences, programs are measured by the scope and application of technology both in and out of the classroom. If the technology required for these critical components of the curriculum cannot be provided, students will leave for schools with better technical support.

Students have realized that technology costs money and requires ongoing support. In 1992, the Associated Student Government voted to impose a Technology Fee on all students at CSU-Pueblo. The purpose of this fee is to improve student access to computers and information technology. Although it covers only a small portion of the costs of information technology at CSU-Pueblo, its existence is a clear signal of the need and importance that students, their parents, and future employers place on computer literacy.

E. Summary Overview

In order to meet the needs of the state, students, faculty and employers, technology must be managed in a systematic way. The Technology Plan presented here is but part of our response to this requirement. This plan is evidence of a process that is in place to manage the effective and sustained integration of technology into the way the university functions. The plan examines the many facets of technology and individual needs of students, faculty and administration in all programs and departments.

The costs of installation, training, support, and replacement are large. However, the benefits of integrating technology in a coordinated, well-planned manner far outweigh these costs. For students, the benefit is an education providing current technological skills and forming a foundation for life-long learning and satisfying careers. For employers the benefit is a well-educated and technologically literate work force that can compete effectively on a world-wide basis. For the community the benefit is a growing tax base from healthy companies and affluent citizens. For the university the benefits are a growing number of students who are satisfied with their education and the ability to reach into remote regions to serve the citizens of the state.

In addition to this, technology plays an ever-increasing role in scholarship and research. If the University is to fulfill its mission, it must successfully integrate the use of technology into its educational, operational, and leadership roles. The degree of success will be a major factor in attracting and retaining the students, faculty, and staff of the university.

During the next few years the rapid evolution of technology will require decisions about resource allocation that will have dramatic impacts on the university community and the region. The university’s ability to compete in the next century will be a measure of the success of the process of planning, allocation, and funding.