



Information Technology Services

Preliminary 2011-13 Initiatives and Priorities

Information Technology Initiatives at a Glance

In Support of:

Data Integrity and Security

- Acquire funding to support an institutional Information Security Officer

Marketing

- Acquire resources to implement and support a revised and enhanced web presence

Campus Infrastructure

- Voice Over Internet Protocol (VOIP) telephone system
- Upgrade and enhancement of Wireless Networking
- Implement email archiving for increase inbox capacity and document retrieval
- Expand our Storage Area Network (SAN) for electronic documents and media
- Adequately resource the hardware/software maintenance utility fund
- Seismic refit of machine room server racks

Decision Making

- Acquire and implement a Financial Data Warehouse
- Implement the Banner Budget Module
- Acquire resources to support a System Analyst for Workflow

Faculty Staff and Students

- Acquire on-going funding for Elluminate (or equivalent) eLearning & collaboration software
- Acquire on-going funding to regularly replace electronic equipment in mediated classrooms
- Acquire and implement fsaAtlas (foreign student/academician) visa reporting software

Sustainability

- Implement a sustainable model for student printing
- Enhance the use of virtual servers in the data center

Institutional Research

- Continue enhancement and usefulness of Dashboard data and presentation

Information Technology Services

Preliminary 2011-13 Initiatives and Priorities

Data Integrity and Security

- Acquire funding to support an institutional Information Security Officer

Information Security continues to be high on the priority list of the Board of Trustee's Audit Committee and high on the priority list of the administration. This initiative proposes to hire a senior level IT position to lead in development and implementation of information technology security policies, procedures, and equipment to make the University more secure against data attacks and other information security risks. Will include periodic assessment and audit of security procedures of both central and de-central systems. The total salary for the position would be \$105,000. Bridge funding may be available for FY 10-11 but permanent funding would need to be designated in the 11-13 biennium and beyond.

Marketing

- Acquire resources to implement and support a revised and enhanced web presence

The University continues to rely more and more upon the Internet and web applications for the delivery of instruction and information. Prospective students rely upon the information on our web pages and their initial contact with us and throughout their decision process. Current students rely upon the content available to them through our learning management system for their studies. They also rely upon the business functions available to them through the web for much of their contact with our administrative areas. The public also relies upon our web presence to gather information about Western and it is the one public information source where we can be assured the message is what we intend to deliver.

Western has not invested in its web presence and management for a number of years. With the increased use of BlackBoard requiring additional time commitment to the instructional process, our web staff has been stretched beyond normal capacity. Even with the heavy demand, when constituents receive help from Web Services the staff are given high marks for responsiveness and quality. This proposal seeks to provide two positions in our Web Services area to support the enhanced marketing, information, and content management efforts of the university. Even with this addition, it will only slightly increase our capacity because we have been fortunate to be able to utilize the services of a web developer funded by a grant during the past two years. However, when the grant ends we will lose this capacity as well unless further funding is acquired. Estimated need is \$120,000 (2 positions) plus benefits.

Campus Infrastructure

- Voice Over Internet Protocol (VoIP) telephone system

The current university telephone system PBX was installed and activated in 1999 to replace the older (1983) non-Y2K-compliant system. The PBX has been maintained and upgraded to be in good working order as of today and, although the system is still supported by the manufacturer, new developments in hardware and software have slowed or are no longer produced due to the age of the technology and the industry trend moving to VoIP.

A VoIP system has several advantages over the present system, including a feature-rich unified communications platform seamlessly combining desktop computing, video conferencing, and voice services (including wireless). The system takes advantage of the existing data network infrastructure reducing the need for separate cabling and equipment to benefit current and future installations. A capital budget request will be made for this project.

- Upgrade and enhancement of our Wireless Local Area Network (WLAN)

The use of the WLAN on campus (supporting portable computing and telephony devices) has moved from alternative use to commonplace in support of the University's educational mission. Their primary values being increased mobility, safety, productivity, and convenience. The current WLAN was developed and funded under the Student Technology Fee (STF) structure beginning seven years ago and has become outdated. The system does not cover significant portions of campus and accessibility has not kept pace with increased demand for this service.

Because of inadequate coverage and capacity in certain areas, the University is experiencing uncontrolled and exponential growth of ad hoc Wi-Fi networks by early adopters who have installed their own non-secured (rogue) Wi-Fi routers thereby seriously compromising the security and integrity of both our current wired and wireless network. This trend is likely to continue without upgrading and expanding this service by providing industry standard, ubiquitous, and secure wireless network services. A capital budget request will be made for this project.

- Implement archiving for increase inbox capacity and document retrieval

We would like to expand our Exchange messaging architecture to include automatic email archiving. This technology allows older messages to be stored on cheaper disk technology than the Exchange environment thus keeping the Exchange environment running more smoothly while giving the user the impression of a much, much larger inbox. Message still look like they are in the inbox but the older messages are simply a "stub" pointing to the actual message on the less expensive storage. This technology would also help us with requirements for document retention. Local stores (.pst files) would no longer be required for people to store messages because of current mailbox size limitations. Based upon a recent contract by the Evergreen State College, the cost per mailbox is \$22.00 plus 18% maintenance. WWU approximate licensing cost would be \$100,000 plus \$18,000 maintenance per year. Seven thousand has been added as contingency to the project for total cost of \$125,000.00 Disk space for the project would be provided by repurposing the disks used in the Novell to Microsoft project. Maintenance fees after the first year would need to be allocated to the Utility Fund.

- Expand our Storage Area Network (SAN) for electronic documents and media

We continue to see increased need for electronic storage of documents and media. Our current SAN will be at capacity by the end of the year but the demand continues to grow with the movement of existing applications to this cheaper storage (BlackBoard, Banner, SQL, etc.) and the growth of new applications (video capture and streaming, digital asset management, etc). One-time cost of \$150,000 (replacement of current EVA SAN with larger frame) plus on-going costs of \$30,000 (maintenance & drive expansion).

- Adequately resource the hardware/software maintenance utility fund

The utility fund has not kept pace with either the vendor increases of maintenance or the need for replacement of servers. This is a critical need that will be exacerbated by the addition of new software functionality such as fsaAtlas, Budget, Advancement, Event Management, or Workflow software. Estimated need is \$90,000 per year.

- Seismic refit of machine room server racks

While we have disaster recovery services in Bond Hall and at Portland State University, we should do whatever we can to minimize any impact to our main server room in the event of an earthquake. Originally the design was to strap the machine racks to the floor. This method is no longer considered best practice for seismic protection. A new technology has proven its value during a number of actual earthquakes (see Figure 1). This project would install seismic isolation platforms under each of our server racks. The preferred solution exceeds UBC/IBC Seismic zone 4 code requirements and can be installed without shutting down needed services. Estimated cost is \$100,000.00



Figure 1.

Decision Making

- Acquire and implement a Financial Data Warehouse (in collaboration with BFA)

We currently do not have the ability to create effective management reports consolidating data from the budget, finance and human resources Banner systems. Current SCT/Banner software is inflexible, data is somewhat difficult to retrieve, and reports are useable but not always self-evident without budget/ finance expertise. Critical management decisions hinge on the ability for management and others to easily access complete and accurate financial, human resources and budget information. Finance data warehouse software allows user-friendly and comprehensive data access to all campus users.

- Implement the Banner Budget Module (in collaboration with BFA & UPB)

While the budget is centrally loaded and tracked within Banner Finance, Budget Development at Western is highly manual, requiring duplicate data entry and maintenance of shadow systems centrally and across campus. In order to implement Banner Budget Development, programming changes were necessary (and this has been accomplished) and changes must now be made to Western's Chart of Accounts. If possible, position control should also be incorporated into the Banner Budget Development and/or improved in the Human Resources module to achieve maximum efficiencies.

- Acquire resources to support a System Analyst for Workflow

We propose adding a ‘workflow czar’ to analyze and implement workflow throughout campus to better utilize existing electronic resources and/or develop enhanced electronic workflow. This would continue our reduction in use of paper forms and increase employee efficiency. The person would be responsible for the analysis of process (an extremely important step since automation of a bad process just makes it faster, not better) and implementation into an automated system (either Banner or another system to be identified). Estimated salary is \$70,000 plus benefits.

Faculty, Staff and Students

- Acquire on-going funding for *Elluminate* (or equivalent) eLearning & collaboration software

In collaboration with the State Board of Technical and Community Colleges and the other 4-year institutions in the State, Western will acquire an 18 month license for *Elluminate*, an eLearning and collaboration tool. We expect the software to become widely used as a collaboration and video tool on campus. We will request on-going funding for continued use of this product. Estimated cost is \$15,000.00 per annum.

- Acquire on-going funding to regularly replace electronic equipment in mediated classrooms

Current budgets cannot cover the cost of operating the increasing number of mediated classrooms and computer labs. The number of mediated classrooms has increased from 30 in 1999 to 130 in 2008. During the same time period, the number of computer lab seats has increased from 300 to 900. This request includes a 5 year replacement cycle for classroom projectors and ancillary equipment. Total on-going request is \$30,000 per annum.

- Acquire and implement fsaAtlas (foreign student/academician) visa reporting software

Federal regulations require Western to maintain and update the “Student and Exchange Visitor Information System” (SEVIS). The fsaATLAS program from SunGard Higher Education is software designed to interface with both Banner and SEVIS to allow the International programs office to manage our international students/scholars more efficiently and effectively. Doug Nord has requested the implementation of this software. The license fee has been discounted to \$18,000 and the basic implementation services (WWU would be responsible for ~50% of the tasks) from SunGard are \$19,980 plus travel. We would expect implementation costs to total \$40,000. This is a needed program if we are to maintain and expand our ability to compete for international students/scholars.

Associated with this request is a request for a permanent increase to the ITS Utility fund of \$2,700 (plus a 4% annual increase) for software maintenance. This amount would be added to our current SunGard Premier Maintenance Program. Failure to fund would result in an increased deficit in the Utility Fund.

Sustainability

- Implement a sustainable model for student printing

This project requires pay stations for students to increase their print balance. Each station requires a piece of specialized hardware, a computer workstation, network connection and power, and installation. We estimate each station will cost approximately \$6,000. Three stations, additional software and server requirements make the total \$20,000. Completion of the project will allow the university to set printing limits for students that are more sustainable than our current practice and will allow for students who exceed their limit to add additional funds to their printing account.

- Enhance the use of virtual servers in the data center

One of the significant things we have done over the past two years has been the use of “Virtual Machines” in our server room to offer increased server capacity with lower costs. It has allowed us to be much “greener” through the use of reduced electricity both for the servers themselves and the associated power and air conditioning. Virtual machines also offer our constituents a less expensive way to bring up a standard, supportable server. Depending upon the application, approximately 8 virtual servers can be hosted on one physical machine. A one-time amount of \$24,000.00 purchases two robust servers to allow us to continue offering virtualization services to the campus.

Institutional Research

- Continue enhancement and usefulness of Dashboard data and presentation

Under the guidance of the Provost, we have developed a business intelligence dashboard for use by our Board of Trustees and executives of the institution. The product was developed using BIRT, an open source reporting system. While BIRT has met our needs to date, it may be that future development requires a more robust application. Cost is to be determined.