

THE UNIVERSITY *of* MONTANA WESTERN

Information Technology Services Seven-Year Strategic Technology Plan (2023-2029)

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Introduction

Information technology continues to be an essential component of higher education and has transformed the core activities of academic institutions. As a result, sound strategic planning for how information technology resources will be cultivated and deployed is essential for the long-term success of the University of Montana Western. In an era of limited financial resources available to public higher education, this need is exceedingly important.

UMW currently has a robust and comprehensive technology program that serves critical areas on campus. These include innovation in instruction, business process enhancement, data-driven decision making and enhanced communications services. The acquisition and planned use of technology to meet these needs at a university level must be vetted through a thoughtful unified process. The goals of this process include research, communication, and prioritization of initiatives to allow decision making regarding the most appropriate timing for technology adoption and implementation.

Statement of Intent

The purpose of this plan is to encourage appropriate campus-wide use of technology. Each of these decisions regarding technology involves budgets, departments, and connectivity. For the campus to take full advantage of the benefits of selected technologies, there must be consideration of infrastructure, long-term use, support, and replacement with every major decision.

This document serves as the first stop for decision makers on campus and the coordination of these academic or administrative efforts is critical and must start with a centralized point of contact, which is the CIO and the Technology Steering Committee.

This plan must be seen as a living document, given that the advance of technology impacts the campus and culture in ways that are rapid and often unpredictable. This Technology Plan will be revisited on a yearly basis by the Chief Information Officer to identify areas of weakness, absence, or change and will be modified accordingly.

This plan prescribes the proper procedures for adoption of new technology and the expansion of existing technologies. It is critical that all parties impacted by this plan understand that the intent of this document and the function of the TSC are to encourage best practice uses of technology in education. The intent of this plan is to provide support for academic use of technologies rather than to govern that use.

The Technology Plan was developed with an awareness of current practice and the evolution of technologies as they impact education and culture in general. The TSC will be charged with the interpretation and enforcement of the plan. There will be timely discussion and recommendations made on all topics brought before the TSC.

Service Overview

The strategic direction outlined in this document incorporates the fact that UMW's information technology environment is not, nor will be, a stand-alone environment.

As a member of the University of Montana Affiliation, UMW is reliant upon core administrative software applications managed by UM. These applications include Ellucian Banner Finance, Ellucian Banner Human Resources, ExLibris Alma Library Service Platform, Transact System and more. The UM Information Technology Services also provides support in the areas of commodity internet service, wide area networks and information security. The UMW CIO also has a dotted reporting line to the UM CIO and is a part of the UM IT Leadership team. UMW also relies on the Montana State Information Technology Services Division (SITSD) for on-site voice technician support.

UMW has developed key relationships with vendors to support applications utilized on campus. These include Ellucian Banner Student Information System hosted in the Ellucian Cloud and all the related components to this system, Microsoft Office 365, Moodle Learning Management Software, Regroup Emergency Notification Software, Maxient Conduct Management Software, StarRez residential and event planning software, and others that fill an important role on campus.

Some of the other factors that will affect the technological direction of UMW include:

- Budgetary resources available for technology staffing will not change significantly during the next five years, but staffing demands likely will increase.
- Demands for new information technology resources and tools, in addition to support for existing services, will continue to grow from within the university community.
- Factors such as the increased consumerization of technology and the growth of mobile devices will continue at an exponential pace.
- Implementing technology implies a financial commitment by the university, and the benefit of that implementation must be weighed against its cost. There will always be a limited amount of funding and support personnel available. Consequently, a need to choose the best use of funds and support staff for technology is imperative.

Technology Governance

Information Technology Services reports to the Office of the Provost with the Chief Information Officer having an additional reporting line to the UM CIO. ITS is a relatively flat organization. All ITS staff report directly to the IT Director with key senior staff members sharing administrative responsibilities. Including the CIO, there are 9 employees comprising 9.0 FTE. There is also a cadre of 2-3 student workers each year that work in the Technology Help Desk. (ITS organization chart is attached as Appendix 1).

The Marketing Department manages the content of the university's web site while ITS manages the technical aspects as well as the web design and programming. The Director of Marketing reports to the Office of the Chancellor. All marketing staff and student workers report directly to the Marketing Director.

The University's eLearning department is integrated into the ITS department and consists of the learning management system (LMS) and instructional design. ITS and eLearning staff work closely together to support classroom mediation and data integration into the learning management system and into high technology classrooms. A majority of the classrooms now consist of a large Smart Board with additional HiFlex classrooms now functioning.

The student computer labs at UMW consist of centralized labs located in the Swysgood Technology Center (STC) and Lucy Carson Library. These centralized labs are maintained and managed by ITS and are composed of both PCs and Macs. In addition to centralized labs there are also two departmental labs that are managed by designated department personnel. These include a Business and Technology PC lab and a Math and Science Mac lab. There is also an additional eSports gaming lab in the basement of the STC for student use. These computer labs, all student support computers and classroom mediation equipment are included in the UMW Student Lab/Classroom Renewal and Replacement Plan.

UMW has several technology related committees that serve to provide input into technology services. These committees include: 1) Technology Steering Committee; 2) Computer Fee Committee; 3) Equipment Fee Committee; and 4) eLearning Committee.

Procedures

The Technology Steering Committee coordinates information technology planning and acquisition on campus. The TSC will guide decisions on changes for the ongoing academic year. Any proposed changes or purchases that affect technology on campus must be coordinated through the TSC (Per UMW Policy 500.3 Technology Steering Committee).

1. All guidelines, policies, and procedures regarding information technology on campus will be reviewed by the TSC. Proposed changes of guidelines, policies, and procedures should be forwarded to the Chief Information Officer.

2. Purchases of standard technology must be reviewed and approved based on supported systems guidelines and purchasing guidelines. All requests should be initially submitted to ITS using the online purchase request form. If needed, ITS may forward requests to the TSC for review and approval. Large acquisitions may be categorized as new technology (Per UMW Purchasing Guidelines).
3. Acquisition of new technology must be submitted to the TSC via the Request for New Technology Form. The TSC will decide in a timely manner to approve, disapprove, or recommend that alternatives be looked at. Decisions by the TSC may be appealed to the Chancellor's Cabinet.

Proposals must be based on supported systems guidelines and purchasing guidelines and must include the following:

- a) Description of the project, including rationale and implementation.
 - b) Dependencies of the technology; those things needing completion before and/or after implementation.
 - c) Plan for immediate and future funding, acquisition, renewal, replacement, and support.
4. The TSC may utilize other technology related committees to get a more in-depth understanding of requested technologies and to receive recommendations from those committees. These committees include:
 - a) Computer Fee Committee –
This group is an advisory committee made up of a minimum of 50% students to provide for student advice in the use of student computer fee funds (Per MUS Policy 940.23 Computer Fee).
 - b) Equipment Fee Committee –
This group is responsible for allocating and approving the purchase of equipment through the use of student equipment fee funds (Per MUS Policy 940.26 Equipment Fee).
 - c) eLearning Committee –
This group is responsible for assessing requests for academic technologies and overseeing use of the learning management system. In addition, they help to promote the use of new technologies and their integration into online and face-to-face courses using instructional best practices.
 5. All grant applications that include a technology component must be reviewed by ITS (and forwarded to the TSC, if appropriate) prior to submission to determine whether

proposed standard or new technology purchases fit within the current campus technology framework.

6. The Student Computer Fee Committee and the Equipment Fee Committee must follow the procedures outlined in this plan. Upon request, a report must be provided to the TSC by the respective budget managers summarizing purchases made during specified years from the Student Computer Fee, Equipment Fee, and Technology Fee accounts.
7. The TSC will meet on a regular basis.

Strategic Direction

This section will discuss how current and upcoming technologies intersect with the technology priorities of the University. Some priorities have remained the same over time and will likely not change, but the details of the implementation of these priorities is constantly changing as new technologies become available, old technologies fade away, and as new ways are discovered to utilize existing technologies. The details of implementation are provided below.

University of Montana Western Strategic Technology Direction

Priority One: Modernize the campus to provide a learning environment that enhances the experience for students, faculty, and staff, both online and in person.

Priority Two: Strive to enhance the efficiencies of faculty and staff by reducing the administrative burden and maximizing their capabilities.

Priority Three: Enhance the online presence of UMW to help prospective students find UMW and existing students to easily accomplish tasks.

Priority Four: Protect and enhance the campus information technology infrastructure through security services, appropriate planning, and policies.

Priority Five: Improve the quality of the experiential education experience of students using technology and eLearning innovation.

Priority Goals and Objectives

Priority One: Modernize the campus to provide a learning environment that enhances the experience for students, faculty, and staff, both online and in person.

Goals:

1. Upgrade to a modern Voice Over IP (VOIP) solution.

VOIP will provide enhance capability by allowing intercom ability, texting, soft phone capabilities and many other modern phone features.

2. Install and configure modern digital signage throughout campus.

Install large LCD TVs with digital signage software in most buildings on campus with a centrally controlled messaging system managed by the communication department. This will provide news and notifications to students, faculty, and staff while giving a modern and high tech appearance in these buildings.

Priority Two: Strive to enhance the efficiencies of faculty and staff by reducing the administrative burden and maximizing their capabilities.

Goals:

1. Implement digital timecards.

The implementation of digital timecards within Banner will reduce the administrative paperwork across all departments and reduce the number of timecard reporting errors.

2. Reorganize campus printing.

With a concerted effort to reduce, or eliminate, the use of paper on campus, it will dramatically reduce the demand for printing by faculty and staff, and potentially students. With this reduction, a large administrative burden can be eliminated by having a centralize printing budget without the need to bill individual departments. This will also reduce the need for licensed software to track printer use.

3. Implement Banner Document Management.

The use of BDM will drastically reduce the amount of printing and copying on campus and will also enhance the efficiencies of all departments that interact with students and student data.

4. Continue to merge UM Western and Helena College ITS departments.

With continued resource restrictions combined with rising demand for IT expertise, combining the ITS resources of UMW with Helena College allows for leveraging the ability of a larger staff with a sharing of the resource expenses. This shared resource model

works for various specialized roles and continuing to expand this model benefits both campuses.

Priority Three: Enhance the online presence of UMW to help prospective students find UMW and existing students to easily accomplish tasks.

Goals:

1. Implement a new version of DAWGS.

Version 8 of Student Self-service Banner (DAWGS) will be out of support in 2024 and the new version 9 has many enhancements and improvements. Upgrading to the latest version will also natively incorporate SSO and an improved User Interface.

2. Deploy a new redesigned UM Western web page.

The existing umwestern.edu web page is built using the WordPress CMS and has become cumbersome and inefficient. Deploying a new modern REST based web page using the same Cascade CMS that is used by the UM Affiliation and focuses on our marketing message and Search Engine Optimization will improve our online relevance and enhance our recruiting efforts.

3. Provide faculty, students, campus groups, and staff with public-facing webspace that supports classroom instruction and student achievement.

By providing webspace that is available for faculty and staff to utilize to support not only classroom instruction, but also research, creativity, and promotional pages that are not a part of the core webpage, will promote a more vibrant and exciting presence on the web. (Look at domains of one). It would be a different domain, but still tied to UMW.

Priority Four: Protect and enhance the campus information technology infrastructure through security services, appropriate planning, and policies.

Goals:

1. Complete and implement a disaster recovery plan.

By completing the rough draft of the UMW ITS Disaster Recovery plan and then maintain and routinely test it by using tabletop exercises with the full ITS staff, it will better prepare UMW for any cyber attacks or other disaster recovery events.

2. Establish an UM Affiliation Chief Information Security Officer (CISO).

Implementing a shared CISO whose primary focus in on information security

for the smaller affiliate campuses will drastically enhance the security of UMW's technology infrastructure. This position would answer both to the UM CISO and the CIOs of the affiliate campuses.

3. Implement cyber security best practices for UMW Students, Faculty and Staff.

To enhance the security of the UMW network and sensitive data, the implementation of Multi Factor Authentication for all users of UMW technology, mandatory cyber security training for faculty and staff, and routine penetration testing of the UMW network will dramatically enhance the security of the UMW network.

Priority Five: Improve the quality of the experiential education experience of students using technology and eLearning innovation.

Goals:

1. Artificial Intelligence Collaboration and Incorporation

By actively participating in the adoption of AI tools and methodologies into the campus way of conducting business and enhancing curriculum, ITS will play a critical role in defining the role of AI and insuring best safe practices for students, faculty, and staff.

2. Updating computer labs to an experiential work office environment.

The days of the traditional computer lab have passed. By converting our old-style labs to a model office space that is usable as both an experiential classroom or as study and collaboration space, it will contribute to the mission of UMW to provide the premier experiential education experience.

3. Promote a higher technology campus environment by adopting improved student life features.

While UMW prides itself on its outdoor lifestyle in small-town Montana, students today expect modern conveniences and capabilities not only to complete coursework, but also to relax and enjoy their off time. Continuing to enhance the computer gaming lab as well as providing additional fun and interactive services such as a UMW Minecraft Server will modernize the UMW technology environment.

4. Further adoption of hiflex classrooms.

Expanding the number of hiflex capable classrooms to include one in each of the major instructional buildings on campus will expand the capability of flexible teaching and learning environments.

- Expand the professional development training program offered by eLearning to enhance the development of online experiential learning.

Expanding the Making Online Learning Experiential (MOLE) professional development course that was created by the UMW eLearning team to further pioneer this methodology not only for UMW but for higher education in general. This innovative approach will differentiate online learning at UMW from the rest of the offerings across the country.

Appendix 1

The University of Montana Western Information Technology Services Organization Chart

