

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, safety, and security 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, Sentinel One and more. The UM Information Technology Services also provides support in the areas of commodity internet service, wide area networks and information security. Per Montana Board of Regents [Policy 1300.1](#), the UMW CIO has a dotted reporting line to the flagship (UM) CIO who is responsible for the security and integrity of data for the affiliation per this same policy (MUS IT Governance & Reporting Structure is attached as Appendix 2). UMW also relies on the Montana State Information Technology Services Division (SITSD) for on-site voice technician support, though that reliance continues to diminish and will go away with the adoption of VOIP.

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 (migrating to Canvas in 2024), 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 CIO 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 at the Technology Help Desk. (ITS organization chart is attached as Appendix 1).

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

The University's eLearning department is integrated into the ITS department and consists of the Learning Management System (LMS) administrator and instructional designer. ITS and eLearning staff work closely together to support classroom mediation and data integration into the learning management system and into high technology classrooms. Many 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 and potential competitive events. The 'gaming' lab can also be used as a traditional computer lab. These computer labs, 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 (TSC) 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 using 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: Work with students and faculty to determine the best ways to modernize the campus to provide a learning environment that enhances the UMW experiential education model.

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 the campus information technology infrastructure and maintain regulatory compliance through thoughtful implementation of security standards and procedures.

Priority Goals and Objectives

Priority One: Work with students and faculty to determine the best ways to modernize the campus to provide a learning environment that enhances the UMW experiential education model.

Goals:

1. ITS team members and leadership will routinely meet with faculty senate, student senate and departments to stay informed of student and faculty needs and desires for technological innovation.
2. The CIO will conduct open forum sessions and other formal and informal meetings to promote the exchange of ideas and struggles pertaining to technology on campus.

These open forum meetings will allow productive conversation on what students and faculty feel is needed in a modern campus environment and to help guide long term technology initiatives for the campus.

3. Conduct information presentations about innovative and leading-edge technologies to help inform the campus of the risks and benefits of exciting new technology.

ITS is uniquely positioned to have an in-depth understanding of the uses of modern technology such as AI in the workplace, new cyber security threats, or even industry trends. This knowledge will be shared with panels, think tanks, and committees to help craft the utilization of new innovations by our students, faculty and staff.

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

Goals:

1. Implement technology solutions to reduce the workload of faculty and staff.

By implementing technology solutions such as digital timecards and Banner Document Management, it will drastically reduce the amount of time spent performing administrative tasks, freeing up precious time to improve productivity and workload.

2. Continue to work on shared resource model among the UM Affiliation.

With continued resource restrictions added to the rising demand of IT expertise, sharing ITS resources within the UM Affiliation 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, but not all.

3. Explore the implementation of AI to increase productivity.

AI will continue to mature and provide increasingly sophisticated tools to improve work force efficiency and ITS will work to help identify, validate, and implement these tools as they prove to be safe and effective.

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

Goals:

1. Engage in a development cycle of continuous improvement of DAWGS.

Version 8 of Student Self-service Banner (DAWGS) will be out of support in late 2024 and the new version 9 has many enhancements and improvements. Once this major upgrade has been completed, transitioning to a cycle of continuous improvement by engaging with students, faculty, and staff to drive the development focus will allow for the progress of a more effective DAWGS experience.

2. Develop the design of the UM Western web page to more effectively promote UMW's unique experience and programs.

By working with campus and student representatives, the ITS web team will collaborate to enhance the design and technology use of the primary UMW web page. This continuous refining of the webpage design will allow for the most current and relevant technology and design standards to be visible, enhancing the usability of the web page and providing a modern experience to prospective and current students. Note: The content on the web page is managed by the Communication Department.

Priority Four: Protect the campus information technology infrastructure and maintain regulatory compliance through thoughtful implementation of security standards and procedures.

Goals:

1. Maintain a multi-faceted disaster recovery plan.

As part of ensuring the availability of technology at UMW, ITS will maintain a comprehensive multi-domain Disaster Recovery plan and then routinely test it by using regular tabletop exercises with the full ITS staff.

2. Establish an UMW Information Security Specialist.

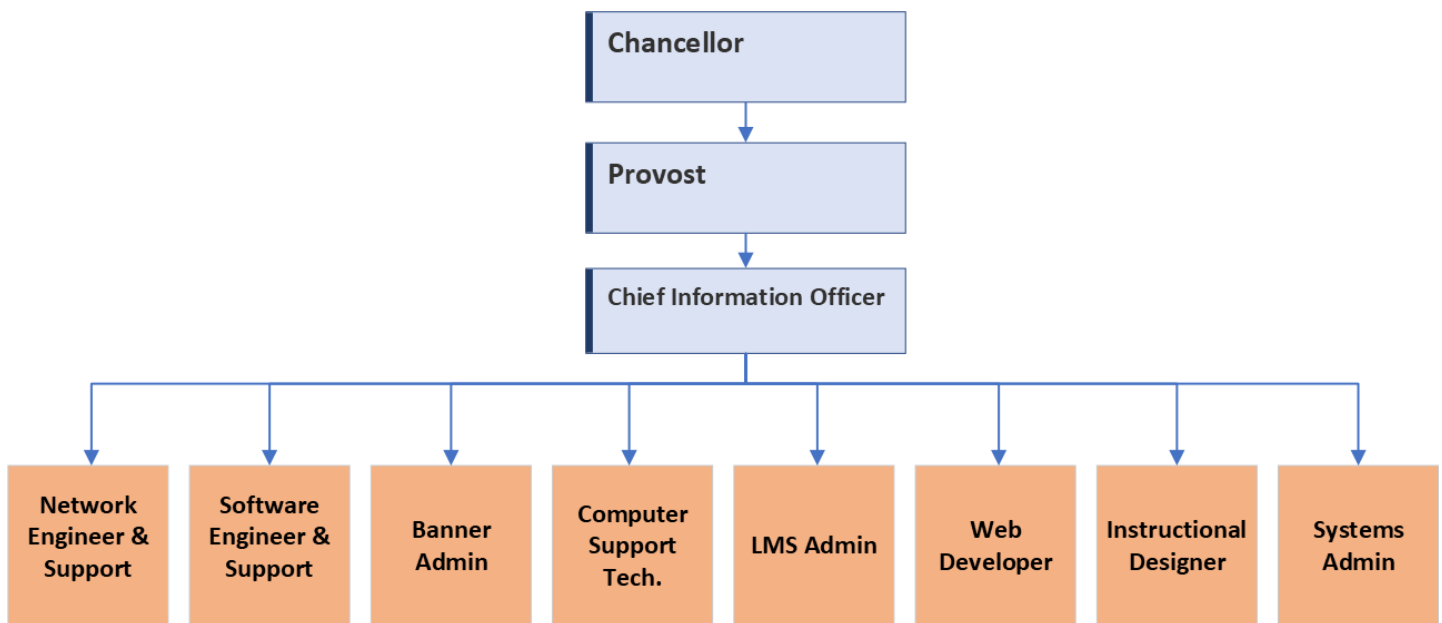
Implementing an information security specialist role within the UMW ITS department, whose primary focus is on information security, will drastically enhance the security of UMW's technology infrastructure.

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

Unfortunately, necessary security procedures are normally inconvenient. While UMW ITS must continue to move the campus forward in hardening cyber-security defenses they will work to ensure these transitions are as painless as possible by providing routine communication about upcoming changes and by working with students, faculty, and staff to plan the best ways to implement these changes with minimal disruptions.

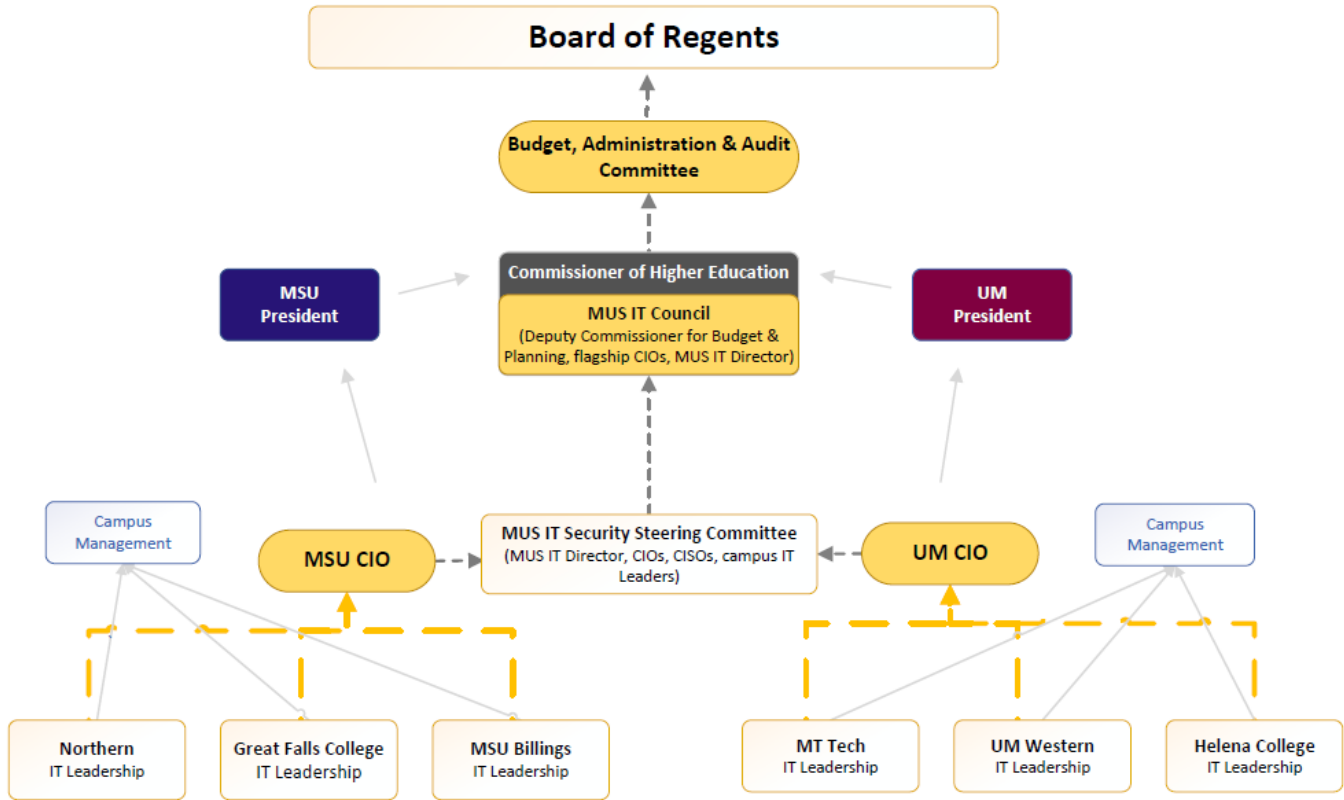
Appendix 1

The University of Montana Western
Information Technology Services
Organization Chart



Appendix 2

MUS IT Governance & Reporting Structure



Notes:
 The dotted line (---) indicates a functional reporting line from affiliated information technology leadership to flagship CIOs and the solid line (—) indicates an administrative reporting line to campus management. The dotted grey line (---) represents formal communication lines related to IT security needs, risks, and governance. See the Governance Pillars document for a description of the roles and responsibilities throughout the IT governance structure.