

Appendix G

Information Technology

- **MCC Technology Plan**
- **Sample Board of Trustees Reports Regarding IT**





Miles Community College

TECHNOLOGY PLAN

2016-2021

Drafted 2016
Revised January 2018

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Preface

The Miles Community College (MCC) Technology Plan was reviewed and modified by the Technology Committee consisting of the following members:

Name	Discipline
Carla Cummins	Information Technology Support Specialist
Don Warner	Information Technology Director (Chair)
Donna Faber	Full-Time Instructor – Communications
Jay Wiebers	Information Technology Support Specialist
Jeff Brabant	Instructor – Information Technology; Baseball Coach
Kylene Phipps	Exe Director of Administrative Services
N/A	eLearning Director
N/A	Full-Time Student
Nancy Swope	Full-Time Instructor – Information Technology
Rita Kratky	Vice President of Academic Affairs
Sarah Pett	Developmental Reading and Writing Instructor
Tracie Vogel	Marketing and Enrollment Specialist

Purpose

The purpose of this document is to provide a comprehensive overview of the technology in use at MCC and generate a process for full lifecycle evaluation from concept to retirement. This is a five-year technology plan that will be reviewed and updated annually.

Vision

We seek to create a technology-driven environment that consistently responds to the needs of MCC’s core mission of student success and lifelong learning. Fiscal responsibility to the student and community is crucial for our success. We will leverage our current technology assets and provide employee development opportunities that maximize the use of existing assets. Our students, faculty, and staff will find our systems dependable, accessible, available, and efficient. Through this document, we are proposing the implementation of a number of new technologies and the enhancement of old ones. It is vital that our systems be dependable, that they accomplish the tasks at hand, that they are capable of growing with the advent of new technologies and solutions, and that they best serve those who use them as tools to achieve the goals at hand.

Executive Summary

The purpose of this plan is to provide a regimented and detailed structure for MCC to plan and implement future technology that will provide short-term and long-term paybacks to students, employees and the community. The team was established and began its activities in February 2016.

The Review Process

The annual review process will begin in January of each year through 2021, with an initial meeting of the Technology Team members. This revision of the Technology Plan is a result of the compilation of information derived from the team's input, feedback, and research activity. The revision completion dates will be listed here.

- Document drafted January 2016
- Document not reviewed in 2017
- Document reviewed and updated January 2018

Hardware

This section outlines a process of providing technology hardware tools to students and staff to provide them with access to the most current technologies. The plan establishes a service lifecycle that identifies a "trickle down" hardware replacement process. This involves moving what was once considered high-end hardware from a heavy user down to a moderate user and hardware from a moderate user to a light user.

One of the primary goals of MCC is to provide a quality education for our students. In order to both accomplish this goal and to remain competitive, we must be able to provide access to current technologies for our students. Establishing lifecycles for our technology will help us to determine what equipment is becoming obsolete or nearing the end of its service life and therefore requires replacement. A comprehensive technology lifecycle policy will enable us to predict costs and make more efficient use of Information Technology (IT) funds.

Seven main technologies at MCC that need to have lifecycles defined are listed below:

- Workstations
- Servers
- Monitors
- Printers
- Telephone equipment
- Cellular phones
- Network switches/routers
- Electronic Instructional Equipment

In order to define a lifecycle for a given piece of technology, both the service life and the useful life of the technology must be considered.

- Service life is the amount of time the technology typically lasts before requiring maintenance and repairs beyond its value. Service life is a relatively fixed value, determined by the equipment's reliability, proper maintenance, and the overall operating environment.

- Useful life of the technology is the amount of time before the technology is rendered obsolete by advances in that technology. Useful life, unlike service life, is a floating value determined primarily by the user's needs.

Because the useful life of technology is determined by the user's needs, equipment that is no longer useful to a user with heavy demands may be useful to another user with lesser demands. This means it is possible to recycle technology that is obsolete into other roles where it is still useful. By recycling old technology, significant cost savings can be realized.

Historically, two computer labs are replaced annually at a cost ranging from \$30,000 to \$40,000. With the addition of mobile labs, initially grant-funded, that are now included in the replacement cycle, the three-year cycle has not been a reality.

This table is intended to be a general lifecycle guideline for technology on campus. Funding sources are generally enrollment driven so when enrollment is down, budgets will also be down, effecting the technology renewal process. Classroom technology is generally the most current technology on campus.

Technology	Service Life	Useful Life	Lifecycle Rotation
Laptops, Workstations & Monitors	3 years	6 years	After three years in the lab, the workstations are distributed to: <ol style="list-style-type: none"> 1. Classrooms 2. Faculty or staff, based on need
Servers	5 years	8 years	New servers are used for high level critical applications; the oldest server is retired.
Network Printers	5 years	8 years	New printers are placed accordingly: <ol style="list-style-type: none"> 1. High volume departments and offices 2. Lower volume areas such as labs and small offices
Telephone Equipment	10 years	Until technology changes warrant replacement.	The entire telephone system will be upgraded at one time.
Cellular phones	2 years	4 years	Stored for backup use.
Network Switchers/Routers	5 years	Until technology changes warrant replacement.	Newer equipment on main campus; older switches in the dorms.

Electronic Instructional Equipment	5 years	Until technology changes warrant replacement.	Old equipment is retired.
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Several equipment disposal options are available to recoup monetary value: used equipment can be sold for parts, sold as scrap, or donated to individuals and organizations that are not financially able to afford new equipment. Computers, monitors and other electronic equipment are generally toxic to the environment. Therefore, efforts are made to reuse them as much as possible before they are sent to a landfill.

Computers

Based on long standing success, quality, and IT staff experience, Dell is the preferred vendor for servers, desktop, and laptops.

Network

Because of the long-standing success, quality, and IT staff experience, Cisco is the preferred vendor for network hardware.

Phone/Voicemail System

The current phone/voicemail system is an onsite Private Branch Exchange (PBX) that is at the end of its lifecycle. To accommodate the upcoming campus additions of the Armory and soon the Ag Advancement Center, MCC will be moving to an onsite Voice over Internet Protocol (VoIP) based PBX. The replacement PBX will need to support analog devices like fax machines, alarm systems, conference phone, and analog dorm room phones.

In February a new onsite VoIP phone system will replace the aged PBX adding new features that will enhance campus communication.

Software

All requests for new software or software upgrades should be presented to the IT planning committee before January of the academic year preceding the implementation. The request must include software/hardware specifications, cost analysis, and rationale for the software. The IT planning committee will then evaluate the purchase based on the information submitted, current industry standards and budgetary needs of the college.

MCC has adopted Microsoft products as their desktop management and productivity software of choice. The accounting system and the student management system used at MCC is Banner by Ellucian, which resides on the campus of University of Montana (UM). Both have annual maintenance fees associated with them.

Classroom

Interactive Television (ITV)

Currently ITV is installed in four rooms:

Internet Connectivity

All ITV systems on campus use a dedicated metered 100Mb Midrivers Internet connection. There is no additional charges unless there is more than 3Tb of traffic in the monthly billing cycle.

Pexip Bridge

All ITV systems on campus now use the Pexip connectivity platform to manage connections. The system is managed by IT and is housed on campus.

Qumu Recording

All Pexip ITV sessions can be recorded using the hosted Qumu recording service.

Room 101

Room 101 is a science lab with ITV equipment that uses a metered 100Mb Midrivers Internet connection. Connections to the system are managed by Pexip. For ease of use and consistency in ITV room control equipment, upgrades should be considered to have the control system replicate the update that occurred in ITV Room 110 in Spring 2016.

Room 108

Room 108 is a classroom with ITV equipment that uses a metered 100Mb Midrivers Internet connection. Connections to the system are managed by Pexip. For ease of use and consistency in ITV room control equipment, upgrades should be considered to have the control system replicate the update that occurred in ITV Room 110 in Spring 2016.

Room 110

Room 110 is a classroom with ITV equipment that uses a metered 100Mb Midrivers Internet connection. The ITV equipment was upgraded in Fall 2015 and because of control system issues the control equipment was replaced in Spring 2016. The new control system greatly simplifies usage and should be considered to both Room 101 and Room 108.

Room 113

Room 113 is a dedicated nursing classroom with ITV equipment that uses a metered 100Mb Midrivers Internet connection. Connections to the system are managed by Pexip.

Regular Classrooms

All classrooms with the exception of ITV rooms 101, 108 and 110 are outfitted with a Computer, LCD Projector, Screen, and Internet. For a complete inventory of software and hardware available by classroom, please see

“H:\ITDepartment\Inventory\DeviceInventoryFrontEnd.accdb.”

Learning Management System (LMS)

The current LMS is Canvas. A Canvas shell for all credit courses in Banner is created with current enrollment when IT runs the Banner to Canvas import.

Staff Development

The Information Technology Director will work collaboratively with the Director of Human Resources to develop individual professional development plans for all IT staff, within the campus-wide employee evaluation system.

In the course of performing technical support for MCC faculty and staff, IT staff will identify areas of needed technology training. IT staff will counsel faculty and staff to obtain individual training by taking advantage of technology courses offered through Distance Education and Community Outreach. In the event of significant campus-wide changes to technology (i.e., new operating system, new student data system, etc.), the Information Technology Director in conjunction with the Distance Education and Community Outreach department will develop campus-wide training sessions.

Website

The current website is administered by the IT Support Staff with the assistance of the Website Committee. Employees may request any changes that need to be made to the website by submitting a help desk request. Departments are responsible for their areas of the website and are expected to work with the Website Committee to keep their web pages up to date.

Campus Point of Sale (POS)

Centra

The Centra uses RecPro, a retail system, to manage memberships and facility usage.

Total Computing Solutions (TCS)

Both the Bookstore and the Café now use TCS. The TCS POS interfaces with Banner replacing using an export/import process that replaced many of the manual processes previously required; thus streamlining the start of each semester for both the Bookstore and the Café. Also included with TCS is a website for online sales in the Bookstore.

Policies/Procedures

The policies/procedures have been moved to the Board Policy Handbook: “H:\Policies and Procedures\BoardPolicyHandbook\Current Board Policy manual\Board Policy Current.docx”

Network

Campus Network

The physical campus network is only for use by college-owned network hardware. The college IT Department will ensure a reliable and efficient network, making upgrades as needed. The college prefers Cisco hardware for its routers, switches, and firewall.

During the 2014/2015 school year, the IT Department upgraded the campus network backbone to 10 GB fiber and replaced key network switches with Power over Ethernet (POE) switches in preparation for implementing POE devices such as IP phones and IP security cameras.

The college has near full wireless coverage for both the campus and public/dorm networks. Additional coverage will be implemented as the budget allows.

Extended Campus Network

The campus network extends to the Workforce Readiness Center and the Ag Advancement Center using 100Mb direct fiber connection provided by Midrivers.

Pubic/Dorm Network

The pubic/dorm network is shared with the campus provided over a shared connection with Dawson Community College. The connection is over a state network with a 1Gb Internet connection to the University of Montana. The IT staff provides connectivity support for students. Information Technology staff are not responsible for tech support of student- or guest-owned computers; however, as time allows, IT staff will help diagnose computer issues.

Data Extraction

Banner data – Microsoft Access

By using Open Database Connectivity (ODBC) to the back end of Banner, many data pulls, data checks, and reports have been designed. The IT Director is the main contact for this information.

Banner data – UM InfoGriz

The UM support team have and continue to develop custom data extracts from Banner using their web-based interface. The MCC Banner Admin group and the UM support team are the main contacts for this information.

OCHE data – Microsoft Access

By using ODBC to the back end of the OCHE data warehouse, many data pulls, data checks, and reports have been designed. The IT Director is the main contact for this information.

OCHE data – Tableau

By using ODBC to the back end of the OCHE data warehouse, many data pulls, data checks, and reports have been designed. The Financial Aid Director is the main contact for this information.

Other data – Tableau

Tableau has the ability to use Excel files, Access files, and ODBC to build reports and summary data. The Financial Aid Director is the main contact for building Tableau reports, and the IT Director will assist in data layout in prepping data for reporting.

Security

Network

Network security on campus uses Microsoft Active Directory for user authentication. The campus Internet is on the state network, and a WatchGuard firewall is between the campus and the state. MCC uses 128 bit encryption for areas that require sensitive data transmission on the network.

Cameras

Security cameras are also in use on campus and may be installed in places to enhance security of either equipment or people. Currently four camera systems are on campus:

- Café – 8 cameras
- Campus – 10 cameras
- Centra – 16 cameras
- Dorm – 64 cameras

Hardware/Software Room Audit

A listing of hardware and software in every classroom and meeting room is located at “H:\ITDepartment\Inventory\DeviceInventoryFrontEnd.accdb”.

Data Backup

General Backup Information is located at “H:\Policies and Procedures\Procedures\IT\DataBackup.doc”.

**SAMPLE INFORMATION TECHNOLOGY REPORTS FOR
MONTHLY BOARD OF TRUSTEES MEETINGS
SUBMITTED BY KYLENE PHIPPS,
DEAN OF ADMINISTRATIVE SERVICES AND HR**

January 2018

- The contract with Cisco Unified Communication System has been signed for the new telephone system. Don Warner will be our Project Manager and is scheduling a planning meeting with Cisco to determine our install and implementation plan.
- Don Warner, Loren Lancaster and Kylene Phipps met with University of Montana to discuss the next steps with the upgrade to Banner 9.
- The Banner users group will continue to meet to plan for the upgrade accordingly.
- We have updated and finalized the Information Technology plan.
- We continue to look at the needs for security cameras at the Ag Advancement Center and Workforce Readiness Center.

May 2018

- The Banner User Group continues to work with the University of Montana on our implementation plan for Banner 9, installing updates and testing. Estimated timeline for implementation is Fall 2018.
- Computer lab 109 is scheduled for replacement this summer.
- IT continues to work on and improve the student account log in process for Fall 2018.

November 2018

- The IT department continues to work with each campus department to update the content of the website to meet the needs of our customers including prospective students, current students, faculty, staff and visitors.
- Continue to work with the athletic department to provide live streaming of games; recently the IT department has been working with basketball to move the live stream to YouTube. IT has also helped build music playlists for both men's and women's basketball.
- IT has been assisting with upgrades for the HVAC systems and solar project including viewing interfaces, network design and firewall edits.
- IT continues to provide campus support with technology challenges and continues to provide Banner data pulls and work toward the Banner 9 upgrade.

January 2019

- Carla Cummins conducted ADA Electronic Document Readiness compliance training for faculty and staff on January 10, 2019. Campus continues to update electronic media including all electronic documents, webpages, canvas course material and social media to meet current accessibility standards.

- IT continues to provide campus support with technology challenges and continues to provide Banner data pulls and work toward the Banner 9 upgrade.
- IT provided audio and video needs for the following events in January, Erin's Hope Crystal Ball and Bobbie Burns in the Centra as well as the Ranch Rodeo at the Ag Advancement Center.

May 2019

- IT live streamed HI-Set Graduation, Nurses Pinning and Graduation for family and friends to view.
- Currently working with campus to implement and build forms for our new online payment program utilizing Access.Gov. This new process will allow a uniform design for campus forms, applications, registrations and a secure, reliable online payment process.

August 2019

- Banner 9 conversion is officially complete and Banner 8 is no longer accessible.
- IT is working closely with facilities and residence halls on a new Proximity Card entry system. This system is being piloted at Pioneer Village in hopes to incorporate similar electronic entry systems in other areas across campus.
- Jay Wiebers is working on moving the Exchange Email to a new server.
- Don Warner and Jay are working on a new email system specific for student use.
- Carla Cummins created the web-based Presidential Search Feedback Form. This form is used to gather feedback regarding the values and attributes community members, faculty, staff and students would like to see in the next MCC President. This feedback will be shared with the Search Committee as well as the campus community for review.
- Carla is also creating a dedicated webpage for the Presidential Search to provide information to interested parties regarding how to apply, position responsibilities, search process and details as well as the search timeline and links to important campus and community resources.
- IT continues to work with areas across campus in preparation for the new academic year.

December 2019

- IT continues to work closely with the athletic department to provide live streaming and video recording of athletic events.
- Provided technology services for the MCC Student Dance in October as well as the Athletic Hall of Fame event in November.
- IT staff is preparing for winter break projects including computer lab replacement as well as updating classroom projectors in 322, 317, 316 and 106. The replacement process ensures users have access to up-to date computer equipment and software that enhances the learning environment.
- IT staff is developing documentation for the new electronic proximity lock key cards to ensure safety mechanisms are in place to protect campus.

- IT is also working with the academic department to build course evaluation surveys seeking input from students regarding their learning experiences.

January 2020

- Provided technology services for the Erin's Hope Project, Inc., Erin's Crystal Ball 2019 held in the Centra on December 28, 2019,
- IT staff continues to work on winter projects including projector upgrades in room 316, 317, 322 and 106 the old projectors have been rotated to replace the projectors in the Career Technical Building, library, science lab and room 210. The replacement process ensures users have access to up-to date computer equipment and software that enhances the learning environment. Computers in lab 313 were also replaced as a winter project.
- IT continues to transition Windows 7 to Windows 10 across campus.