



Miles Community College

**TECHNOLOGY PLAN**

2016-2021

Drafted 2016

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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:

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<input type="checkbox"/> Don Warner	Information Technology Director (Chair)
<input type="checkbox"/> Donna Faber	Full-Time Instructor – Communications
<input type="checkbox"/> Janet Hartmann	Distance Education and Community Outreach Director
<input type="checkbox"/> Jay Wiebers	Information Technology Support Specialist
<input type="checkbox"/> Jeff Brabant	Instructor – Information Technology; Baseball Coach
<input type="checkbox"/> Lisa Smith	Vice President of Administrative Services
<input type="checkbox"/> Mike Mintz	Marketing and Enrollment Specialist
<input type="checkbox"/> Nancy Swope	Full-Time Instructor – Information Technology
<input type="checkbox"/> Rita Kratky	Vice President of Academic Affairs
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<input type="checkbox"/> Tim Bouchard	Full-Time Student

## 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

## 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.

<b>Technology</b>	<b>Service Life</b>	<b>Useful Life</b>	<b>Lifecycle Rotation</b>
Laptops, Workstations & Monitors	3 years	6 years	After three years in the lab, the workstations are distributed to: <ol style="list-style-type: none"> <li>1. Classrooms</li> <li>2. Faculty or staff, based on need</li> </ol>
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"> <li>1. High volume departments and offices</li> <li>2. Lower volume areas such as labs and small offices</li> </ol>
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.

### ***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 three rooms:

## **Room 101**

Room 101 is a science lab with ITV equipment that uses the campus network connection to the outside world controlled by MCC's firewall. 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 dedicated T1 connection to a Midrivers controlled network to access other systems in the network. To access the outside world requires Midrivers involvement. The possibility of moving this connection to the campus network needs to be researched for possible cost savings and expanded usage. 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 dedicated T1 connection to a Midrivers controlled network to access other systems in the network. To access the outside world requires Midrivers involvement. The possibility of moving this connection to the campus network needs to be researched for possible cost savings and expanded usage. 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.

## ***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 eCollege and is under committee review to be replaced with a product that better serves the needs of students, faculty, and administration.

## **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)**

### ***Bookstore***

The Bookstore uses Cougar Mountain, a retail store POS, that doesn't have any automated processes for importing students or books into the system. The POS is scheduled to be replaced before Summer 2016 semester.

### ***Café***

The Café uses Maitred, a retail restaurant POS, that requires a manual process to input meal plans at the beginning and end of each semester. The POS is scheduled to be replaced before Summer 2016 semester.

### ***Centra***

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

### ***Total Computing Solutions (TCS)***

The TCS POS is scheduled to replace both the POS systems in the Bookstore and Café before Summer 2016 semester. TCS will interface with Banner to replace many of the manual processes required; thus streamlining the start of each semester for both the Bookstore and the Café. Also included with TCS will be a website for online sales.

## **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 will need to be extended to the Armory building and the Ag Advancement Center in the near future.

### ***Pubic/Dorm Network***

The pubic/dorm network is provided with a 20Mb Internet connection and is currently under review to provide more adequate bandwidth through the Midrivers internet connection. 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 OBDC 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”.

