Introduction

The purpose of this plan is to provide a high level overview of the current state of technology on campus and propose solutions to identified needs which can be phased in as funding is available. This plan has been created through the Campus Technology Committee.

Methodology

The Campus Technology Committee was created in the fall of 2014 with members representing all areas of the campus. In January of 2015 members were asked to submit technology challenges and needs to begin the creation of this plan. The submissions were compiled and categories assigned to see if broad themes became apparent. The following themes emerged: administrative efficiency, align IT with the campus, expand existing services, expand and strengthen existing infrastructure, academic and research support enhancements and security.

The next step was matching these themes with institutional strategic goals to help in prioritization.

Administrative efficiency ties to goal IV

Align IT with the Campus (improve communication, need for training) ties all five goal through better understand campus needs, making sure policies and procedures are accurate and understood and more effective use of all existing technology

Expand existing services (specialty academic software, computing platform choice) ties to goals II and III through better support of academic programs and allowing faculty to choose the computing platform that they feel is best suited for the given purpose

Expand and strengthen existing infrastructure (high performance computing, better connectivity) ties to all five goals by providing an agile infrastructure supporting all aspects of the campus

Academic and research support enhancement (improve classroom and lab technology, class delivery) ties to goal III

Security (cyber security, audit compliance, safe computing environment) ties to goal II and III
Vision

The technology units at the University of Maryland Eastern Shore (Administrative Computing and Information Technology) are deeply committed to supporting our students and mission. These units will act to move UMES forward through the use of appropriate technologies, policies and procedures.

Themes:

1. Administrative efficiency
   a. Expand use of scanning and ImageNow to automate and create workflows of manual processes both academic and administrative
   b. Provide additional scanning hardware around campus to increase our move to paperless
   c. Review and streamline existing business processes
   d. Bring additional services to the web
   e. Explore cloud offerings that make sense

2. Align IT with the Campus
   a. Provide robust support services to enhances and support campus research projects
   b. Work collaboratively with all technology support units on campus to leverage our collective strengths and eliminate redundancy
   c. Ensure published policies and procedures are accessible and accurate
   d. Provide adequate training for campus systems and technology so the maximum benefit is gained
   e. Promote a platform and structure to build an orientation program for new faculty and staff that covers cyber security and policy/procedure awareness. Make this program easily expandable to include new employee orientation and other topics as appropriate.
   f. Provide training for Hawkweb, ImageNow, Blackboard analytics to better leverage the use of data in decision making.

3. Expand existing services
   a. Provide adequate information access to faculty and researchers both on and off campus
   b. Refine the process for granting additional access to computing resources
   c. Improve support for BYOD (Bring Your Own Device) on the campus infrastructure
   d. Introduce and support faculty computing platform options
   e. Provide permanent funding sources for instructional technology software and support services
   f. Provide special purpose software systems to satisfy specific academic and administrative needs
g. Refresh ageing software systems with modern robust ones
h. Facilitate awareness and utilization of existing current software systems to prevent redundancy
i. Enhance and expand the IT frontline support model further leveraging the Helpdesk

4. Expand and strengthen existing infrastructure
   a. Enhance the internet bandwidth provided to the campus
   b. Increase the connectivity to the campus of our remote research facilities
   c. Provide robust network infrastructure to handle BYOD (volume of connected devices)
   d. Enhance the infrastructure to allow researchers to utilize large datasets both locally and remote

5. Academic and research support enhancements
   a. Upgrade classroom technology across the campus to better support teaching and learning
   b. Introduce and support campus wide standard platforms to video conferencing and text based chat/messaging
   c. Develop a campus wide technology refresh cycle supporting the cascading of recently replaced technology to support less demanding uses maximizing our limited resources
   d. Create a testing facility to aid faculty by providing an adequate technology facility configured for testing with electronic monitoring for academic integrity

6. Security
   a. Create an environment of security awareness through training and best practices
   b. Maintain legislative audit compliance
   c. Enhance the security of the campus network infrastructure with additional monitoring, scanning, intrusion detection and alerts with adequate manpower to react in a timely manner

Challenges

The technology units at UMES are constrained by finite resources and ever increasing demands for service. Some of the service demands are discretionary like bringing additional business process to the web or going further toward a paperless environment. Other demands are not like providing additional security measures dictated by the legislative auditors. Each of the themes described and their associated supporting actions require some degree of additional manpower. Some can be absorbed by existing staff and others will require additional human resources to complete.
Another major challenge is financial resources. In general the budgets are constrained and equipment refresh cycles have been affected during the period of economic downturn. Recently, one time financial sources have been used to meet current needs. This is not optimum for planning as those sources may or may not be available in the future. Infrastructure specifically requires periodic replacement as well as expansion to meet additional needs. Almost all network, server hardware and software requires yearly maintenance be paid. That maintenance generally increases at a rate of three percent per year. That effectively shrinks the available resources that fund current services. Additional services will require additional resources.

**Staffing Plan**

July 2015
Network Security Professional – This person would enhance the existing network group providing manpower for threat detection, mitigation, network monitoring and security appliance management.

July 2016
IT Analyst/Trainer – This person would introduce new Hawkweb product features to the functional users and recommend business process improvements through new software options. Provide some degree of training to campus users of Hawkweb and Hawkeye.

Classroom Support Professional – This person would be added to the classroom tech maintenance and response team to handle the growing number of technology enhanced teaching spaces.

July 2017
IT Helpdesk Professional – This person would take ownership of the front line support services including lab scheduling, self-help documentation and helpdesk staff training

**Conclusion**

In order to move UMES forward positioning the institution for future growth and service demands an organized roadmap must be followed. The broad themes identified help our technology units focus on specific areas in order to better support our strategic goals. By defining many supporting initiatives, they can be accomplished in an incremental fashion as dictated but resource availability. Ultimately, the success of this plan will depend on the availability of resources. This plan will be updated yearly so that it will remain relevant.

Attachments: spreadsheet of identified needs, smart classroom upgrade progress report
Attachment A: Classroom Instructional Technology Progress Report

In the fall of 2014 UMES started a project to upgrade classroom instructional technology. There are 35 institutional classrooms and many additional departmental teaching spaces. The initial focus has been to upgrade those most in need starting with the institutionally owned spaces. Once those classrooms are complete the departmental classrooms and specialty spaces will be next. Again, focusing first on the ones where technology updating is in the greatest need.

**Rooms completed in Phase I**

<table>
<thead>
<tr>
<th>Kiah 1123</th>
<th>Kiah 1125</th>
<th>Kiah 1132</th>
<th>Kiah 1134</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiah 1136</td>
<td>Kiah 1138</td>
<td>Kiah 1140</td>
<td>Kiah 2115</td>
</tr>
<tr>
<td>Kiah 2119</td>
<td>Kiah 2121</td>
<td>Trig 1131</td>
<td>Trig 1101</td>
</tr>
<tr>
<td>Trig 2113</td>
<td>TC 1</td>
<td>TC 2</td>
<td></td>
</tr>
</tbody>
</table>

Note: due to critical need or proximity efficiency these departmental rooms were also upgraded in Phase I

<table>
<thead>
<tr>
<th>Trig 0114</th>
<th>Trig 0109</th>
<th>Trig 0126</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC 1134</td>
<td>PAC 1127</td>
<td>PAC 1111</td>
</tr>
</tbody>
</table>

It should be noted that electrical outlets were installed in the ceiling above the projectors in these and other locations to correct code violations from the previous use of extension cords.

<table>
<thead>
<tr>
<th>Library 1199</th>
<th>Only needed electrical outlet installed – done</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOODS 1102</td>
<td>Room was redone prior to this project</td>
</tr>
</tbody>
</table>

**Rooms in Phase II**

The remaining institutional room needs are listed below.

<table>
<thead>
<tr>
<th>Hazel 1008</th>
<th>Crestron programming</th>
<th>Hazel 1012</th>
<th>Crestron Programming</th>
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</thead>
<tbody>
<tr>
<td>Hazel 1013</td>
<td>Crestron programming</td>
<td>Hazel 1015</td>
<td>Crestron programming</td>
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<tr>
<td>Hazel 1032</td>
<td>Crestron programming</td>
<td>Hazel 1020</td>
<td>Crestron programming</td>
</tr>
<tr>
<td>Hazel 2040</td>
<td>Crestron programming</td>
<td>Hazel 2061</td>
<td>Crestron programming</td>
</tr>
<tr>
<td>Hazel 3068</td>
<td>Crestron programming</td>
<td>Hazel 3074</td>
<td>Crestron programming</td>
</tr>
</tbody>
</table>
Phase II Continued

<table>
<thead>
<tr>
<th>Room Code</th>
<th>Equipment Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilson 1103</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>Wilson 1111</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>Wilson 1113</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>Wilson 2111</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>ATC 0003</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>ATC 1134</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>PAC 1109</td>
<td>Podium and equipment</td>
</tr>
<tr>
<td>Henson 1111</td>
<td>Podium and equipment</td>
</tr>
</tbody>
</table>

The estimated budget for completing the rooms in phase II is $50,000. Foundation money derived from the Thompson Hospitality contract has been identified to fund this effort. The quotes for all the needed equipment have been received. With final approval, we will begin ordering and staging to complete the rooms at the end of the spring semester.

Phase III – Departmental rooms

The next step in the project will be an assessment of the existing technology in the remaining teaching spaces. After prioritizing the rooms most in need first, a plan accounting for room availability on semester breaks will be devised and brought forward for funding consideration.