



Board of Trustees  
15 Estabrooke Drive  
Orono, ME 04469

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www.maine.edu

February 21, 2018

TO: Members of the Finance/Facilities/Technology Committee

FR: Ellen N. Doughty, Interim Clerk of the Board *Ellen Doughty*

RE: **March 1, 2018 Finance/Facilities/Technology Committee Meeting**

The University of Maine

University of Maine  
at Augusta

University of Maine  
at Farmington

University of Maine  
at Fort Kent

University of Maine  
at Machias

University of Maine  
at Presque Isle

University of  
Southern Maine

The Finance/Facilities/Technology Committee will meet from **9:30 am to 11:30 am on March 1, 2018**. The meeting will be located at the University of Maine System Executive Offices, Rudman Conference Room, 253 Estabrooke Hall, 15 Estabrooke Drive in Orono. In addition to the Estabrooke Hall location, the following Polycom locations and a conference call connection will also be available:

UMA -- 125 Robinson Hall  
UMFK -- Alumni Conference Room, Nadeau Hall  
UMPI -- Executive Conference Room, Preble Hall  
USM -- 703 Law Building, Portland  
Phone: 1-800-605-5167 code 743544#

Refreshments will be provided at the UMS and the USM locations. The meeting materials will be posted to the Diligent Board Portal as well as the Board of Trustees website (<http://www.maine.edu/about-the-system/board-of-trustees/meeting-agendas/finance-facilities-committee/>).

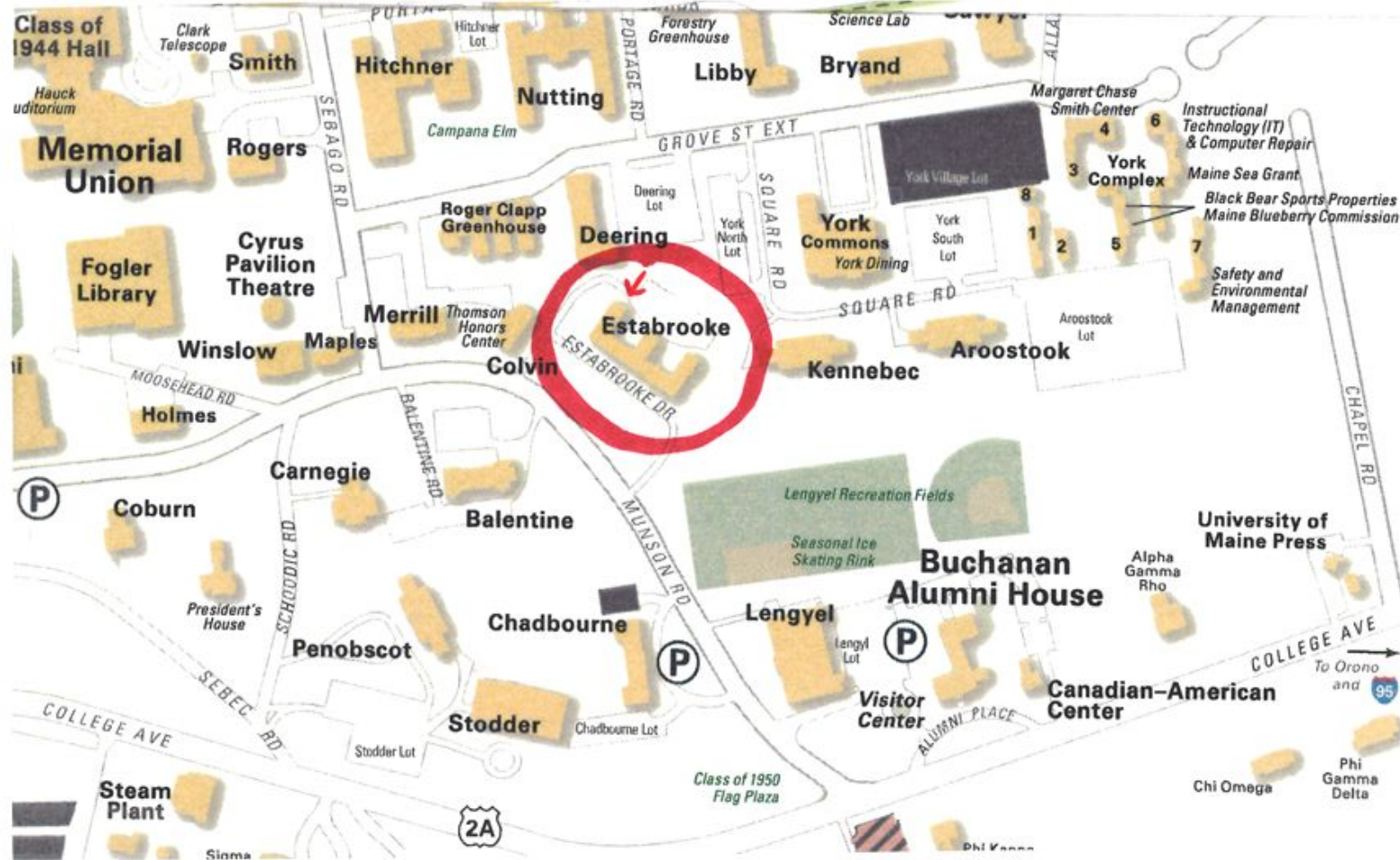
If you have questions about the meeting arrangements or accessing the meeting materials, please call me at 581-5840. If you have any questions or desire additional information about the agenda items, please call Ryan Low at 581-1541.

cc: James Page, Chancellor  
Trustees who are not members for the FFT Committee  
Presidents  
Robert Neely  
Ryan Low  
David Demers  
Tracy Elliott  
Chip Gavin  
Miriam White

# University of Maine System

15 Estabrooke Drive, Orono

**Rudman Conference Room**  
253 Estabrooke Hall, 2<sup>nd</sup> Floor  
15 Estabrooke Drive, Orono



## Directions to the UMS located on the UMaine Campus

**From the South on I-95:** take exit 191 to Kelly Road and turn right. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

**From the North on I-95:** take exit 191 to Kelly Road and turn left. Continue on Kelly Road for 1 mile until you reach the traffic light, then turn left onto Route 2 and go through downtown Orono. Cross the river. Turn left at the lights onto College Avenue. Buchanan Alumni House will be the first campus-related building on your right. Right after the Buchanan Alumni House, take a right onto Muson Road. Estabrooke Hall is the building on the right after Lengyel.

The UMS is located on the 2<sup>nd</sup> floor of Estabrooke Hall. Enter Estabrooke Hall from the back of the building, the entrance closes to Deering Hall.

Board of Trustees

**Finance, Facilities & Technology Committee**

March 1, 2018, 9:30 am to 11:30 am

Rudman Conference Room, 253 Estabrooke Hall, Orono

**AGENDA**

**Technology Items**

Tab 1 - Review of Projects with a Value of \$250,000 or Greater

Tab 2 - State of IT Report - 2017

**Facilities Items**

Tab 3 - Square Footage Increase and Donation Authorization, UM

Tab 4 - Marine Sampling Processing Shed, UMM

Tab 5 - Gorham Athletic Fields LED Lighting Project – Hannaford, Baseball and Softball Fields, USM

Tab 6 - ~~Master Plan Acceptance, UMA~~ **WITHDRAWN**

Tab 7 - Sightlines FY2017 ROPA Presentation

Tab 8 - Capital Project Status Report

Action items within the Committee purview are noted in green.

Items for Committee decisions and recommendations are noted in red.

*Note: Times are estimated based upon the anticipated length for presentation or discussion of a particular topic. An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Committee.*




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## AGENDA ITEM SUMMARY




1. **NAME OF ITEM:** Review of Projects with a Value of \$250,000 or Greater
2. **INITIATED BY:** Karl W. Turner, Chair
3. **BOARD INFORMATION:** X **BOARD ACTION:**
4. **OUTCOME:** **BOARD POLICY:**
5. **BACKGROUND:**

Dr. David Demers, Chief Information Officer, will provide information on the following projects with a value of \$250,000 or greater:

- Classrooms for the Future
- MaineStreet Improvements
- UMS Wireless Infrastructure
- HR Upgrade

## Status Update – February 2018

### Classrooms for the Future

Overall status:		Change from previous report:	None
Budget status:		Change from previous report:	None
Schedule status:		Change from previous report:	None

### Overview

This project will involve renovations to existing classrooms across the entire University of Maine System. The project team will focus on the data obtained during the earlier classroom assessment phase and resulting classroom ratings in order to prioritize work at each campus. The team will also develop standards for equipment in all classrooms. Vendors will be used for the larger renovations and campus services/classroom technology staff will be used for minor renovations and upgrades. Once the rooms have been updated, they will be re-assessed and scored accordingly.

Initiation Date	Sponsor	Original Estimated Completion Date	Current Estimated Completion Date	Est. Budget	Budget Expended/ Encumbered to Date	Project % Complete	Comments
4/2016	David Demers	12/2018		<del>\$3,836,000</del> \$4,362,345	\$2,689,887	62%	Revised budget reflects increased allocation.

### Status

In December 2017, the overall budget for this project increased by \$526,345 due to the reallocation of funds. Remaining work on Summer 2017 projects will be completed during Spring break.

Planning for Summer 2018 upgrades is underway. Facilities walk-throughs have taken place on the USM and UMaine campuses. Vendor walk-throughs are in the process of being scheduled. Equipment estimates are being calculated and given to the campuses so rooms can be finalized and projects budgets created. Summer 2018 project budgets have been completed at UMA.

The core project team will work with campus coordinators on each campus during Summer 2018 upgrades. The role of the campus coordinate includes participation in walk-throughs, help to coordinate vendor work, follow-through on Facilities work order, coordinate furniture delivery, and communicate with the project manager and team lead on the status of installs.

### BUDGET SUMMARY

Campus	Allocation	% Committed to Date	\$\$ Not Yet Budgeted
<b>PROJECT TOTAL</b>			
UMM	\$195,900	96%	\$103,652
UMF	\$379,896	73%	\$100,896
UMaine	\$1,578,220	51%	\$766,281
UMPI	\$257,276	36%	\$164,276
USM	\$1,124,080	74%	\$289,480
UMFK	\$245,768	72%	\$69,168
UMA	\$581,205	69%	\$178,705

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**Summary by Campus and Classroom Project**Reference: [Campus Room Renovations](#)

Campuses	Rooms By Project Setup	% Complete
UMA	Music Arts 124	100%
	RRSC 248 & 255	100%
	UC Bath/Brunswick 114	100%
	UC Norway SoPar 114 & 206	100%
	UC Saco 111	100%
	UC Ellsworth 2 & 7	100%
	UC Rockland 410 & 413	100%
	Jewett 124, 180, 189, 190 & 291	100%
UMF	Roberts 205 & 207	100%
	Ricker Addition 202, 205	100%
	Roberts C23 & 131	100%
	Ricker Addition 217	100%
	Preble 117	100%
	Roberts 105, 107, 201, 203	100%
	South 115	100%
	Education Center 6 & 113	100%
UMaine	Shibles 202	100%
	DPC 105	90%
	Neville 101	100%
	Estabrook 130, 152	100%
	Bennett 215	100%
	Dunn 315 & 316	100%
	South Stevens 106D	100%
	DPC 107, 115, 117	85%
	Boardman 116	97%

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	Boardman 118	100%
	Shibles 217, 313, 316	100%
	Nutting 100	98%
	Aubert 354	100%
	Hitchner 157	100%
	Jenness 102, 104, 108	100%
	Lengyel 127	100%
	Libby 220	100%
	Little 110, 120, 202, 206, 220	100%
	Lord 200	100%
	Colvin 401	100%
	Memorial Gym Complex 106 & 110 (ROTC Army)	94%
	Merrill 228a	100%
	Murray 102 & 106	100%
	N Stevens 235	90%
	Rogers 206	100%
	ROTC Navy 201	78%
	ROTC Navy 203	46%
	Deering 101c	100%
	Barrows 123, 131, 133	100%
	Balentine 129	100%
UMM	Torrey Hall 230, 232, 234	100%
	Torrey Hall 106	100%
	Powers 208 & 209	100%
	Science 114	100%
	Science 102 & 120	100%
UMFK	Powell 123	100%
	Cyr 113	100%

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	Old Model School 11	100%
	Cyr 200 & 201	100%
UMPI	Folsom 206	100%
	Houlton 120 & 125	49%
	Pullen 113, 212, 216	100%
	Folsom 204 & 205	100%
USM	405 Bailey	98%
	John Mitchell 217	100%
	Payson Smith 301A	100%
	LB 103	75%
	Masterson 113	100%
	Bailey 320	80%
	Bailey 10, S113, 201, 202, 204, 205, 206, 207, 208, S213, S215, 218, S312, S313, 315, L319, 320, L321, C402, C403, C404, 405,	100%
	Corthell 112, 211, 212	100%
	John Mitchell 151, 164, 181, 233, 235, 242, 252, 265, 270	48%
	LAC 287	100%
	LAC 210, 211, 212, 214, 216, 218, 224	100%
	LB 208, 209, 241, 302, 303, 310, 326, 327, 402, 403, 410, 424, 425, 502, 503, 509, 510, 523, 524	100%
	Payson Smith 1, 41, 42, 44, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 211, 303, 304, 306	100%
	Wishcamper 103, 113, 417, 419/427	48%
	Science 203, 403	48%

## Risks

- Renovations and improvements to classrooms are limited to summer and school breaks. In addition, vendors need advance notice to schedule larger renovations due to the competitive nature of this work and the lead time for ordering equipment.
- Wireless and network infrastructure will not be upgraded in classrooms at UMPI, UMFK and UMF

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- The discovery of asbestos containing materials at USM will lead to more thorough test prior to starting work in a building. US:IT is working closely with Facilities Capital Planning on a mitigation plan that includes testing and abatement. The need to complete more testing than anticipated and possibly conduct additional abatement poses a risk to both project schedule and cost.

**Status Update - October 2017****MaineStreet Improvements**

Overall status:



Change from previous report: None

Budget status:



Change from previous report: None

Schedule status:



Change from previous report: None

**Overview**

This project will engage with faculty and students to find ways to improve their experience working with MaineStreet including bringing MaineStreet functions to mobile platforms, which can subsequently be extended to a variety of uses. We also will engage with decision makers in the One University initiative to discover and understand changes in business process that will need support in MaineStreet. Once these changes have been identified, we will work with affected functional areas to plan, implement, and test the specific MaineStreet changes that are required.

Initiation Date	Sponsor	Original Estimated Completion Date	Current Estimated Completion Date	Estimated Budget	Budget Expended to Date	Project % Complete	Comments
4/2016	John Grover	2019	2019	\$2,000,000	\$51,734	15%	

**Status**

The following developments affect the current nature of this project:

- Three campuses (UMA, UMM, and UMPI) have engaged with EAB for their Guide mobile app which will address some of the needs expressed through the previous surveys for students.
- Oracle is putting more effort into making their PeopleSoft product mobile friendly and now nearly all student self-service components are mobile friendly in the newest releases of their software. This improved support by Oracle most likely alleviates the need to invest in a product to provide the mobile interface and will allow focus, instead, on accelerating testing and implementation of newer releases of PeopleSoft modules.
- During November 2017, Oracle representatives conducted a series of interactive sessions with staff from several administrative offices across the University of Maine system including Student Records & Advising, Financial Aid, Admissions, and Student Financials. In January, Oracle provided an executive summary of their key findings and recommendations to senior US:IT staff. Two of Oracle's recommendations pertain to ensuring the UMS is fully leveraging the existing capabilities within the PeopleSoft Campus Solutions environment and to explore upgrading Campus Solutions from version 9.0 to 9.2. The project team and US:IT Leadership are currently reviewing Oracle's findings and recommendations, and considering strategies to address each of them.

**Recently Completed**

- Receipt of Oracle's executive summary of Key findings and recommendations.

**In Progress**

- US:IT leadership and project team reviewing Oracle's findings and recommendations.




**Risks**

- EAB SSC Guide introduces some complexity to manage. We don't wish to contribute to "app fatigue" on those campuses implementing Guide, but we have other campuses that are not there yet. Guide will direct the students to web-enabled pages which may be delivered as part of this project. Details and specifications are as yet unknown.

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## Status Update February 2018

### UMS Wireless Infrastructure

Overall status:   
 Budget status:   
 Schedule status: 

Change from previous report: None  
 Change from previous report: None  
 Change from previous report: None

### Overview

This project is a wireless technology connectivity Initiative to upgrade wireless service and associated cabling and equipment at all campuses to bring wireless capacity to gigabit speeds to support learning and living spaces.

Initiation Date	Sponsor	Original Estimated Completion Date	Current Estimated Completion Date	Estimated Budget	Budget Expended to Date	Project % Complete	Comments
4/2016	Jeffrey Letourneau			<del>\$11,200,000</del> \$12,800,000	\$5,185,481.32 (\$1,449,862.70 encumbered)	51%	Revised budget reflects increased allocation.

### Status

The total allocation for this project has been increased due to re-allocation of \$980,000 to this project in December 2017. The project team is currently working with campus representatives at UMPI and UMFK to determine priorities for the additional funds as well as planning for the additional work at UMM and UMF.

Current work is focussed at USM and UMaine. At USM, Bailey Hall is nearly complete, but the discovery of asbestos ceiling tiles has paused work until further evaluation can be completed. This has increased our awareness of asbestos containing materials at USM and will lead to a more thorough testing regimen prior to starting work in a building. US:IT is working closely with Facilities Capital Planning on a mitigation plan that includes testing and abatement. The need to complete more testing than anticipated and possibly conduct additional abatement poses a risk to both project schedule and cost. The order of work has been adjusted to account for this and cabling will begin in March in the C-wing of the Science building (a newer facility).

At UMaine, upgrades have been completed in Boardman and are nearly complete in Little, Murray and Aubert. Class of 1944 and Lengyel will begin in March.

During the semester break, a partial upgrade was completed in Scott North, Scott South, and Scott West on the UMF campus. The remainder of the work will be completed during Summer 2018. Work was also completed in Folsom-Pullen at UMPI.

### BUDGET SUMMARY

Campus	Allocation	% Budgeted to Date	\$\$ Not Yet Budgeted	% Expended & Encumbered to Date	\$\$ Expended & Encumbered	\$\$ Not Yet Expended/Encumbered
<b>PROJECT TOTAL</b>	<b>\$12,800,000*</b>	<b>95%</b>	<b>\$648,360</b>	<b>52%</b>	<b>\$6,635,344</b>	<b>\$6,164,656</b>
Equipment in Inventory					\$1,378,078	
System-wide Services	\$620,000	100%	\$0	100%	\$620,927	-\$927
UM - Machias	\$653,200	100%	\$0	58%	\$380,659	\$272,541
UM - Farmington	\$1,674,800	100%	\$0	69%	\$1,153,393	\$521,407
UMaine	\$3,189,600	96%	\$137,150	21%	\$683,882	\$2,505,718
UM - Presque Isle	\$615,200	84%	\$97,765	74%	\$456,619	\$158,581
USM	\$5,017,600	93%	\$352,525	21%	\$1,032,222	\$3,985,378

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<b>UM - Fort Kent</b>	\$469,600	87%	\$60,920	87%	\$408,503	\$61,097
<b>UM - Augusta</b>	\$560,000	100%	\$0	93%	\$521,062	\$38,938

(\*) = original \$11.2M allocation plus reallocation of \$980k plus \$620K required from contingency funding for system-wide licensing.

#### **BUILDING SUMMARY**

Complete <sup>1</sup>		Installation & Deployment Scheduled / In Progress <sup>2</sup>		Planning - Not yet Budgeted
University of Maine at Augusta				
Lewiston Katz Jewett Randall	Eastport Camden Belfast Civic Center College Center			
University of Maine at Farmington				
Mantor Library Dakin Black Mallett	Lockwood Purington Stone	Partial - To Complete Summer 2018 Scott North Scott West Scott South		Roberts Learning Center <sup>3</sup>
University of Maine at Fort Kent				
Powell The Lodge Crocker				Blake Library Old Model Sch <sup>3</sup> Cyr <sup>3</sup>
University of Maine at Machias				
Torrey Hall / Merrill Library Reynolds	Powers Science Kilburn	Dorward <sup>3</sup> Sennett <sup>3</sup>		
University of Maine at Presque Isle				
Park Emerson	Merriman Folsom-Pullen			
University of Maine				
Fogler Library Shibles Bennett Rogers Jenness	Bryand Global Science Boardman	Begin 0-3 months Murray Hall <sup>4</sup> (90%) Little (90%) Aubert (75%) Estabrook Core (35%) Crosby Lab Class of 1944 Lengyel Lord	Begin 3-6 months Nutting (85%) Fernald (60%) Neville (90%) Barrows (50%) Begin 6-9 months Donald P Corbett (0%) Winslow(85%) Hitchner	Colvin Hall Sculpture Building Dunn
University of Southern Maine				
Drawing Studio Print Studio Academy Building  Wireless Only Wishcamper John Mitchell Cen Law Building	Abromson	In Progress Bailey (85%) Payson-Smith (15%) Science (25%) Begin 0-3 months Luther-Bonney Glickman Library Masterton Hall	Begin 3-6 months Corthell Brooks Dining Costell Complex Sullivan Complex Begin 6-9 months Lewiston-Auburn Woodbury	

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		Wishcamper (wired) JMC (wired)		
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<sup>1</sup> Networks are online and functioning; some testing and close-out paperwork may remain to be done

<sup>2</sup> Dates are estimated start dates for cable installation & deployment – subject to change

<sup>3</sup> Insufficient funding to upgrade entire building; minimal upgrades to support Classrooms for the Future or future upgrades




<sup>4</sup> Partial upgrade due to building limitations

## Risks

- Identification of asbestos containing materials (ACBM) at USM in an area that was not anticipated has led to a higher awareness of and need to test for ACBM. Both the need for increased testing and the probability of higher than anticipated abatement needs will impact both project schedule and cost. The degree of impact will not be known until test results are completed.
- The project team is working closely with the Classrooms for the Future project team to coordinate efforts. Campus decisions to prioritize upgrades in residence halls over classroom buildings may negatively impact the Classrooms for the Future project.
- Many of the buildings require modifications by Facilities Management prior to network installation. The project team is working with each campus to plan this work. Resource availability and scheduling for this work may cause project delays.
- A risk to perceived success is unreasonable stakeholder expectations. Although a ubiquitous system-wide upgrade is needed, this project will only partially meet that need given the constraints of limited resources (schedule, budget, staffing, construction limitations, and coordination with other campus resources).
- Many buildings have network infrastructure that will need to be upgraded before new wireless networks can be installed. In some cases, this may include new fiber installation and/or the need for facility renovations.
- The phased funding approach will necessitate maintaining two separate WiFi networks on most if not all campuses driving up the ongoing operational costs and efforts for US:IT while creating inconsistent wireless service levels building to building on the campuses.
- There are a large number of factors and variables that will affect this project's timeline. There are other sizeable projects taking place at the same time. Another factor affecting the timeline will be the coordination among involved entities in setting priorities and timing.

## Status Update - February 2018

### HR 9.2 Upgrade

Overall status:		Change from previous report:	None
Budget status:		Change from previous report:	None
Schedule status:		Change from previous report:	None

### Overview

This project will upgrade the UMS PeopleSoft (MaineStreet) Human Capital Management (HCM) system from version 9.1 to version 9.2, the HCM PeopleTools from version 8.53 to version 8.55. The upgrade will maintain Oracle compliance and continued support of the system. To expedite and achieve economies of scale, the project will also cover improvements in interfaces and systems that support the Benefits and Payroll Center of Excellence. As part of this project the hardware architecture has been upgraded to utilize multiple web servers (with a load balancer) and multiple application servers (with Process Scheduler Servers).

Initiation Date	Sponsor	Original Estimated Completion Date	Current Estimated Completion Date	Estimated Budget	Budget Expended to Date	Project % Complete	Comments
6/2017	David Demers/Mark Schmelz	Spring 2018	Spring 2018	\$850,000	\$441,410	50%	

### Status

On February 6 the team met for the second half-day quarterly review. The team was introduced to the new executive sponsors: David Demers (CIO) and Mark Schmelz (Interim Chief Human Resources Officer). The status review summarized progress on the architecture replacement (largely complete) and then focused on the upcoming testing. Testing will take place in 4 phases: Unit testing, System Integration Testing, User Acceptance Testing and Performance Testing. Testing will be augmented by the use of ERP Analyst's Testing as a service (TaaS) solution. It was confirmed that there will be no new data fields involved in the upgrade.

The team is also discussing implementing the newest PeopleSoft user interface (named Fluid). Designed as an improvement over the "classic" user interface, the Fluid User Interface moves away from pixel-perfect page layout and provides greater flexibility. Fluid pages scale from large screen devices, such as laptops and desktops, to the reduced viewing space of tablets and smartphones. Staying with the current interface would be a customization that would increase maintenance costs. Completely implementing Fluid would require updating the financial system, which is beyond the scope of this project, therefore, a partial implementation of Fluid is being investigated.

Members of the project team met with TIAA in February to discuss the procedures and timeline for modifying the current TIAA file feed so it supports an after tax Roth IRA contribution option in the 403(b) plans for all eligible UMS employees. The timeline was finalized and the expected go-live for the Roth IRA implementation is September 1, 2018.

### Recently Completed

- Conducted second quarterly review
- Infrastructure analysis, design and initial implementation
- PeopleSoft install
- Private query and customizations review
- Software housekeeping and compare reports
- Developed test plan for core HR and failover/load balancing
- Built server environment and Initial database move
- Drafted lists of customizations, private queries, Crystal and SQR reports
- Roth IRA implementation plans and timeline established

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**In Progress for Upgrade**

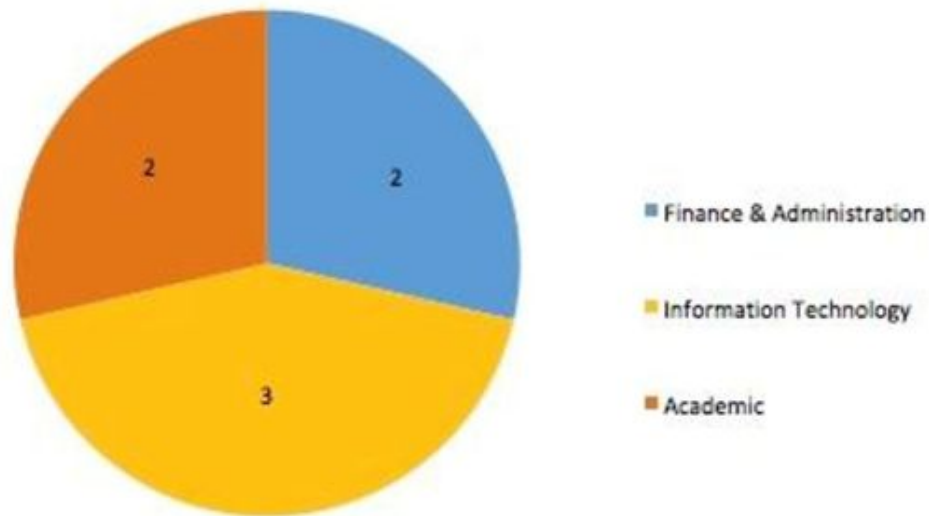
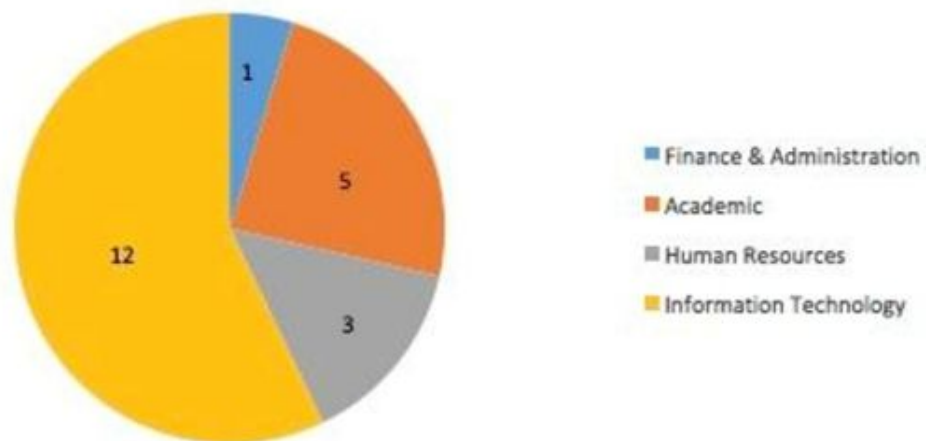
- Identify possible productivity enhancement
- Develop test plans for performance testing
- Training and communication planning
- Retrofit SQRs, integrations, queries
- Drafting testing scripts
- Conducting weekly update meetings and additional planning meetings

**In Progress for Interfaces and System Improvements**

- Leave of Absence module
- Comp Time module
- Automating I-9 form processing
- Retirement file interface
- Benefits billing automation
- Tuition waiver form automation
- Add Pay request automation
- POI form automation
- Personnel Action Form automation
- Enable Terminations process
- Roth IRA
- Current manual workarounds being compared to new capabilities in 9.2 with goal of eliminating manual tasks

**Risks**

- Availability of HR staff.
- Potential incompatibility between 9.2 and existing customizations, interfaces, reports or other.
- Insufficient time allotted for testing and resolution of issues.
- Potential inability to implement new “fluid” interface.
- Some technical tasks are behind schedule, but this is not impacting the critical path at this time.

**US:IT PROPOSED PROJECTS****US:IT ACTIVE PROJECTS**

**Finance & Administration Projects Total Budget = \$30,000**

**Academic Projects Total Budget = \$902,515**

**Human Resources Projects Total Budget = \$860,000**

**Information Technology Projects Total Budget = \$17,009,926**

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## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** State of IT Report - 2017

2. **INITIATED BY:** Karl W. Turner, Chair

3. **BOARD INFORMATION:** X

**BOARD ACTION:**

4. **OUTCOME:**

**BOARD POLICY:**

5. **BACKGROUND:**

Dr. David Demers, Chief Information Officer, will share highlights from the State of IT Report 2017 with a focus on Future Directions.

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# University Services: Information Technology

## STATE OF IT REPORT - 2017



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## Overview of US:IT

## System Upgrades & Enhancements

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## Team Highlights

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3	Welcome from CIO
4	Overview of US:IT <ul style="list-style-type: none"> <li>Organizational Structure</li> <li>Support Services</li> <li>Annual Budget</li> <li>Capital Investments</li> </ul>
8	Project Management and Updates
12	System Upgrades and Enhancements
14	Partnerships
15	Team Highlights: <ul style="list-style-type: none"> <li>Information Security Office</li> <li>Advanced Computing Group</li> </ul>
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17	Future Directions

## WELCOME

From the Desk of the  
Chief Information Officer

David Demers, Ph.D.  
Chief Information Officer

**H**ello and welcome to the University Services:Information Technology division's annual State of IT report. In this report, we hope to inform the University of Maine System community with an overview of the US:IT Organization, updates on major projects and service enhancements completed or undertaken this past year, partnerships facilitated and a vision of the future for the US:IT team.

Our division continues to strive to support the 'One University' concept by providing reliable, secure and robust technological solutions that enhance teaching and learning, create operational efficiencies and accommodate the business goals of each campus constituency. Information contained in this report was contributed by numerous staff within US:IT and the success metrics reported highlight the ongoing dedication and commitment of the entire US:IT team to deliver exemplary customer service to each campus we support. In this report we also outline the collaborations, partnerships and activities we will continue to pursue in order to enhance the technology and information services landscape for the University of Maine system.

It should also be noted that the past year was one of leadership transition for US:IT. Dick Thompson, who retired as CIO in September 2017, was the driving force behind the IT unification effort. This monumental task positioned US:IT to be on the leading edge for the University of Maine System to drive new efficiencies and realize savings in order to combat rising costs and shrinking budgetary allocations. Through his stewardship and leadership, US:IT emerged to serve as a model of success for other units to follow. I am grateful to Dick for his contributions and his strength in seeing this initiative through. It is my goal to continue to build upon this success. To do so will require continued collaboration and teamwork throughout the division as well as with the students, faculty and staff we serve on each campus. I truly look forward to working together as a group to achieve this goal.

A stylized, handwritten signature in black ink, appearing to read 'DD'.

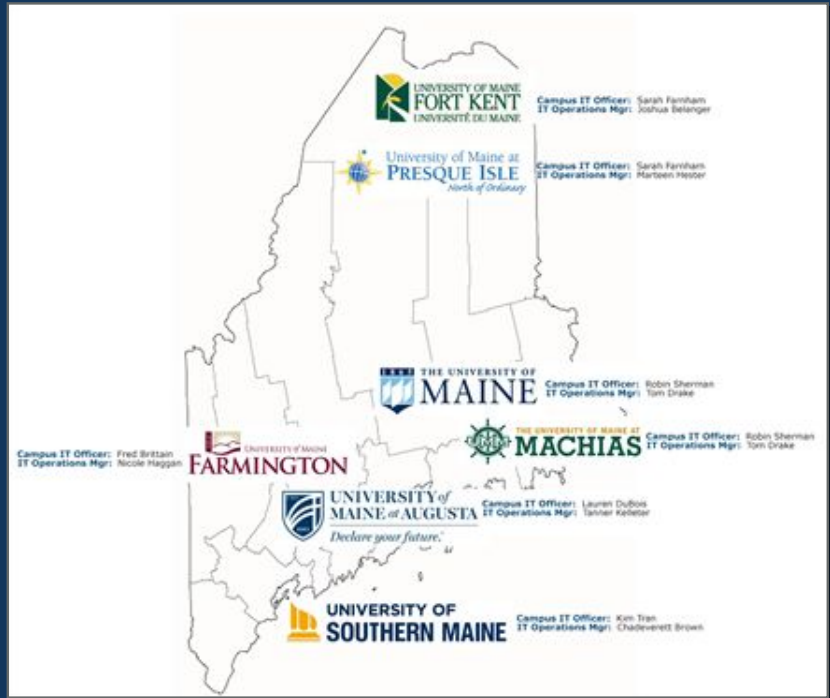


## OVERVIEW OF US:IT

### Structure, Leadership and Staffing

The University Services: Information Technology division consists of more than 200 US:IT employees organized into the following functional areas:

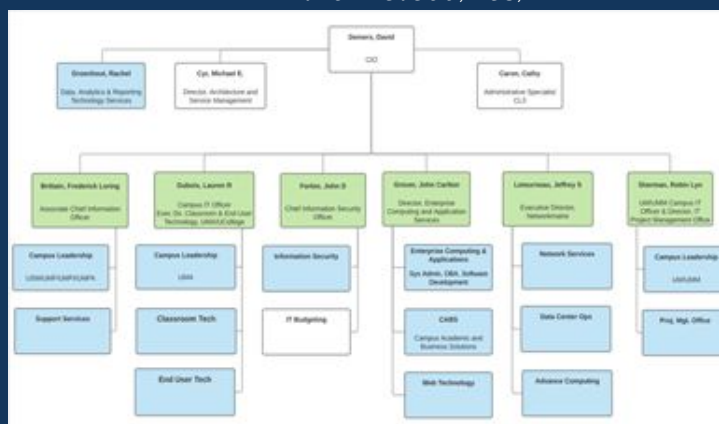
- Support Services
- Classroom Technology
- End User Technology
- Information Security
- Enterprise Computing and Applications
- Campus Academic and Business Solutions
- Web Technologies
- Network Services
- Data Center Operations
- Advanced Computing Group
- Project Management
- Data Analytics and Reporting Technology Services



In addition, each campus in the University of Maine System has a designated Campus Information Technology Officer as well as a Campus Operations Manager. These roles are charged with providing each campus with strategic and operational level IT support through collaboration and engagement.

A full organizational chart for US:IT is now available at:

[www.maine.edu/its/](http://www.maine.edu/its/)



## OVERVIEW OF US:IT

## Support Services



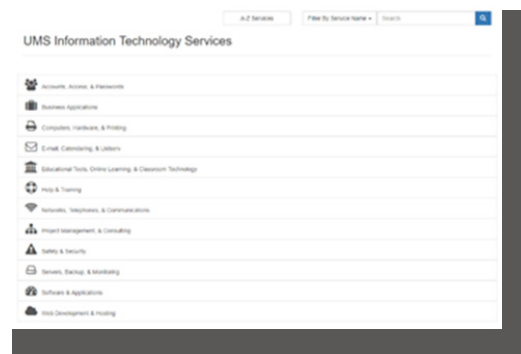
The University Services:Information Technology division supports greater than 100 unique services across a dozen categories:

- Accounts, Access, & Passwords
- Business Applications
- Computers, Hardware, & Printing
- E-mail, Calendaring, & Listserv
- Educational Tools, Online Learning, & Classroom Technology
- Help & Training
- Networks, Telephones, & Communications
- Project Management, & Consulting
- Safety & Security
- Servers, Backup, & Monitoring
- Software & Applications
- Web Development & Hosting

In 2016, US:IT formed a cross-disciplinary team entitled IT Portfolio Management chaired by Kim Tran, Campus IT Officer for USM. One of the goals for this group was the publication of a shared UMS Service Catalog. A service catalog is an industry standard offering that provides the client community a menu of services offered, self-service offerings, links to documentation and training, and contact information. In summer of 2017, this group released the very first Service Catalog for IT in the University of Maine System. Beyond providing customer-oriented access to IT Services, it also supports management of IT's portfolio of service as well as identification of duplicative services.

At this time there are 85 public-facing services in the catalog with numerous more internal to IT. The project will continue to be refined with documentation linked to services and incident response tracking as the product matures. From September through November 2017, the service catalog had 8,950 views from across all the campuses and the intensity of visits has been climbing as the university community becomes more familiar with the facility.

The service catalog is available at <https://itservices.maine.edu>

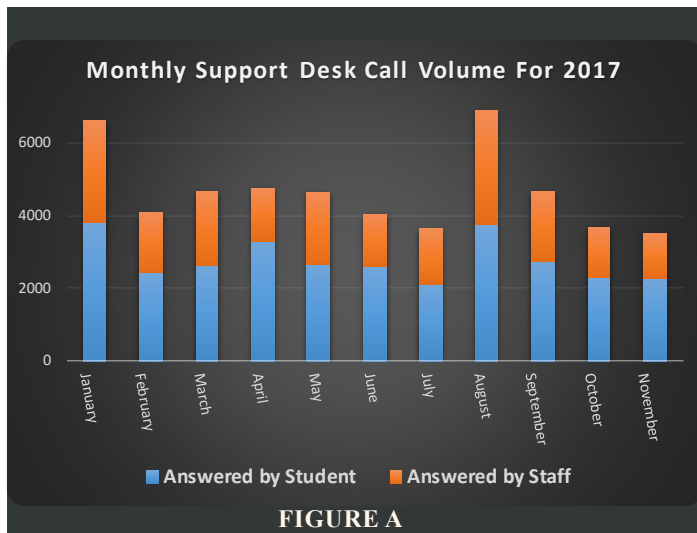


## US:IT Service Catalog

# Public Services  
**85**

# Service Catalog Views  
(Sep'17-Nov'17)  
**8,950**

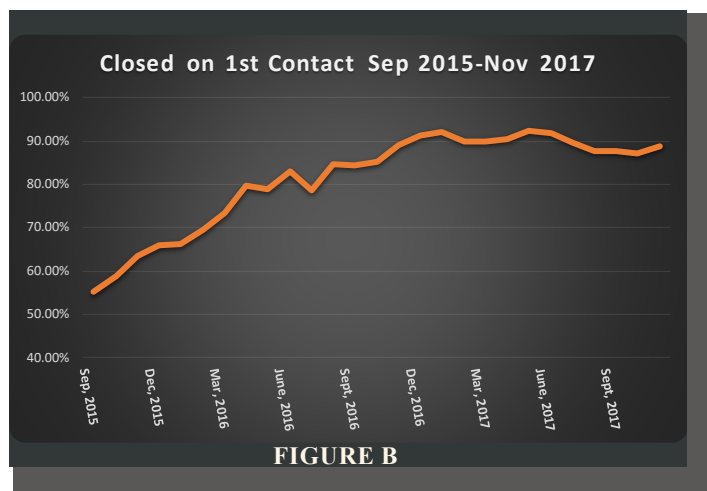
# Help Desk



The US:IT operates multiple, integrated help desks across all the campuses and some additional locations. Telephones are managed such that the local help desk will receive the call first and if nobody is available, the client can opt to reach assistance from another location. The change to campus-first answering was made in summer of 2016 in response campus feedback about remote assistance not being as reliable. With the current model, approximately 93% of the total volume of 51,160 calls were answered locally over the past calendar year.

Student labor plays an integral part of the IT Support Services operation. In 2017, roughly 60% of calls placed to the IT Help Desk were handled by student workers (Figure A). Students, primarily located at UM, UMF and USM, play a significant role in after hours and weekend support as well.

A key metric for a robust Help Desk operation is the percentage of calls resolved on first contact. Training of support staff and the introduction of a statewide, real-time chat tool amongst support staff have steadily increased the



ability for issues to be resolved upon first contact. At present, roughly 90% of calls are resolved immediately (Figure B).

When tickets are unable to be resolved upon first contact, speed of resolution is an area where US:IT must continue to focus. With an increase in call volume in August in particular, the fall semester starts with a backlog of work before classes begin (Figure C). Various IT units will need to shift vacations to earlier times in the summer to ensure availability for an earlier peak period.

## Help Desk Calls

**Total # Calls in 2017**

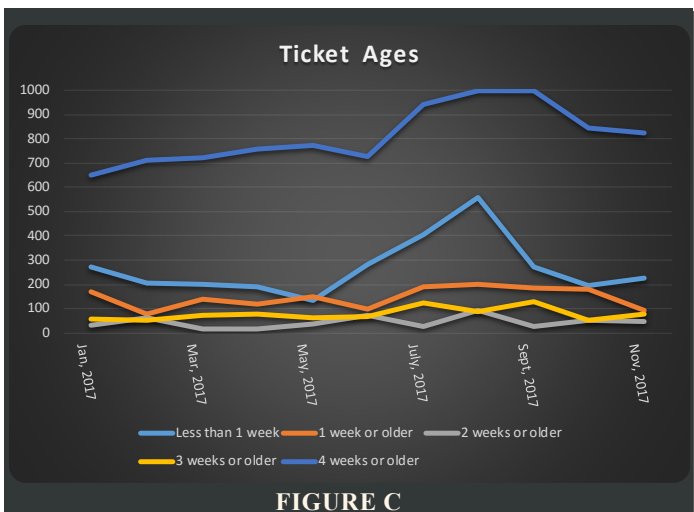
**51,160**

**% Answered by Students**

**59.9%**

**% Calls Resolved on First Contact**

**90%**



Through the initial State of IT report, seven new positions were created within IT Support Services. The purpose of these positions was to enhance quality of service and coverage. All of these positions are filled with six (6) at campuses and one (1) Analyst position charged with tracking effectiveness, process improvement, creating documentation and ensuring we are leveraging staff seamlessly from one campus to another. The result of these positions has resulted in extended support desk hours by adding second shift regular staffing to oversee existing student labor and making phone support available to all the campuses on weekends and until 9:00 PM during the week. This totals approximately twenty

four additional hours per week of service desk availability. The additional staff have also stabilized gaps where we have frequent turnover in entry-level positions, areas where staffing is limited, and illness and vacation has previously had a profound impact. Staff are regularly deployed to assist at other campuses as needed. These new staff have also provided assistance in moving legacy services to the appropriate enterprise teams and have facilitated support for computer desktop initiatives at the campus level.

As a trial, the help desk was made available 24x7 during the first two weeks of the spring semester of 2017. This was heavily advertised at all the campuses and yielded only six calls over the entire period after midnight and minimal volume between 9:00 PM and 12:00 AM. The experiment suggested the demand does not align with cost and the strategy will be re-evaluated.

## Annual Budget

The US:IT budget is comprised of compensation and benefits for US:IT employees, non-compensation annual expenses and annual revenue offsets. The consolidated US:IT budget is almost entirely recharge-based, with the rational cost for services and support charged back to individual University of Maine System campuses. This arrangement provides a cost-effective model for delivering a blend of campus-specific and shared IT services for each member campus; this model is also leveraged by other UMS shared services organizations, including human resources, strategic procurement, general counsel, internal audit and finance.

Since 2017, the US:IT budget has experienced modest growth to keep pace with contractually-mandated salary and annual licensing increases. As shown in Figure (D), the FY18 budget increased by a total of 5.1% to \$23.739M over the FY17 budget (\$22.580M). The projected FY19 budget includes a 4.5% increase over the FY18 budget for a total of \$24.843M.

The annual US:IT budget is allocated into several categories, including:

- 69% for compensation (salary & benefits)
- 31% for non-compensation expenses

Figure E provides the breakdown of the budget with the majority of non-compensation expenses allocated to 'Supplies & Services' and 'Maintenance'.

The projected FY19 budget has a similar allocation pattern (Figure F) to the FY18 budget. The \$1.104M increase includes allocations required to fund necessary support positions and negotiated salary increases (\$375K) and several non-compensation expenses which represent recently acquired software platforms as well as hardware and software expense reinstatements that were subsidized through other sources in the FY18 budget.

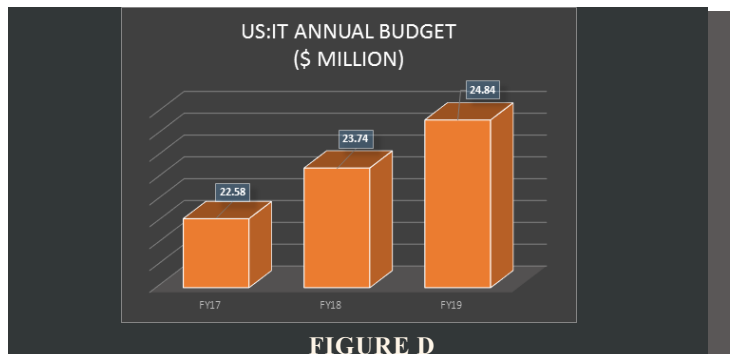


FIGURE D

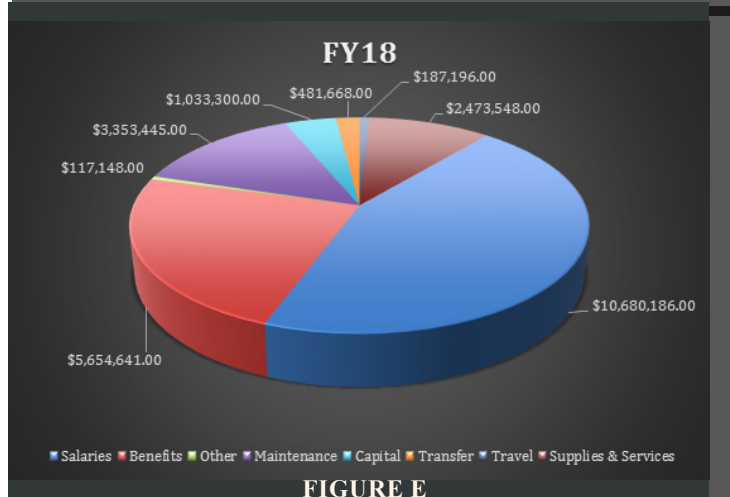


FIGURE E

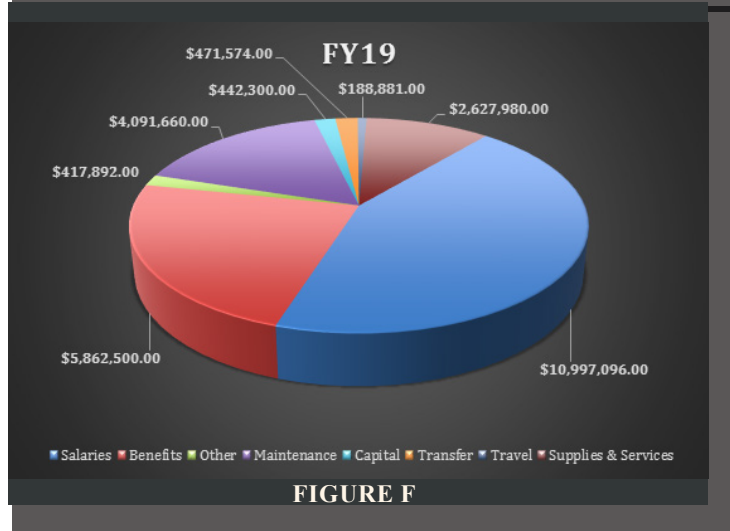


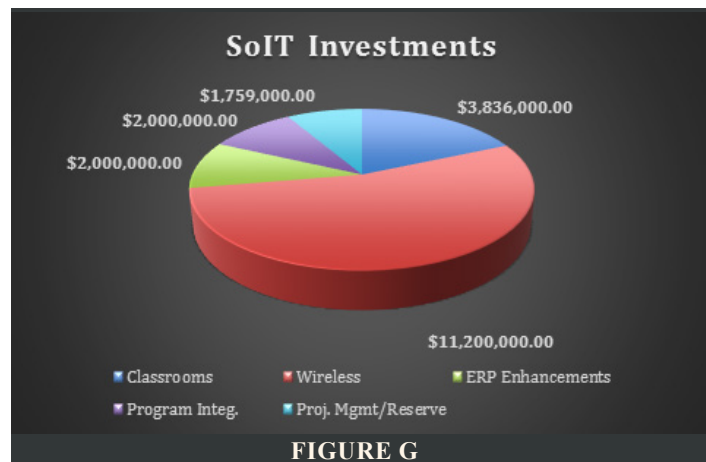
FIGURE F



# Capital Investments

In 2015, the State of IT Report presented to the Board of Trustees outlined several capital investment projects designed to enhance IT infrastructure, delivery systems and improved services to all University of Maine System constituencies in support of the One University initiative.

The Board of Trustees fully endorsed the initiatives presented and authorized \$20M in bond investments to support modernization of classroom technology, rebuilding wireless infrastructure and improvements in the MaineStreet ERP environment. Allocations were made to these projects as shown in Figure G. Updates on these projects are presented in the following sections of this report



## PROJECT MANAGEMENT

### Highlights and Metrics

The Project Management Office (PMO) continues to provide guidance to the UMS community throughout an IT project's lifecycle; from the initial project request through project completion. As the services the PMO delivers continue to mature, the value of applying project management methodology throughout the project lifecycle is fully realized, resulting in increased demand, support and adoption by project teams. Figure H demonstrates the increased reliance and demand for project management services for new initiatives from 2013 through 2017.

During 2017, the PMO completed fourteen (14) projects and initiated ten (10) new projects (Figure I). The following list represents some examples of the new projects.

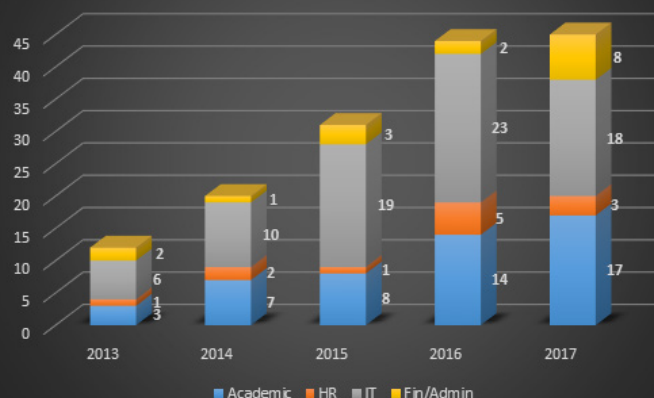
#### New Projects

- *MaineStreet HRMS upgrade*
- *Blue (course evaluation system for UM, UMM, USM, and UMPI)*
- *EAB Campus/Guide (UMA, UMPI, and UMM)*
- *Taskstream (assessment, accreditation, and e-portfolio system for UM and UMA)*
- *UMF website upgrade*

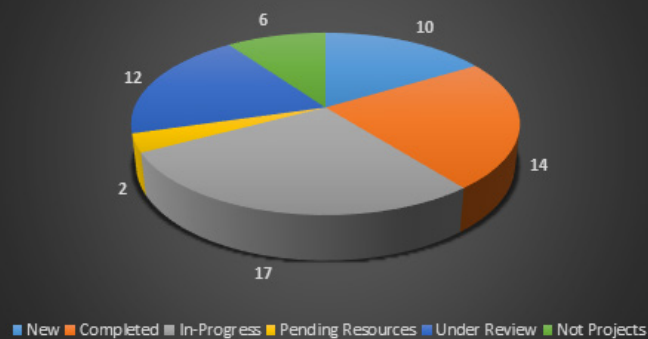
#### Completed Projects

- *MaineStreet Financials upgrade*
- *Transfer Equivalency Guides*
- *UMA Website upgrade*
- *EAB SSC-Foundation*
- *learn.maine.edu website upgrade*
- *AiM upgrade*
- *Access Control*

**FIGURE H** Project Requests (By Category/Year)



**FIGURE I** Project Requests 2017



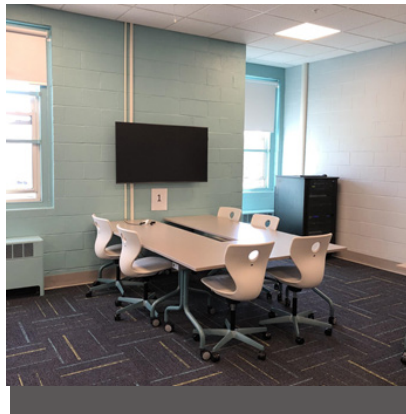
In addition to providing project management services for projects requested at the campus and system levels, the PMO provided substantial support for the bond-funded Classrooms for the Future, Wireless Infrastructure, and MaineStreet Improvements projects.

## 2017 PROJECT UPDATES

### CLASSROOMS FOR THE FUTURE

The US:IT Classroom Technology team assists in the design, installation, support and maintenance of audio visual technology in the classrooms, conference rooms, and event spaces for the University of Maine System. In the past year, the Classroom Technology team has been heavily involved in the 167 classroom installations and upgrade projects underneath the Classroom for the Future project. The team has also completed an additional 24 projects with campus based funding. There has been a concerted effort by the Classroom team with the Campus IT Officer's to change/shift the culture around using consistent, uniform technology in all campus spaces.

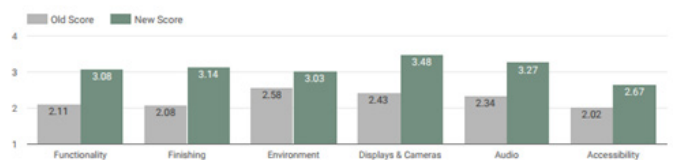
The work completed through the Classrooms for the Future project during the Summer of 2016 and 2017 has made a positive impact on the teaching and learning spaces. The funds provided allowed for coordinated efforts of the Classroom for the Future team, the Facilities staff on the various campuses, and the instructional designers, to significantly improve the classroom experience. A 4-point classroom assessment rubric was utilized to establish a baseline measure of teaching technology



capacity through evaluation of several practical categories including functionality, finishing, environment, displays & cameras, audio and accessibility. Prior to the upgrades performed over the past year, the average room scored 2.27 on the 4-point scale. Following upgrades completed over the past year, average room scores improved to 3.1. A breakdown of these improvements by campus are shown in Figure J. Additional breakdown of improvements in each of the functional categories are provided in Figure K.

Category Score Comparisons  
Scores are of renovated rooms

Figure K



In addition to the quantitative measure of improvements made through the classroom investments, qualitative feedback obtained from students and faculty using these newly renovated spaces indicates the positive impact of the initiative. A sampling of feedback is provided below.

*"Made me more focused on teaching instead of trying to get technology to work."*

*"I can teach while looking at the students not having to turn my back or to the side."*

*"Very versatile for group work."*

*"Much more pleasant environment."*

*"Make all classrooms like these rooms."*

*"I like that the projector and sound system can be controlled with one button. The projector provides a good quality picture."*

*"I like that this room has reliable equipment."*

*"Better teaching experience for myself and students."*

Faculty Feedback

*"It makes it feel more realistic and like you are sitting in the same room as everyone."*

*"more of a comfortable experience"*

*"I like how there are outlets on the table, it makes it easy to bring a laptop for work and not worry about where we are going to plug it in."*

*"This has made me realize how many opportunities are available to us students now compared to just a short time ago."*

*"Instant access to my Professors when I have questions."*

*"Easy to use remote and comfortable chairs."*

Student Feedback



### US:IT Classroom Technology 2017 Summary

149  
Rooms Upgraded

2.27  
Old Average Score  
Upgraded Rooms

3.1  
New Average Score of  
Upgraded Rooms

Renovated Rooms Assessment Score Comparisons

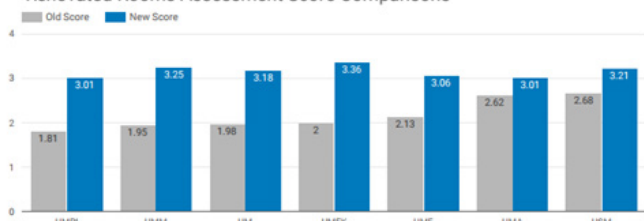


Figure J

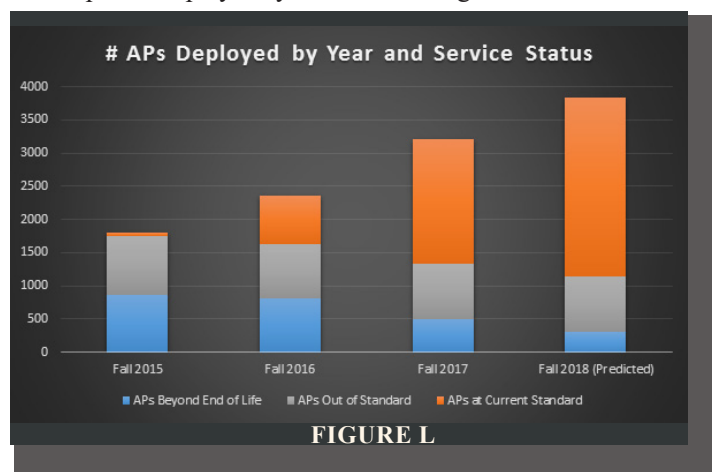
### After Action Reviews (AARs)

AARs were completed on Summer 2017 classroom upgrades for all 7 campuses. Participants were eager to share positive feedback from faculty and students on updated classroom spaces. Areas for process improvement include enhancing communications with campus staff during the upgrade process, better coordination with Facilities to ensure timely completion of facilities related work, more detailed documentation on scope and addressing furniture and technology installation delays on campuses.

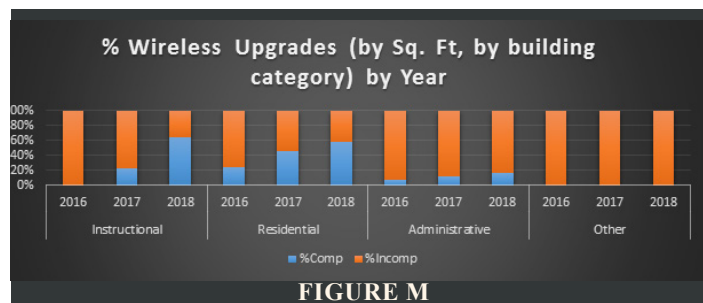
The CFTF team has modified processes as a result of feedback from the campuses. Facilities' tasks and timelines are now incorporated into the project plan. Campuses are now asked to provide room requests no later than January so quotes can be obtained and equipment/furniture orders can be placed earlier to avoid delays. The team is also working with campuses to identify a point person (project coordinator) on each campus who can be involved from the initial walk-through stage until room completion. These project coordinators will also be involved in a weekly update meeting to improve communication.

### WIRELESS INFRASTRUCTURE

This project represents an effort to upgrade wireless service and associated cabling and equipment at all campuses to bring wireless capacity to gigabit speeds to support learning and living spaces. As shown in Figure L, in 2015, virtually all wireless access points deployed on UMS campuses were either beyond their serviceable lifespan or out of current standards. The goal of this project is to maximize the number of deployed access points that are at current standards. This past year, wireless infrastructure upgrades resulted in the majority of access points deployed system-wide being at current standards.



Over the past year, eleven residence halls were upgraded with new infrastructure and wireless networks. In addition, upgrades to nine classroom buildings have been completed since June 2017 or are currently in progress. Focus for this project is shifting from residence halls that needed to be completed during summer break to academic buildings on the larger USM and UMaine campuses as shown in Figure M.



The project team has worked with UMaine and USM leadership to prioritize classroom buildings. Major upgrades are underway in Bailey Hall at USM and Boardman and Bryand Global Sciences at UMaine. Estimates and project plans are underway for several other classroom buildings as indicated in Table N.

### MAINSTREET IMPROVEMENTS

The primary goal of this project is to engage with stakeholders (staff, faculty and students) to identify ways to improve their MaineStreet experience. This includes bringing MaineStreet functions to mobile platforms as well as achieving support for the One University initiative by operationalizing business process improvements to create seamless, portable access to information.

To help ensure the project achieves its goals, the project team engaged with BerryDunn, inc. for business analysis services including the development of student and faculty surveys, conducting on-campus focus group sessions, peer institution consultations, and to catalog identified requirements.

Surveys were distributed to faculty and students in 2017 during June and September to collect input about MaineStreet functionality/requirements.

BerryDunn conducted focus groups at all campuses during the week of September 18, 2017. While focus group attendance was lower than anticipated, the discussions provided additional insights into the issues faced by faculty and students when working in MaineStreet. The results of these sessions were consolidated with the results of the two surveys.

STUDENT REQUIREMENTS	FACULTY REQUIREMENTS
<ul style="list-style-type: none"> <li>• Mobile-friendly access</li> <li>• Improved navigation</li> <li>• Better grades, courses and schedule view</li> <li>• Simplified course enrollment</li> <li>• Push notifications for holds, billing, and grades</li> <li>• Dashboard view of relevant information</li> </ul>	<ul style="list-style-type: none"> <li>• Improved navigation</li> <li>• Notifications of student activity</li> <li>• Ability to email all students</li> <li>• Add notes to advisee's profile</li> <li>• Streamline/simplify course catalog logic</li> <li>• Simplify grade uploads</li> </ul>

## Wireless Infrastructure Building Upgrades by Campus

Campus	Allocation	Buildings		
University of Maine	\$2,889,600	Fogler Library Shibles Bennett Rogers Jenness Bryand Global Boardman Aubert Crosby Lab	Little Nutting Fernald Neville Barrows Murray Hall <sup>4</sup> Donald P Corbett Estabrook Core	Sculpture Building Dunn Colvin Hall Murray Hall Class of 1944 Lord Hitchner Winslow
University of Maine at Machias	\$403,200	Science Torrey / Merrill Library	Kilburn Powers Reynolds	Dorward <sup>3</sup> Sennett <sup>3</sup>
University of Southern Maine	\$5,017,600	Drawing Studio Print Studio Academy Building Wishcamper John Mitchell Cen Law Building Bailey	Payson-Smith Science Abromson Luther-Bonney Glickman Library Masterton Hall Corthell	Brooks Dining Costell Complex Woodbury Sullivan Complex Wishcamper JMC
University of Maine at Augusta	\$560,000	Lewiston Katz Jewett	Randall Eastport Camden Belfast	Civic Center College Center
University of Maine at Farmington	\$1,444,800	Mantor Library Dakin Black Mallett Lockwood	Purinton Stone Scott North Scott West	Scott South Roberts Learning Center <sup>3</sup>
University of Maine at Presque Isle	\$515,200	Park Emerson	Merriman Folsom-Pullen	
University of Maine at Fort Kent	\$369,600	Powell The Lodge	Crocker Old Model School <sup>3</sup>	Cyr <sup>3</sup>

TABLE N

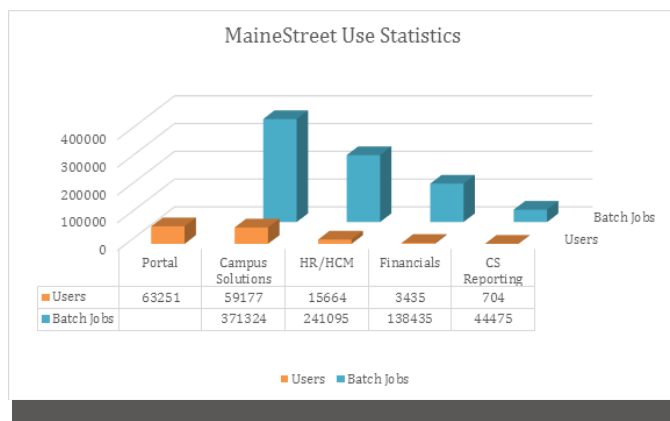
### Notes:

<sup>3</sup> Insufficient funding for entire building; minimal upgrades to support Classrooms for the Future

<sup>4</sup> Partial upgrade due to building limitations

## MAINSTREET IMPROVEMENTS (CONT'D)

There were two related developments during 2017 impacting the nature of the project. Campuses have engaged with EAB for their Guide mobile app which will address some of the needs expressed through the surveys for students. The second development is that Oracle is putting more effort into making their PeopleSoft product mobile friendly and now nearly all student self-service components are mobile friendly in the newest releases of their software. This improved support by Oracle most likely alleviates the need to invest in a product to provide mobile interfaces and will allow focus, instead, on accelerating testing and implementation of newer releases of PeopleSoft modules.



## DATA CENTER SERVER MIGRATIONS

The consolidation of IT in 2012 offered a significant opportunity to streamline our operations and reduce costs by deduplicating services, reduce the number of servers and amount of storage needed for the university and to house those servers in well maintained, secure data centers.

Migrating servers from campus locations to the Orono datacenter has continued to be high priority work for the System Administration and Data Center Operations groups. In 2017, migration of all servers from University of Maine Farmington hardware to the Orono data center was completed. The Farmington IT Support Services, Web Technologies, System Administration, and Data Center Operations teams worked together to migrate 22 servers to the Orono data center and to decommission 27 other servers, for an 80% overall reduction in deployed servers.

Similar work is underway with USM and UMaine legacy servers.



# SYSTEM UPGRADES AND ENHANCEMENTS

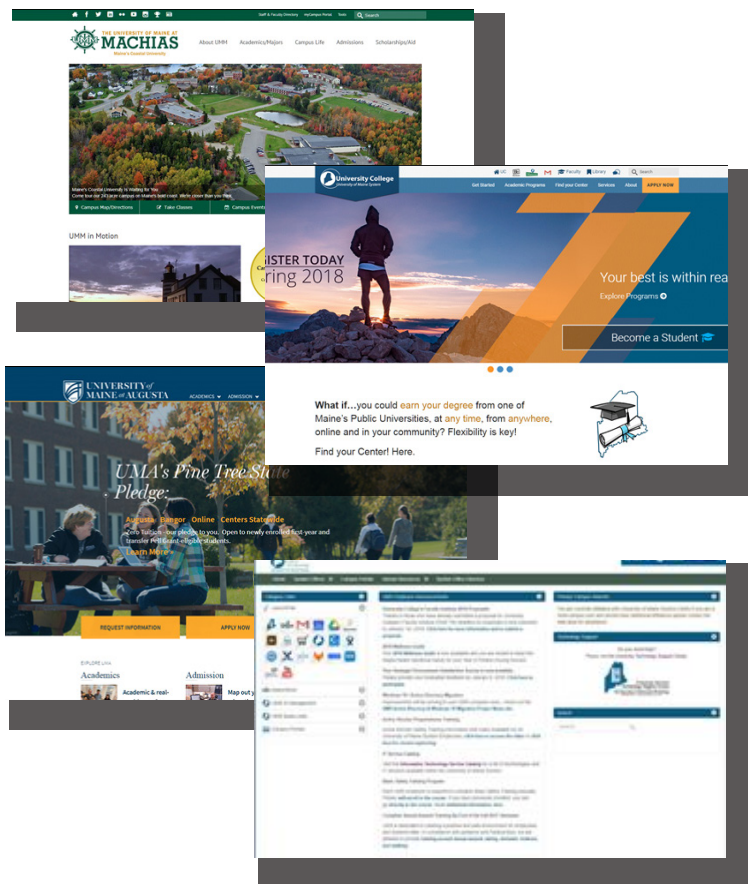


## WEBSITES/PORTAL

A thrust of Web Technology has been to move campus websites from highly customized (but hard to support) website software, often hosted on aging campus infrastructure, to a robust and common framework hosted in a central data center. Such migrations come along with numerous support options, features and functionality sought by campuses for their external-facing websites, including enhanced campus branding, ADA compliance and mobile device friendliness.

Through 2017, Web Technologies partnered with campuses and departments in upgrade and redesign projects to ensure their web presences were up-to-date, performing well, meeting needs, and generating desired outcomes. Over the past year, the Web Technology team completed 5 major website projects including 3 full redesigns (UMM, UMA and University College), migration of USM's website framework to the Orono data center, and implementing a Web Accessibility tool. Web Technologies also participated in a number of upgrades to several other websites.

Web Technologies also manages the myCampus portal which has seen a nearly 30% growth in use over last year.



### Campus Portal Usage

#### # Distinct Users

59,877

#### Total # Pages

229,106

#### # Sessions in 2017

5,684,239

#### # Page Views

10,580,219

## ACTIVE DIRECTORY

Migration of Windows computers to the new University Active Directory is almost complete on the UMF and UMFK campuses. Windows migration has begun at UMaine, UMM, and UMPL. Macintosh computer migrations are underway on the UMaine, UMM, UMF and UMA campuses and have been completed at the UMFK campus.

## WINDOWS 10

In February 2018, US:IT's End-user Technology area will pilot, and shortly thereafter deliver, a standard and secure Windows 10 deployment for new computers including commonly-used software and services. This will free IT Support Services staff at campuses from maintaining separate Windows 10 development and support processes and tools.

**MAINSTREET FINANCIALS**

- Go-live: October 2016;  
Post go-live tasks completed Jan. 2017
- Transaction Volume
  - Payment vouchers 164,886
  - Purchase Order docs 63,124
  - GL Journals 75,018
  - Employee Expenses 24,772
  - AP Payments 112,206
  - HR Journal postings 5,225
  - Chartfield combos 170,000(+)

**IMAGENOW**

- Upgrade: October 2017  
(Version 7.1.5-1664)
- 2017 Documents Volume: 836,606
- Total Pages Stored: 7,658,757

**BLACKBOARD**

- Upgraded: July 2017  
Release 3100.0.3-rel.51+917ccd3
- # Active Courses: 8,630
- # Enrollments: 100,901

**KALTURA**

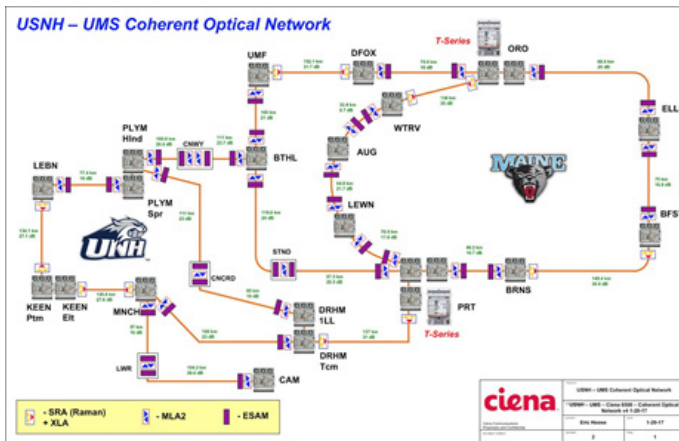
- Go-live: April 2017.
- # Media Entries: 4,251
- # Media Files Played: 62,000
- # Minutes of Video: 17,000
- Monthly bandwidth: 2533 GB
- Storage Used 33,942GB

**BOX**

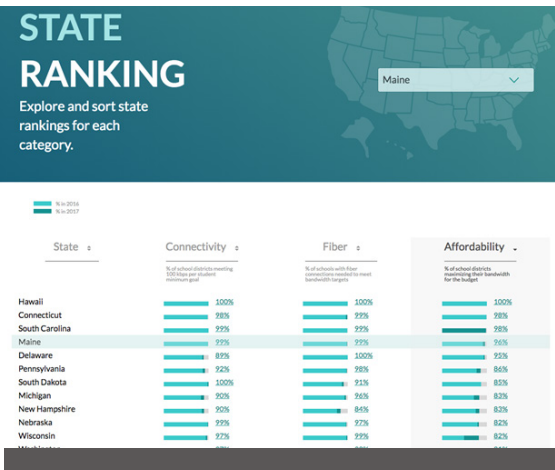
- Go-live: Jan 2017
- # of Files Stored: 5,400,000
- Storage Used: 23TB
- # Session Logins: 60,500

**PARTNERSHIPS****MAINE REN**

As stated in the 2016 State of IT report, UMS and USNH released a joint RFP to replace much of the optical networks in Maine (MaineREN) and New Hampshire (I-Beam). The RFP was awarded to Integration Partners of NH with Ciena 6500 selected as the optical network platform. Throughout 2017, equipment was installed at twenty one (21) locations across Maine, New Hampshire and Massachusetts. While the project time-line has been delayed to some extent due to challenges with the quality of fiber cables UMS leases between Waterville and Portland, all equipment has been fully deployed and configured, successfully passed all tests both pre and post an extended burn-in period. The transition of production services to this new platform began during the Winter 2017 break with completion anticipated by the end of Spring 2018 break.

**MSLN-MLTI WIFI**

2017 proved to be a very productive year for the Maine School and Library Network (MSLN). Once again Maine has been rated among the top states for Internet connectivity for K-12 schools in terms of connectivity, fiber optic availability and affordability by Education SuperHighway. In late 2017 UMS released an RFP for data transport (broadband) services for both UMS and MSLN locations throughout Maine. This RFP will result in the award of some 760 data transport circuits across multiple transport service providers. While awards will not be made until January 2018, it is already clear that the consortium-based contracting for services will once again yield benefits to the entire K-20 (and public library) community.



2017 also saw the passage of LD-256 which stabilizes state funding for MSLN. The bill received overwhelming support not only from the K12 schools and public libraries who receive direct benefit from MSLN, but also from much of the telecommunications industry, the Office of the Public Advocate, and the Maine State Library. Sponsored by Representative Martin Grohman of Biddeford, the final version of the bill changed the MTEAF's assessment from a percentage-of-retail-sales based to a fixed-surcharge based assessment. Modeled after how the E-911 system is funded, the MTEAF will restore state-level funding for MSLN to just under \$4.0M or roughly to the level available in 2011-2012.

Networkmaine's support of the WiFi networks at two hundred and fifty (250) middle and high schools as part of the Maine Learning Technology Initiative (MLTI) was scheduled to end in June 2017. We had hoped that discussions with the Maine Department of Education (MDoE) would lead to UMS and MDoE collaborating, much like we do with MSLN and Internet connectivity, to support the WiFi networks in Maine's K-12 schools moving forward. MDoE has decided to take another approach.

MDoE has decided that it will no longer provide WiFi networks as part of its learning technology initiative. Networkmaine has agreed to support the existing WiFi environments through FY19, under contract with Systems Engineering in Portland, to provide a transition period to schools so that they have time to explore, identify funding and deploy their own WiFi networks to replace what has been provided through the state for the past sixteen (16) years.

### **NEREN (NORTHEAST RESEARCH AND EDUCATION NETWORK)**

NEREN is a consortium of non-profit organizations that provide a fiber-optic network connecting and unifying the research and education communities in New York and New England. NEREN owns and operates a regional Research and Education Network (REN) that ties together in-state fiber initiatives, like MaineREN, effectively creating an open network that links the members not only to one another but also to facilities throughout the region and globe. UMS continues its involvement and support of NEREN with Dr. Bruce Segee and Mr. Jeff Letourneau serving on its board of directors with Mr. Letourneau currently serving as the Chairman.

In 2017, NEREN has focused on expanding its footprint in response to the expressed needs of its members. The first, and by far the largest effort, expands the NEREN network into New York City to the Manhattan Landing (MAN LAN). MAN LAN is the largest peering point among regional, national and international research and education networks in the United States. By expanding to MAN LAN, NEREN is able to provide its member institutions, and their researchers, cost-effective high-performance interconnectivity with their collaborators around the world. Initially UMS will be sharing a 100 Gbps wave to MAN LAN with UNH, Dartmouth and UVM.

Similarly, NEREN has acquired dark fiber assets from its current point of presence in Cambridge, MA to One Summer Street in Boston. This location is the largest multi-tenant, mission-critical telecommunications and data center facility in New England at which more than 75 Internet content providers, access networks and cloud service providers co-locate. With a NEREN presence in this facility, its members will have very cost-effective direct network connections to some of the largest and most popular services on the Internet.

Participating in these initiatives is part of US:IT's strategy towards shielding UMS, along with MaineREN and MSLN participants, from any negative outcomes from the recent FCC order eliminating Network Neutrality protections in the US.

### **OTO FIBER**

Initially formed through an inter-local agreement between the Town of Orono, the City of Old Town and the University of Maine System in 2015, Old Town - Orono Fiber Corporation (OTO Fiber) is incorporated as a non-profit public benefit corporation created to establish, design, install, maintain and make available an open and competitive basis telecommunications infrastructure within the City of Old Town and the Town of Orono that enables high speed Internet service in the two municipalities.

With the award of a Northern Borders Regional Commission grant in 2015, OTO Fiber set off to create a proof-of-concept open-access fiber to the premise (FttP) network of at least 6 miles spanning the two municipalities. In 2017 OTO Fiber received its 501(c)3 status from the IRS and shifted its attention away from these startup efforts to the creation of the envisioned FttP network.

In September 2017 OTO Fiber released an RFQ for a consultant to design up to twelve (12) miles of fiber optic infrastructure across the two municipalities. The RFQ resulted in four (4) respondents with a contract awarded to Tilson Technologies of Portland, ME. The network design effort is expected to be completed with construction of the network beginning in spring of 2018. OTO Fiber expects to have the pilot FttP network available to retail Internet Service Providers in the fall of 2018.

### **NNENIX**

In late 2016, Northern New England Neutral Internet Exchange (NNENIX) was formed as a non-profit corporation to establish a neutral Internet eXchange Point (IXP) that enables its members, educational institutions, and the general public to benefit from the opportunity to voluntarily interconnect for the purpose of exchanging traffic between the users of each network. While over 850 IXPs exist across the globe, the closest IXP to Maine, and the rest of northern New England, is in Boston.

Over the past year, through the generous donation of equipment and services from various companies, NNENIX has established its first point of presence (PoP) in Portland, ME. UMS and Bowdoin College are charter members of NNENIX with a number of Maine based ISPs and national entities including Akamai, Google, Netflix, and Hurricane Electric committed to participate. With the aggregation of demand that an IXP creates, it is expected that NNENIX will help create opportunities, price points, and options in Maine's broadband marketplace previously unavailable north of Boston.



## TEAM HIGHLIGHTS

### INFORMATION SECURITY OFFICE

Information Security continues to be in the forefront of US:IT activities. The Information Security Office (ISO) maintains a detailed report on the state of the UMS information security, which examines threats and measures US:IT employs to reduce the risk to the UMS and its Universities. That report provides a set of strategies to continue improvement.

While the overall number of breaches to higher education institutions has declined in the past few years, the threat continues. Most higher education attacks are aimed at personal information, with a growing trend toward more espionage. Phishing continues to be a leading means to gain access, specifically to steal credentials.

To address Information Security threats, members throughout US:IT are engaged in activities every day that keep attacks in check. At the center of the efforts, four individuals in the ISO work to keep security practices honed. This office is responsible for policy, standards and practices; awareness and training; and consulting with departments to meet compliance standards (including, but not limited to FERPA, HIPAA, and PCI). Several major functions and services have been routinized in the past few years. Information Security analysts review threats from several sources including reports from a 24-7 intrusion detection system. The team regularly scans systems for vulnerabilities and alerts US:IT staff of needed patching. The team responds to incidents appropriately using in-house diagnostics to analyze the extent of any security breach as well as contracted support for external investigations that may exceed our capabilities. The ISO has developed a security awareness program, participates in UMS compliance programs and provides a set of services to meet established requirements as well as increase the security posture.

To provide the most efficient and effective information security program, the Information Security Office in conjunction with their US:IT colleagues applies controls and protections commensurate with the risk. An iterative approach is applied such that higher risk assets are identified by data or criticality and then assessed against foreseeable threats

based on vulnerabilities. Controls are then applied to manage the risk and the assets are reassessed. A combination of controls employ a mix of people, technology and process. An appropriate balance is required to maintain the strategy of “defense in depth.”

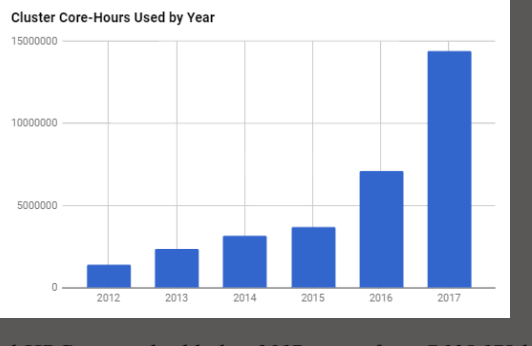
We have identified a number of strategic improvements aimed to suitably enhance current efforts. Among these, we propose better phishing mitigation approaches, a comprehensive revision of the Information Security Policy and Standards, and staff augmentation. In-depth technical defense strategies are also actively being explored.

### ADVANCED COMPUTING GROUP

The Advanced Computing Group at the University of Maine was established in 2013 to provide computing infrastructure and support for the research needs of the state of Maine. The ACG provides complete computing power packages to advance research, education, and Maine into the 21st century. Services include: High Performance Computing (HPC), Cloud Computing with virtual machines (VM), data storage and high resolution visualization technology (vWALL).

In 2017, 20 new compute nodes were purchased resulting in the addition of 560 cores to the HPC cluster and a 29% increase in processing power. Additionally, 512 GB of high speed memory was purchased to boost overall memory capacity for nodes utilized for genomics research. 2 new file servers were purchased to test a new 672 TB Ceph Storage cluster.

Over the past year, ACG completed a successful pilot of a new Virtual Computer Laboratory service for classes at the University of Maine and the University of Maine at Augusta. This initiative is designed to provide remote access to virtualized workstations through a regular web browser. Additional testing of this platform will continue into the Spring 2018 term. Additionally, a collaboration between ACG and the UMaine Forestry Department culminated in a forestry mapping program that was featured as part of the NSF-funded Northeast Cyber Team Program.



**\*\*Total HPC usage doubled in 2017 going from 7,135,175 hours in 2016 to 14,421,763 hours in 2017**

Information Security Controls			
	Prevention	Detection	Response
People	Background Checks Confidentiality Agreements Training & Awareness Phishing Exercises	Self-Reporting i.e. <a href="mailto:phish@maine.edu">phish@maine.edu</a>	Incident Response Teams
Technology	Firewalls Antivirus Access Controls Vulnerability Scanning	Intrusion Detection Systems Central Logging and Alerting Network Tools	Forensic Tools
Process	Control Consulting Contractor review	Threat Advisories (REN-ISAC, MS-ISAC, Infragard, FBI, Homeland Security, etc)	Incident response program



# SCHOLARSHIP AND DEVELOPMENT

## Presentations and Professional Development



US:IT promotes ongoing professional development and training and encourages staff to accept and seek out opportunities to represent UMS at conferences and other events. The lists below represent some of these opportunities in 2017.

### Staff Professional Development Opportunities

Event	Description
<b>NERCOMP</b>	Classroom Design for Teaching and Learning, Rethinking Academic Technology
<b>Extron</b>	AV Associate Training
<b>Microsoft Higher Education Conference</b>	Education Initiatives and Networking
<b>Windows10 Deployment Workshop</b>	Training on servicing model and deployment for IT staff and administrators.
<b>JAMF</b>	User Conference
<b>Trainings</b>	How To: Configuration Management for Macs in the Enterprise, Introducing: Centralized Apple TV Mgmt. Why DEP is Replacing Imaging (and Why it's a Good Thing), Managing iOS11 and macOS High Sierra Upgrades, Collaborating with Git, JavaScript: The Good Parts Master Class, Windows 10 Deployment Best Practices: Upgrade App Integration & Network Security, AT and APPS to Support Students in Higher Ed, iOS and Google
<b>USM Class</b>	Python Programming COS/ITT184
<b>Boston Academy</b>	Smartsheet Essentials
<b>RMC Project Management Learning Solutions</b>	Crash Course for IT Professionals
<b>Project Management Institute</b>	Conflict, Collaboration and Consciousness, Managing Remote Teams for Success, Gravitas: Making a Powerful Impact, How to Manage Conflict with Product Owners, Agile Requirements Gathering, PMP Exam Prep
<b>Husson University PM Program</b>	Building and Improving Your Organization's Agility
<b>Educause</b>	Annual Conference 2017, Security Professionals Conference 2017
<b>UMS Office of Organizational Effectiveness</b>	Facilitator Training
<b>SIGUCCS Mentoring Program</b>	Mentor
<b>North America Network Operators Group</b>	Gathering of network operator peers.
<b>Internet2</b>	Global Summit, Regional Principals Meeting
<b>2017 MLTI Student Conference</b>	STEM Related Workshops
<b>New England Peering Forum</b>	Internet Peering Collaboration
<b>NetApp Insight</b>	Customer conference related to data storage solutions.
<b>National Science Foundation</b>	Campus Cyberinfrastructure PI and Cybersecurity for Cyberinfrastructure PI Workshop
<b>State E-Rate Coordinators Association</b>	Fall Meetings
<b>USAC</b>	Fall E-Rate Training
<b>Internet2</b>	TechEx Conference
<b>NEREN</b>	Advancing Regional Collaboration and Research IT Collaboration Seminar
<b>Juniper</b>	Informational Event
<b>Cisco</b>	Connect New England
<b>Bangor Information Security Professionals</b>	Multiple Sessions
<b>National Electrical Code</b>	Recertification Course

### Staff Presentations & Publications

Event	Description
<b>Educause</b>	Classrooms for the Future Sessions
<b>University College Annual Faculty Institute</b>	Active Learning Simulator/Space
<b>New England Celebration of Women in Computing Conference</b>	Git Control
<b>ITSS Staff Training</b>	UAD Training (packaging, management, imaging, admin)
<b>The Quilt</b>	Executive Committee Retreat, Visit to FCC, Winter Members Meeting, CEO Roundtable
<b>FCC's Broadband Deployment Advisory Committee</b>	Nominated by State Educational Technology Directors Assoc.
<b>FocusMaine Initiative</b>	Interview on how to make Maine's economy more competitive with high-speed broadband infrastructure.
<b>American Library Association Legislative Day</b>	Met about library policy priorities including Network Neutrality.
<b>Cisco Blog Article</b>	Interview regarding MLTI Wireless
<b>SuperComputing 2017</b>	Volunteer, Social Media Communications Director
<b>Assoc. of Computer Technology Educators of Maine (ACTEM)</b>	Presented on Maine Learning to Mod Through Minecraft Project
<b>ACTEM and Maine Technology Directors Meeting</b>	Presented on E-Rate and WiFi
<b>ACTEM</b>	Exhibitors
<b>Educause</b>	Presentation at Annual Conference - Centrally Led, Widely Dispersed: Creating an Identity and Approach for a Unified IT Organization That Propels the Mission, Annual Conference Proposal Reviewer
<b>Penn State College of Liberal Arts</b>	Customer Experience Framework Development and Training Delivery to the IT Department

# FUTURE DIRECTIONS

## Governance and Strategic Planning



### SHARED GOVERNANCE

As noted in the Educause “Higher Education IT Governance Checklist” (March, 2017), IT Governance serves as an essential organizational process which facilitates robust, effective IT strategy to best meet the needs of the academy. This is accomplished by aligning decisions with institutional mission and needs, improving communication within the IT organization as well as with the larger community, ensuring stakeholder input and buy-in for policy, budget and project decisions and by integrating risk management into the decision making process.

In establishing a revised IT Governance structure for the University of Maine System, several key principles and goals have been defined. These principles and goals are aligned with an overall vision for US:IT Governance which is:

- *US:IT Governance will facilitate communication to further stakeholder engagement resulting in greater collaboration and consensus for IT project prioritization.*

The key outcomes for successful US:IT Governance are:

- *Greater Transparency: through enhanced information dissemination and dialogue with stakeholders*
- *Greater Accountability: US:IT assumes responsibility for supporting and executing decisions endorsed and/or derived through governance*
- *Greater Stewardship: US:IT ensures efficient and responsible use of technology resources supporting the University of Maine system and member campuses*

A revised US:IT Governance structure will be established in 2018 and the various committees will be charged to achieve the following goals:

- *Balance needs of campuses with cost-effective technology solutions*

- *Provide robust communication to clarify system-wide IT vision for supporting the University and the mission of member campuses*
- *Create opportunities for enhanced collaboration to improve efficiency and impact of technology solutions and services*
- *Establish policies and practices to ensure effective Information Technologies and Services are afforded to all members of the University of Maine system and community*
- *Create evaluation criteria for new services and solutions to be offered to member campuses*
- *Provide mechanisms to encourage and support innovation*
- *Provide robust analysis for total cost of service delivery*
- *Provide consistent, predictable project request cycle coordinated with annual University budget cycle*

The basic framework of the US:IT Governance structure will encompass various cross-disciplinary teams, all working and communicating together to fulfill the core outcomes of the governance initiative. The basic structure is depicted in Figure O.

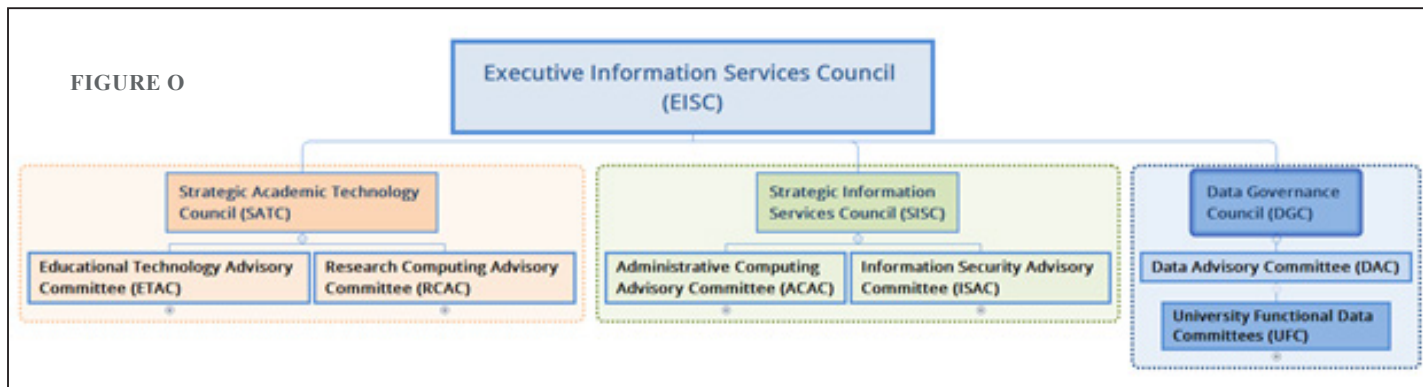
The Executive Information Services Council serves as the final decision-making authority for IT-supported initiatives. This group will serve to ensure strategic alignment of IT initiatives and services with the University of Maine System mission. The EISC will receive recommendations and proposals for consideration from two Strategic Councils:

#### Strategic Academic Technology Council

- *Defines and recommends strategic approaches to leveraging IT resources to support the Academic and Research needs of the University of Maine System and member campus*

#### Strategic Information Services Council

- *Defines and recommends strategies and approaches to key IT-related issues and services to best serve and support the needs of the University of Maine System and member campuses*



Each Strategic Council will be responsible for receiving, reviewing and endorsing project proposals from supporting advisory committees. The advisory committees supporting the Strategic Academic Technology Council include:

#### Educational Technology Advisory Committee

- *Provide strategic direction and plan for meaningful and innovative use of technology solutions with broad benefit to member campuses; Identify opportunities for collaboration to enhance teaching, learning and assessment through technology*

#### Research Computing Advisory Committee

- *Provides strategic direction and planning to provide robust research computing infrastructure to meet the needs across the University of Maine System and member campuses. Identifies collaboration opportunities to promote and leverage existing and emerging research computing infrastructure throughout the state.*

The advisory committee supporting the Strategic Information Services Council include:

#### Administrative Computing Advisory Committee

- *Recommends and endorses standards for IT architecture and identifies opportunities for shared business processes to drive efficiency and efficacy across the University of Maine System for supported platforms and applications.*

#### Information Security Advisory Committee

- *Provides leadership and direction for the University of Maine System Information Security Program; recommends initiatives, strategies and establishes priorities for Information Security infrastructure and compliance needs of the University*

US:IT will seek full implementation of this revised governance structure during the Spring and Summer 2018 months to coincide with and inform the annual budget planning cycle.

## STRATEGIC PLANNING

US:IT has established a goal of developing a comprehensive strategic plan prior to the start of the Fall 2018 semester. It is anticipated that the US:IT strategic plan will provide a 3-5-year roadmap designed to enhance the technology and information support and services the unified US:IT division provides to the campus and system communities. The plan will also serve to inform effective budget and resource planning while providing US:IT teams with discrete, annual deliverables.



The strategic planning development cycle will include defining shared mission, vision and values statements for the US:IT organization, preliminary analysis of existing services and assessment of efficacy, identification of new opportunities, defining goals & key performance indicators, and determining resource needs for accomplishing each goal. Objectives incorporated into the strategic plan will be defined according to the 'SMART' framework (Specific, Measurable, Attainable, Relevant and Time-bound).

To support the development of the strategic plan, several US:IT task forces have been established to conduct preliminary analysis and assessment of current service and support efforts. These task forces include:

- **US:IT Mission, Vision, Values Task Force:** *To define the shared mission and vision for US:IT and the core values to which we aspire.*
- **US:IT Core Services Task Force:** *To catalog and review all supported services; categorize each service by use and adoption at each campus.*

## ENHANCED COMMUNICATION

During the latter half of 2017, US:IT Leadership has embraced the concept of fostering enhanced internal communication as well as communication and dissemination with the wider UMS community. To this end, several venues and initiatives have been devised to provide greater opportunity for US:IT staff to engage with colleagues, peers and campus stakeholders to build upon previously established foundations for professional development and training. These include, but are not limited to:

- **US:IT Summit:** annual division-wide training and professional development day for US:IT Staff
- **Lunch and Learn Series:** weekly series offering opportunity for US:IT staff to share learning opportunities with colleagues.
- **CIO Open Forum:** monthly all US:IT staff meeting to provide updates on current projects as well as address current issues facing US:IT
- **US:IT Website Enhancement Task Force:** Provide recommendations and suggestions on essential services, features and information to be included on the US:IT Website
- **US:IT Service Outage Task Force:** Provide recommendations on strategies and best practices for informing the UMS community on planned and unplanned system outages.

# Summary

Overall, 2017 proved to be a highly productive and effective year as the unified US:IT team continued its ongoing evolution. Based on the success experienced over the past year, US:IT is well positioned to promote and provide transformative, strategic leadership in the use of technology and information to support the mission of the University of Maine System and each campus community. We value and appreciate the ongoing support of our colleagues throughout the University of Maine System and look forward to serving the entire community in the years to come.



### AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Square Footage Increase and Donation Authorization, Cooperative Forestry Research Unit (CFRU), UM
2. **INITIATED BY:** Karl W. Turner, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**  
 Net GSF Increase  
 Support Maine through research and economic development  
 Policy 706 – Acceptance of Gifts, Development Activities and Fund Raising Campaigns  
 Policy 801 – Acquisition of Real Property
5. **BACKGROUND:**

The University of Maine System acting through the University of Maine (UM) requests authorization to accept the donation of a camp building from Baxter State Park's Scientific Forest Management Area (SFMA), to be located on land leased by the university's Cooperative Forest Research Unit (CFRU) at Telos Camp located on T5R11 WELS, Maine. This request is pursuant to Trustee policy prohibiting net increases in space without Trustee authorization.

Baxter State Park Scientific Forest Management Area (SFMA) has a camp building that they no longer need due to upgrades in the park. The building is a wood structure with vinyl siding and a metal roof and is approximately 750 gross square feet. No third party evaluation of the building has been completed, but upon review by the UM facilities staff the estimated value is well below the \$50,000 threshold requiring Board approval. Baxter SFMA is a member of the CFRU and has offered to donate the building to the CFRU at no cost. The CFRU intends to locate the building on a parcel of land currently leased by the CFRU from the landowner, Katahdin Forest Management and has approval from the landowner to do so. The CFRU will use the building as a camp for the staff and students who currently utilize tents when staying overnight at the camp.

The Cooperative Forestry Research Unit (CFRU) is part of the Center for Research on Sustainable Forestry (CRSF) at the University of Maine. The CFRU was formed in 1975 as a research cooperative between the University of Maine and Maine's forest landowners/managers. There are currently 35 members of the CFRU who annually contribute over \$500,000 to research the most important problems they face in managing over 8.2 million acres of commercial forestlands in Maine. The applied nature of this forestry research involves extensive field work on research installations that are spread across the Maine Northwoods. The CFRU employs field crews made up of UMaine summer students, staff, faculty and visiting scientists, and works closely with faculty and students at UMFK, including the new JD Irving Professorship, who has a half time research appointment connected to the CFRU.



The CFRU will cover all costs associated with the move, site preparation, setup and ongoing maintenance of the building through non E&G funds. The facility will be added to the inventory provided to Sightlines but as with other buildings of this size, type, and remote status, Sightlines will determine in what manner the data is used in their tracking and reporting. Changes at this site are not expected to impact the key performance indicators which are reported to Trustees.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the March 18-19, 2018, Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorizes the acceptance of the donation of a camp building increasing building square footage at the University of Maine by up to 750 square feet.

02/21/2018




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### AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Marine Sample Processing Shed, UMM
2. **INITIATED BY:** Karl W. Turner, Chair
3. **BOARD INFORMATION:** **BOARD ACTION:** X
4. **OUTCOME:** **BOARD POLICY:**  
 Support Maine through research and economic development  
 Net space changes  
 Relevant academic programming  
 Policy 706 – Acceptance of Gifts, Development Activities and Fund Raising Campaigns  
 Policy 801 – Acquisition of Real Property
5. **BACKGROUND:**

The University of Maine System acting through the University of Maine at Machias requests authorization to build a Marine Sample Processing Shed on the Machias campus. The proposed shed will support both research and teaching curriculum. The request is pursuant to Trustee policy prohibiting net increases in space without Trustee authorization.

The proposed space is a heated greenhouse of up to 400 square feet located adjacent to existing facilities on campus and with adequate utilities to allow the sample processing to take place.

The purpose of the space is to provide a safe and warm environment out of the elements for processing marine benthic samples. Each fall, courses in Oceanography (ENV 103), Marine Biology (BIO 206), and Marine Ecology (BIO 360) are taught at UMM with students participating both in field sampling and their own research projects requiring sample processing. Intertidal field research commenced at UMM in the late 1970's including a number of research efforts focused on intertidal soft-shell clam ecology and/or aquaculture. Sampling occurs throughout the year, independent of season, outside temperature, or weather and all samples taken for those studies and courses are processed by washing marine intertidal sediments through sieves, outdoors on campus. This space will be used by marine biology faculty and students as well as students and faculty in the two other science-based programs at UMM – Biology and Environmental Studies.

The cost of the project (currently estimated at \$65,000) will be funded by a grant (response pending) or funds yet to be identified. The current request is intended to expedite the construction process should the grant proposal be approved as scheduled in March. The operating costs of the new structure will be funded as determined by the UMM Chief Business Officer. The net change in square footage will be tracked in the campus' list of assets.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the March 18-19, 2018, Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees approves the increased footprint at the University of Maine at Machias of up to 400 square feet for a sample processing shed.





AGENDA ITEM SUMMARY

- 1. **NAME OF ITEM:** Gorham Athletic Fields LED lighting project. (Hannaford, Baseball, Softball Fields), USM
- 2. **INITIATED BY:** Karl W. Turner, Chair
- 3. **BOARD INFORMATION:** **BOARD ACTION:** X
- 4. **OUTCOME:** **BOARD POLICY:**  
Enhance fiscal positioning Policy 701 – Capital Budgets  
Increase enrolment  
Improve student success and completion
- 5. **BACKGROUND:**

The University of Maine System acting through the University of Southern Maine requests authorization to expend up to \$1,780,000 for installation of LED lighting on three athletic fields on the Gorham Campus. The funding will come from a combination of private giving and institutional funds. USM has already dedicated \$650,000 toward the project. \$160,000 in private gifts has been raised, and the USM Foundation is currently actively seeking the remaining \$970,000. This request is pursuant to Board Policy 701 Operating and Capital Budgets, requiring advance approval of projects with a total cost of \$500,000 or more.

The scope of the project includes installation of state of the art LED lighting for the Hannaford Field, Baseball and Softball fields. None of these fields currently have any lighting for nighttime games. The lack of lighting on these fields reduces the time available for the use of these fields by University athletic teams as well as outside entities that may otherwise rent the fields. With the new lighting in place, the University will be able to host NCAA tournaments as well as State High School tournaments. Renting of the fields to other organizations can happen once the lights are installed bringing in an additional stream of revenue and providing recruitment opportunities. Lights will add scheduling flexibility and reduce missed class time by student-athletes. Additionally, having lights will enhance our recreational opportunities for all students.

The project may be phased to accommodate the availability of funding and lead time for ordering the lighting. A vendor has been identified through the National Joint Powers Alliance (NJPA) purchasing consortium. USM currently has completed design for the lighting on all three fields. The funding is identified for the first project (Hannaford Field) but is still actively being raised for the Softball and Baseball fields. The timeline for construction for the Hannaford Field project is Summer 2019, the other two fields will be scheduled once fundraising is complete with a current expectation of Fall 2019.

The operating costs are expected to be contained to the electricity cost as the lighting system purchase includes a 20 year maintenance agreement covering everything on the pole including light bulbs and electronics. The energy use of these lights is expected to be 25% less than other lighting options. The operating costs associated with the lights will be covered centrally and offset by rental fees collected from external entities using the fields. USM expects the initial operating costs to be cost neutral and, as activity develops, for it to become a positive revenue stream.

**6. TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forwards this item to the Consent Agenda at the March 18-19, 2018 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees approves the University of Southern Maine to expend up to \$1,780,000 from a combination of private giving and institutional funds for the Gorham campus athletic fields LED lighting project.

## **Master Plan Acceptance, UMA**

6

This agenda item has been withdrawn from the March 1, 2018 Finance, Facilities, Technology Committee meeting.



## AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Sightlines Annual Facilities Report, UMS
2. **INITIATED BY:** Karl W. Turner, Chair
3. **BOARD INFORMATION:** X **BOARD ACTION:**
4. **OUTCOME:** **BOARD POLICY:**
5. **BACKGROUND:**

Sightlines will present its annual Facilities Benchmarking and Analysis findings regarding the University of Maine System's facilities and facility management operations.

Sightlines will be available to present and discuss the annual report. While the entire updated report is attached for Trustees' information, in the interest of time only selected slides will be reviewed during the live presentation.

A key metric formally adopted by Trustees – density as measure of the intensity or efficiency of the use of our space – has improved in FY17 against an overall downward trend. This is illustrated on Slide 10 in the slide numbering sequence.

While this is only a single data point and not yet a trend, it does indicate the University's efforts to constrain and reduce its footprint, among other factors, are starting to make a difference. The University's footprint is coming more into line with a size appropriate to the population it serves. Sightlines will elaborate on this.

Beyond density, the Sightlines data continues to reflect a challenging situation in which the condition of the University's facilities as measured by renovation age and net asset value have continued to decline. The University is currently on pace to see more than half of all space not have been meaningfully renovated in more than 50 years by 2022. This is illustrated on Slide 18 in the slide numbering sequence.

The measures of condition or quality of the University's facilities simply are unlikely to improve overall until and unless substantially more investment is made in existing facilities each year, as the University is seeking to begin doing with the bond request currently pending before the legislature.

Additional slides of potential particular interest may include:

- Slide 7 summarizes Sightlines core findings for the year.
- Slide 42 shows the continuing positive news about carbon reduction at the University.
- Slide 50 illustrates the ongoing gap between current investment levels and the levels that would be needed to meet Trustee priorities.
- Slide 51 illustrates the long-term trend of deteriorating facility condition.
- Slide 53 highlights a case study from UMM regarding the benefit of space reduction.
- Slides 59-61 forecast how the space reduction initiative approved by Trustees in January 2018 could help achieve further benefits.
- Slide 65 and onward detail the current status of the facility-related key performance indicators previously adopted by Trustees



# The University of Maine System FY2017 ROPA+

March 2018

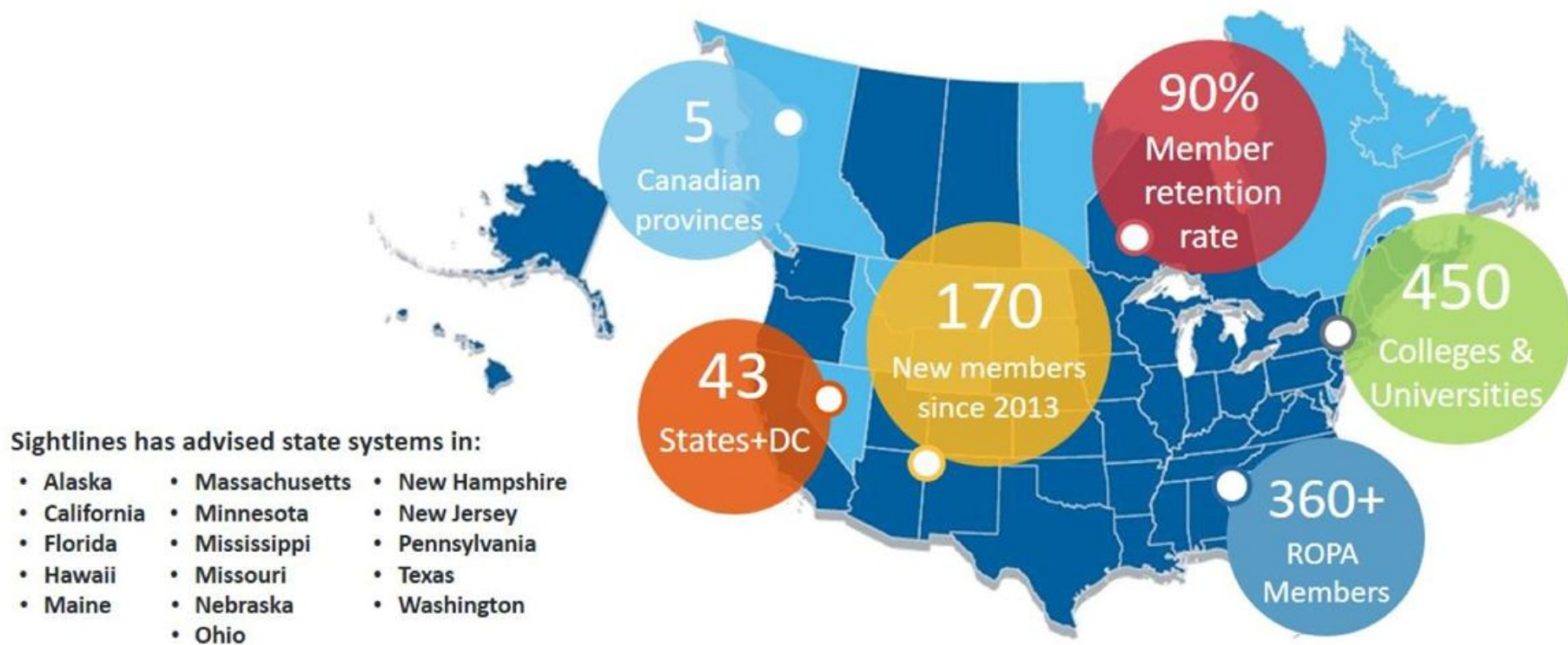
University of the Sciences in Philadelphia  
University of Toledo  
University of Vermont  
University of Washington  
University of West Florida  
University of Wisconsin - Madison  
Vanderbilt University  
Virginia Commonwealth University  
Wake Forest University  
Washburn University  
Washington State University  
Washington State University - Tri-Cities Campus  
Washington State University - Vancouver  
Washington University in St. Louis  
Wayne State University  
Wellesley College  
Wesleyan University  
West Chester University  
West Virginia Health Science Center  
West Virginia University  
Western Oregon University  
Westfield State University  
Widener University  
Williams College  
Worcester Polytechnic Institute  
Worcester State University

7.1



## Who Partners with Sightlines?

Robust membership includes colleges, universities, consortiums and state systems





## FY2017 Core Observations

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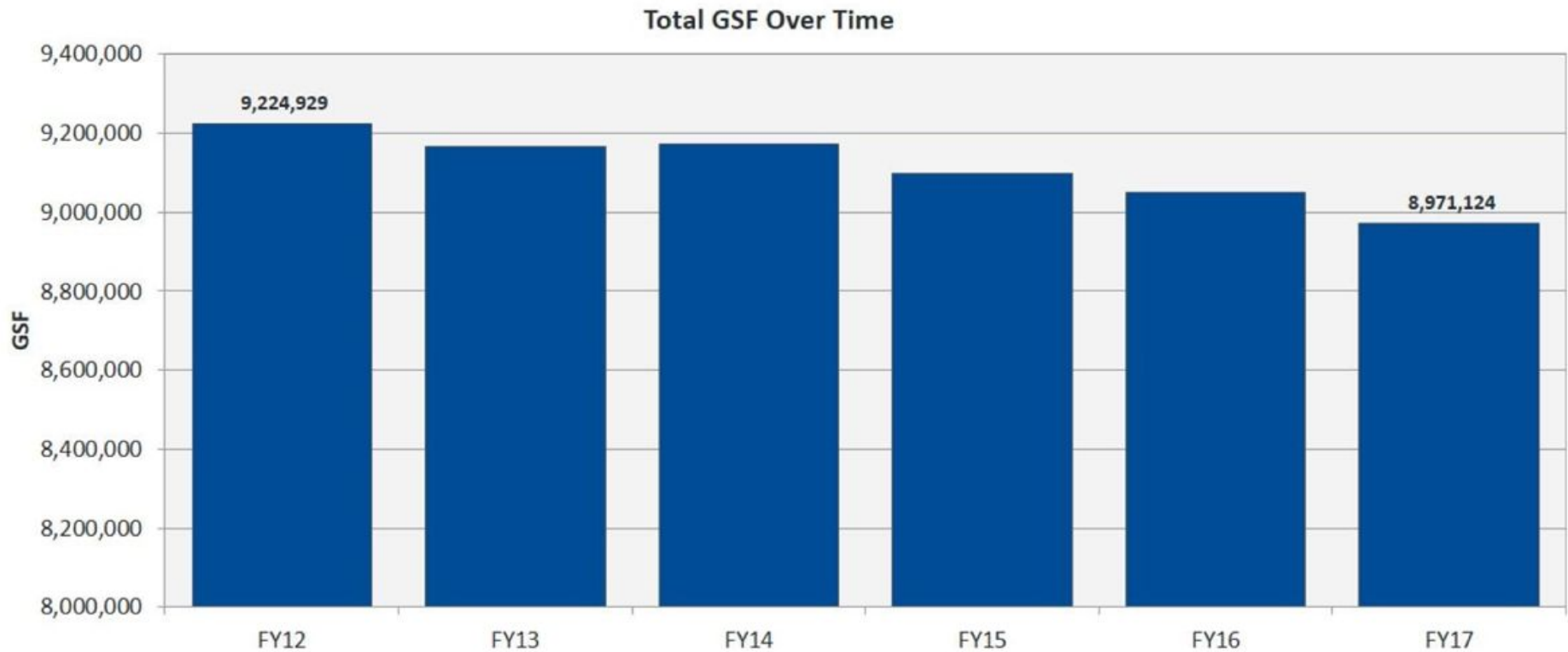
7.1

- Removing buildings from the building inventory increases System density and improves net asset value.
- Total capital investments continue to not meet Sightlines' Annual targets and increase overall backlog of need.
- Project selection addresses highest risk needs and helps maximize value of minimal investment levels.
- Opportunities exist to be more proactive through operating planned maintenance and stewardship.



## Total GSF Over Time

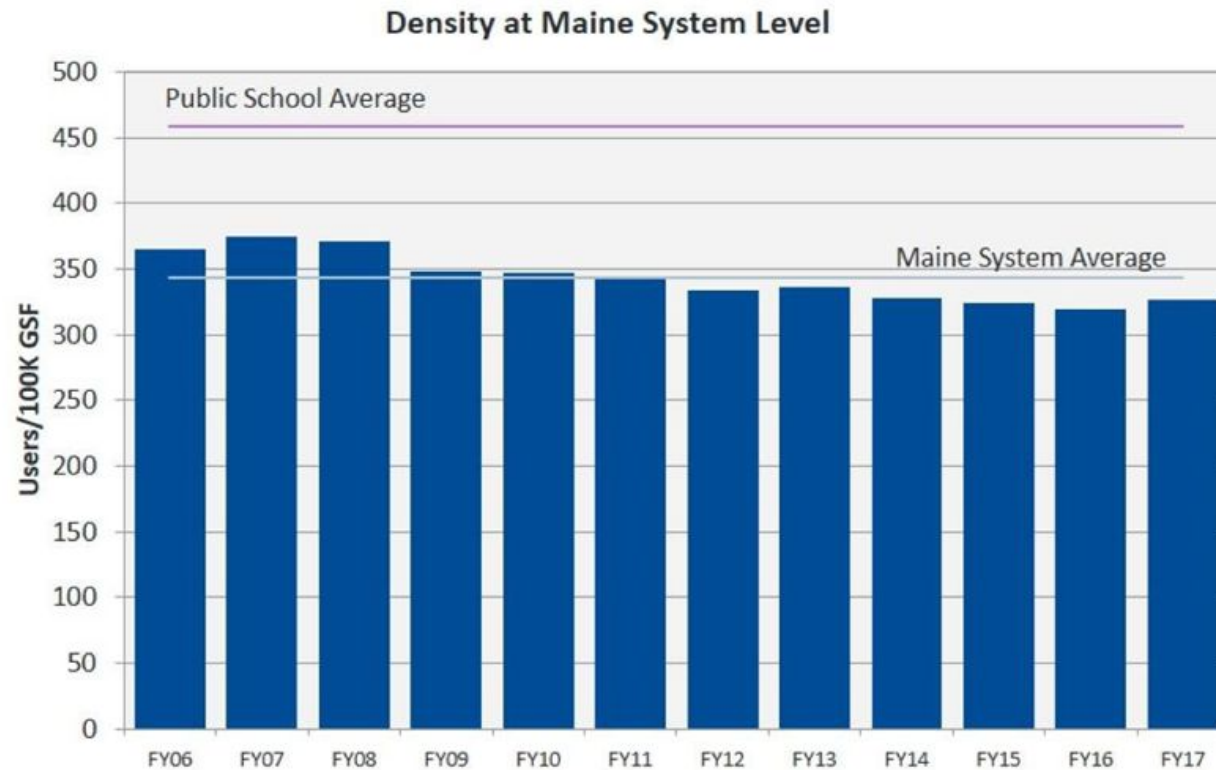
System GSF decreased by 254K GSF since FY12



7.1

## Density Across the Maine System

Density reaches 326 users/100K GSF in FY17 with additional UMS staff and buildings offline



**Density: Measures number of users per 100,000 GSF**

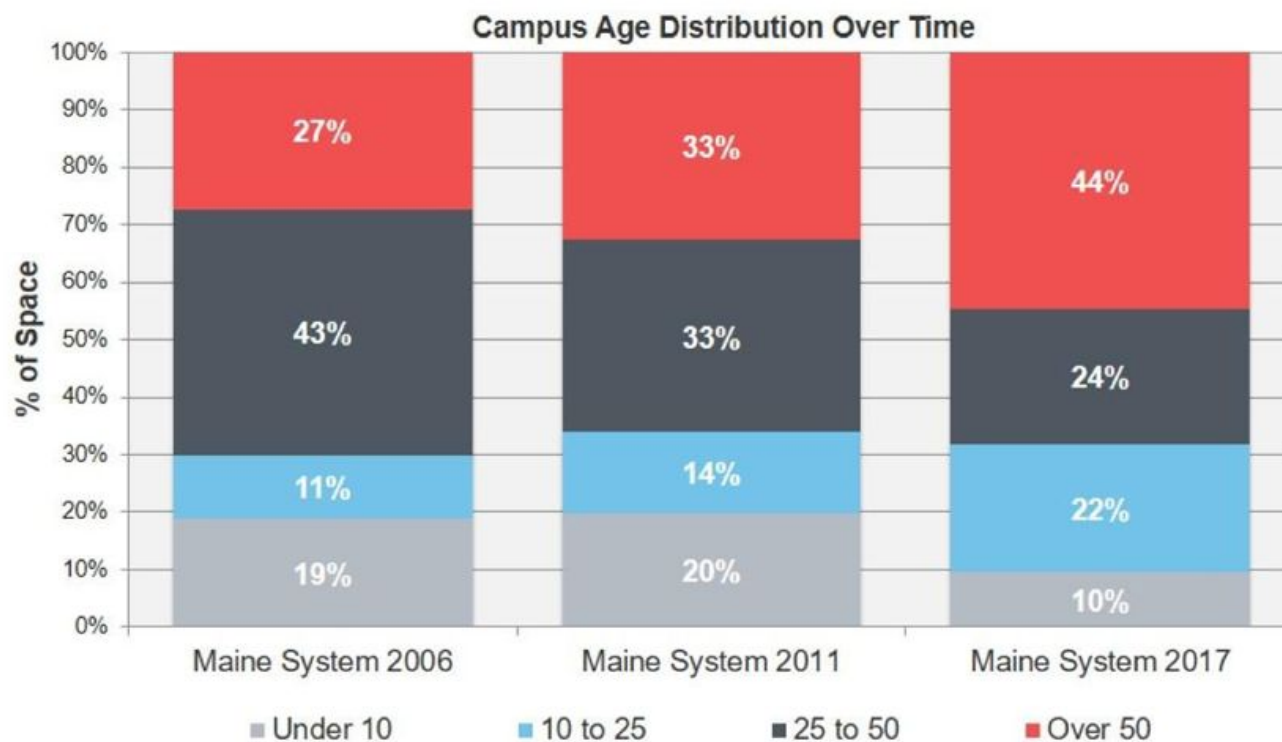
Users include all student, faculty, and staff FTEs

Measures campus building usage on a daily basis

7.1

## Space Over 50 is Growing

Consistent distribution of high risk space over the years



### Buildings Over 50

Life cycles of major building components are past due. Failures are possible. Core modernization cycles are missed.

Highest risk

### Buildings 25 to 50

Major envelope and mechanical life cycles come due. Functional obsolescence prevalent.

Higher Risk

### Buildings 10 to 25

Short life-cycle needs; primarily space renewal.

Medium Risk

### Buildings Under 10

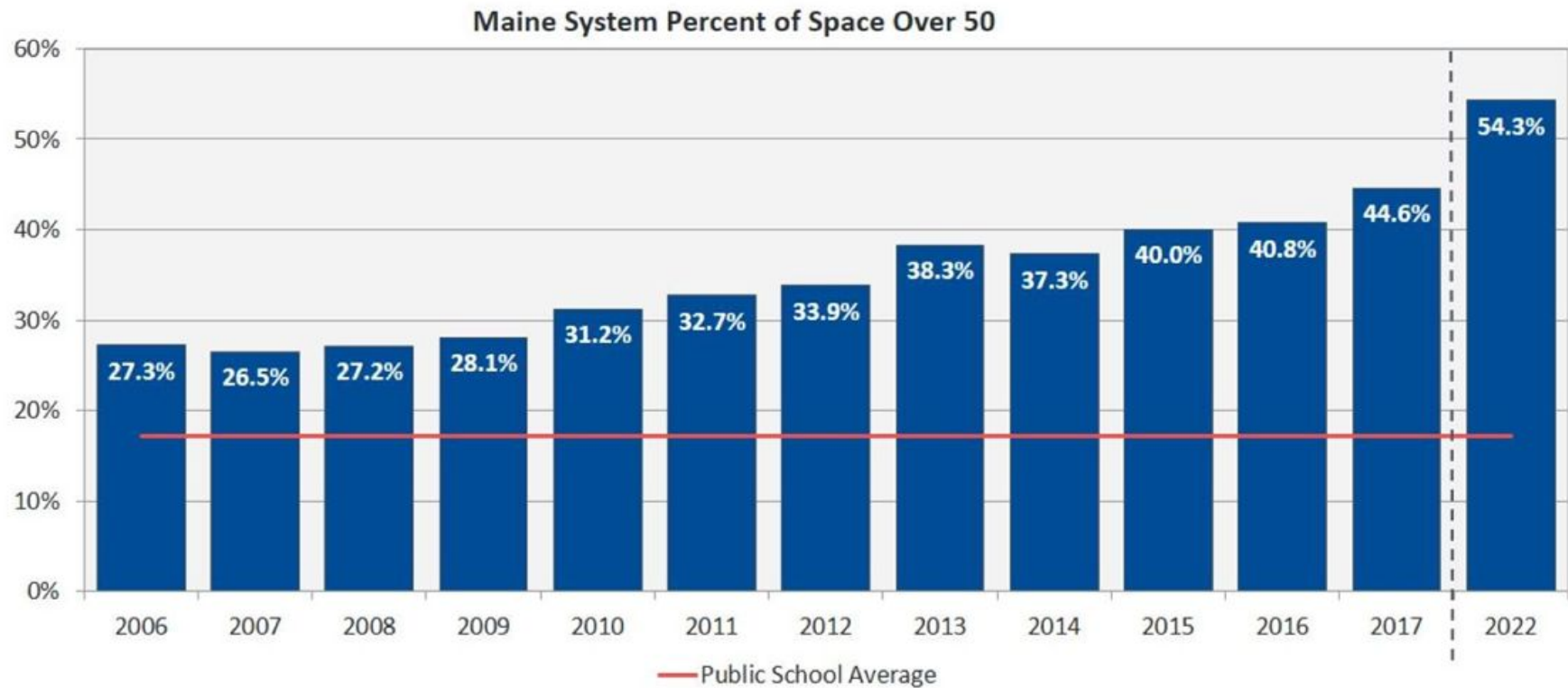
Little work. "Honeymoon" period.

Low Risk

7.1

## By 2022 54% of Space Will be Over 50 Years Old

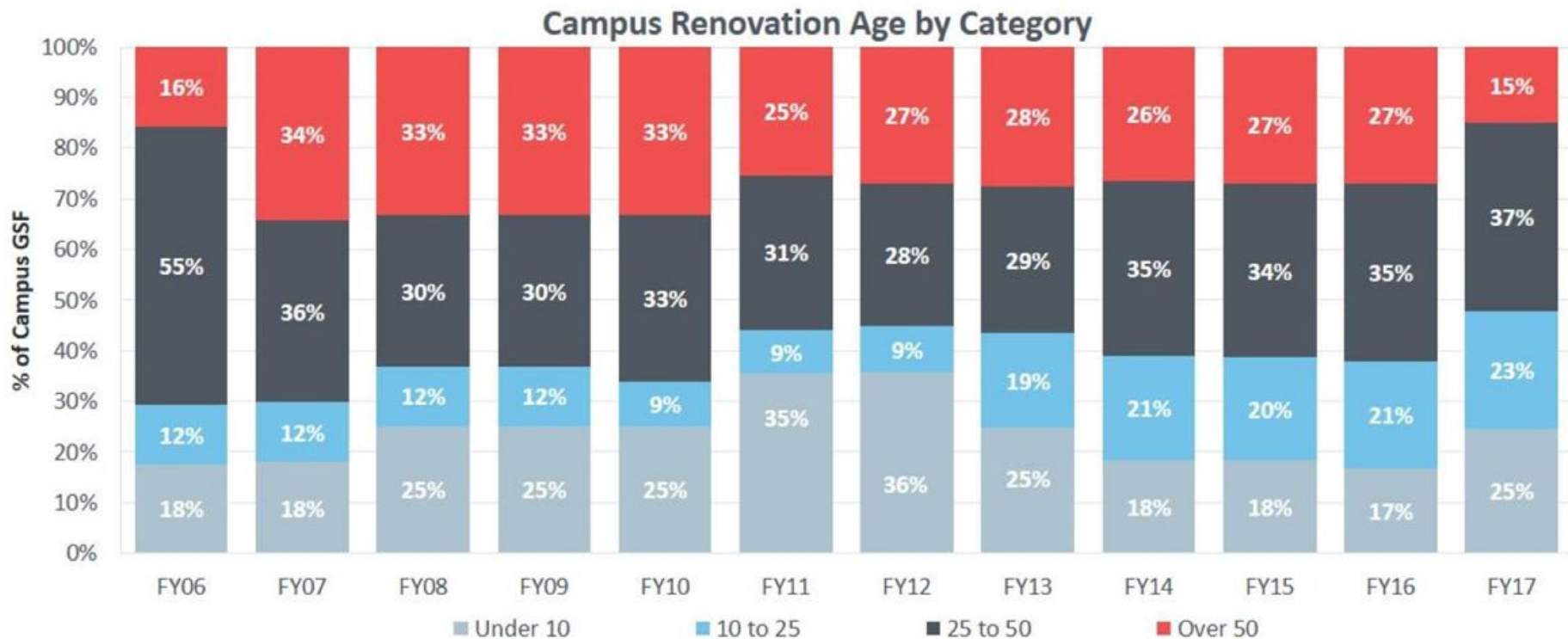
Plan now for major life cycle replacements in these buildings



7.1

## Case Study – UMA Shift in Renovation Age

Renovations and demolitions at UMA offsets age

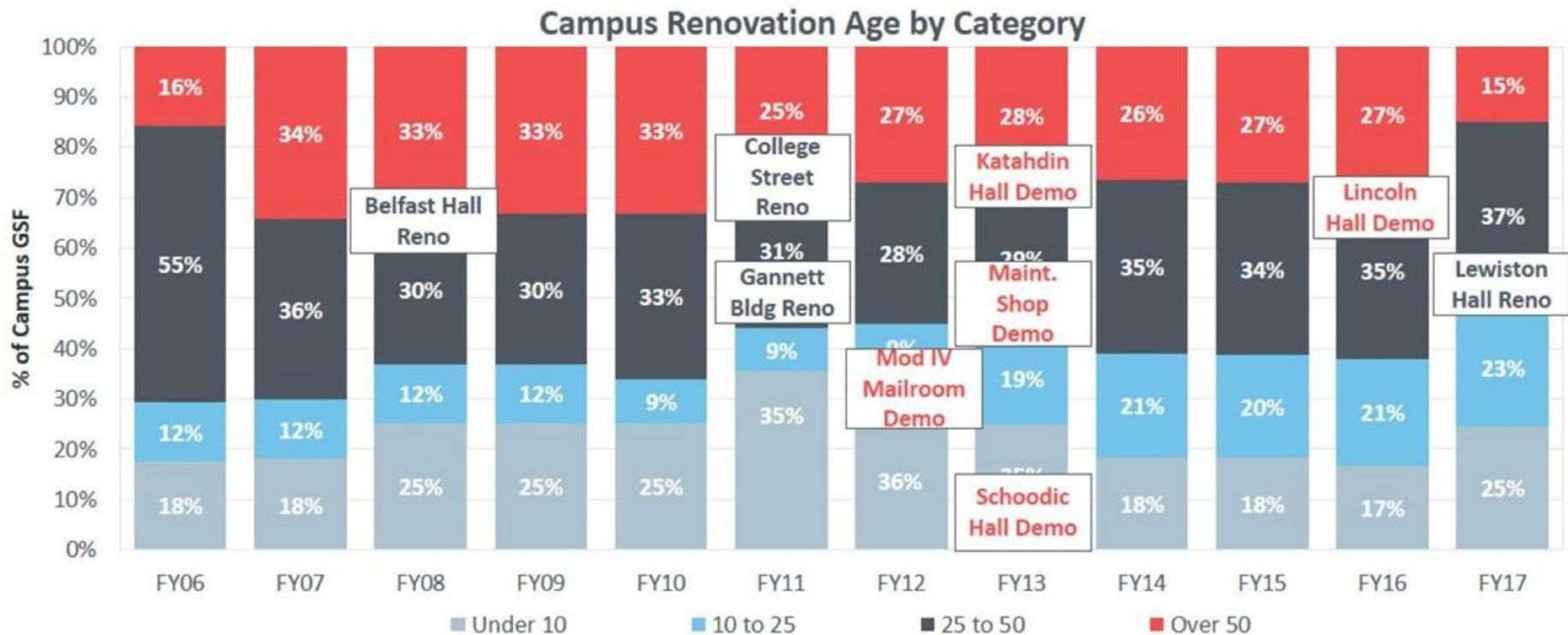


7.1



## Case Study – UMA Shift in Renovation Age

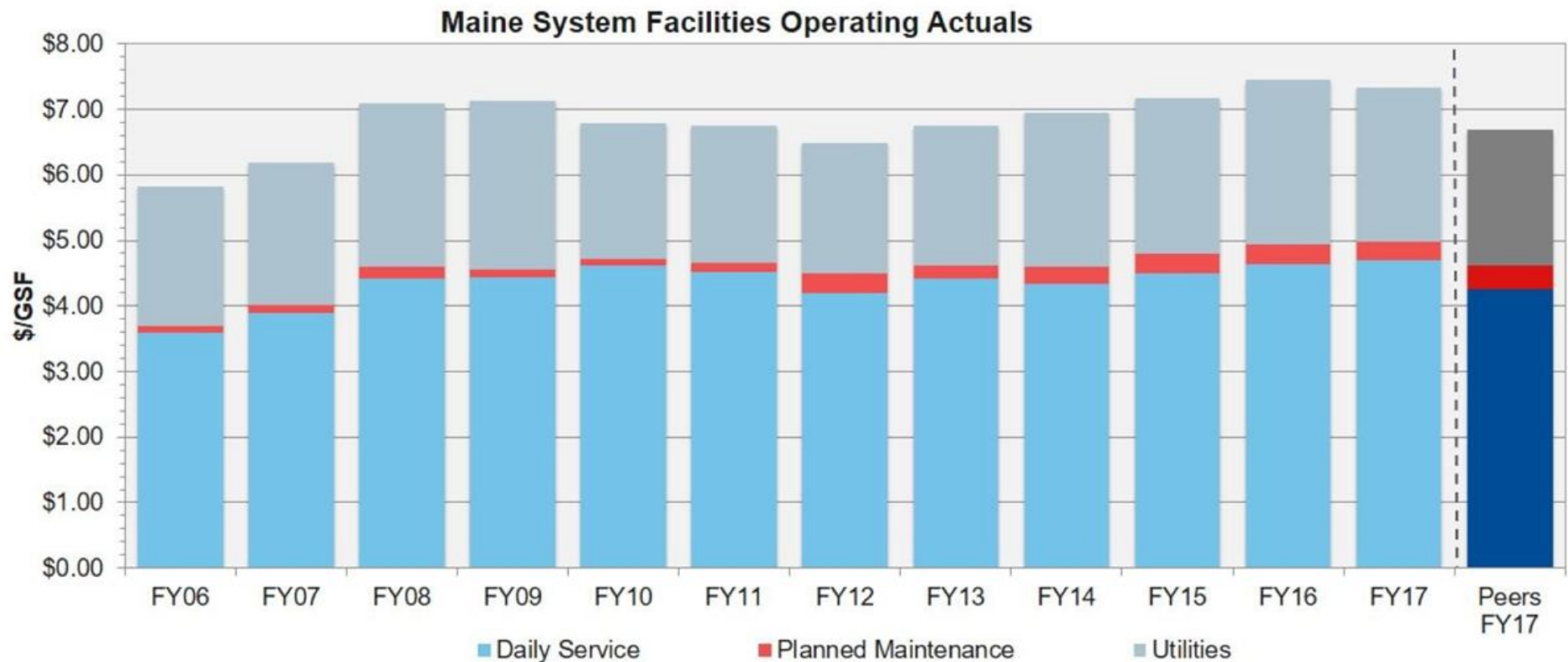
Renovations and demolitions at UMA offsets age



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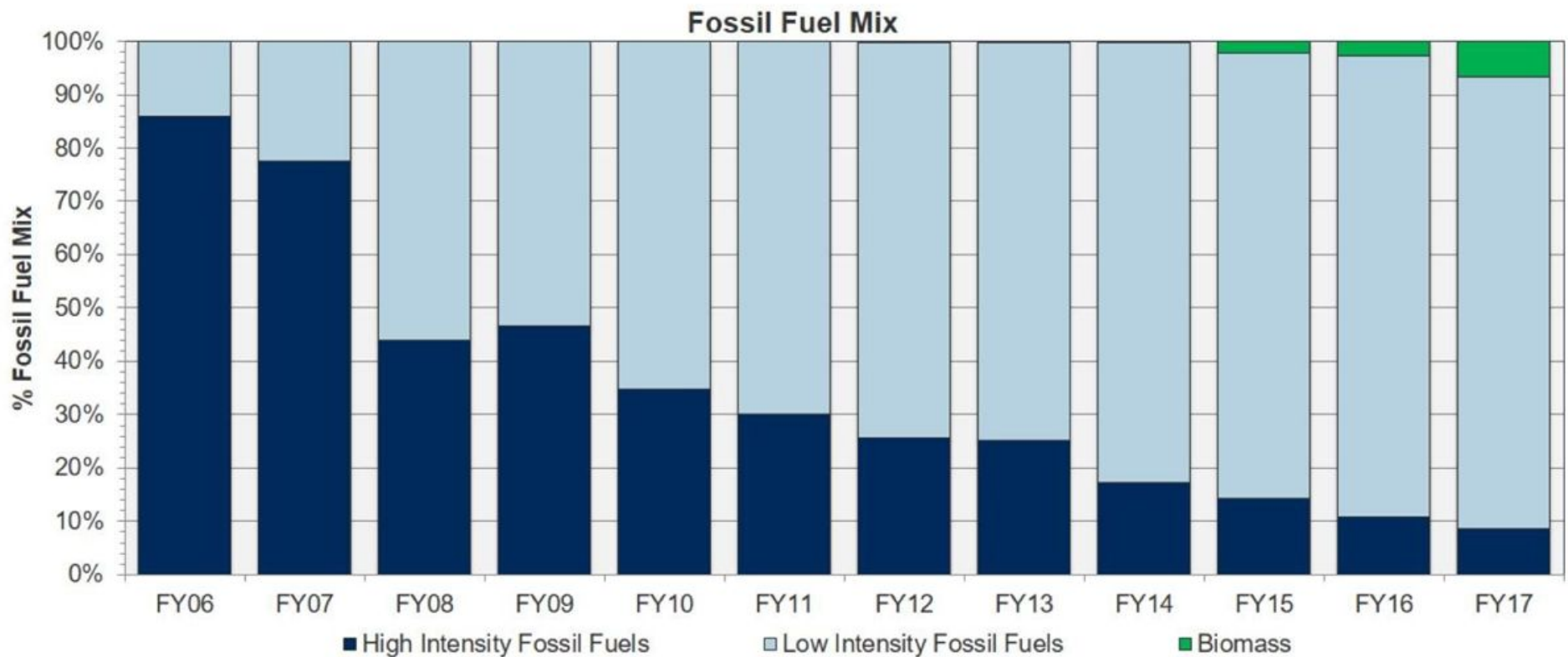
## UMS Spending Consistent from FY16 to FY17

Utility expenditures decreased from FY17



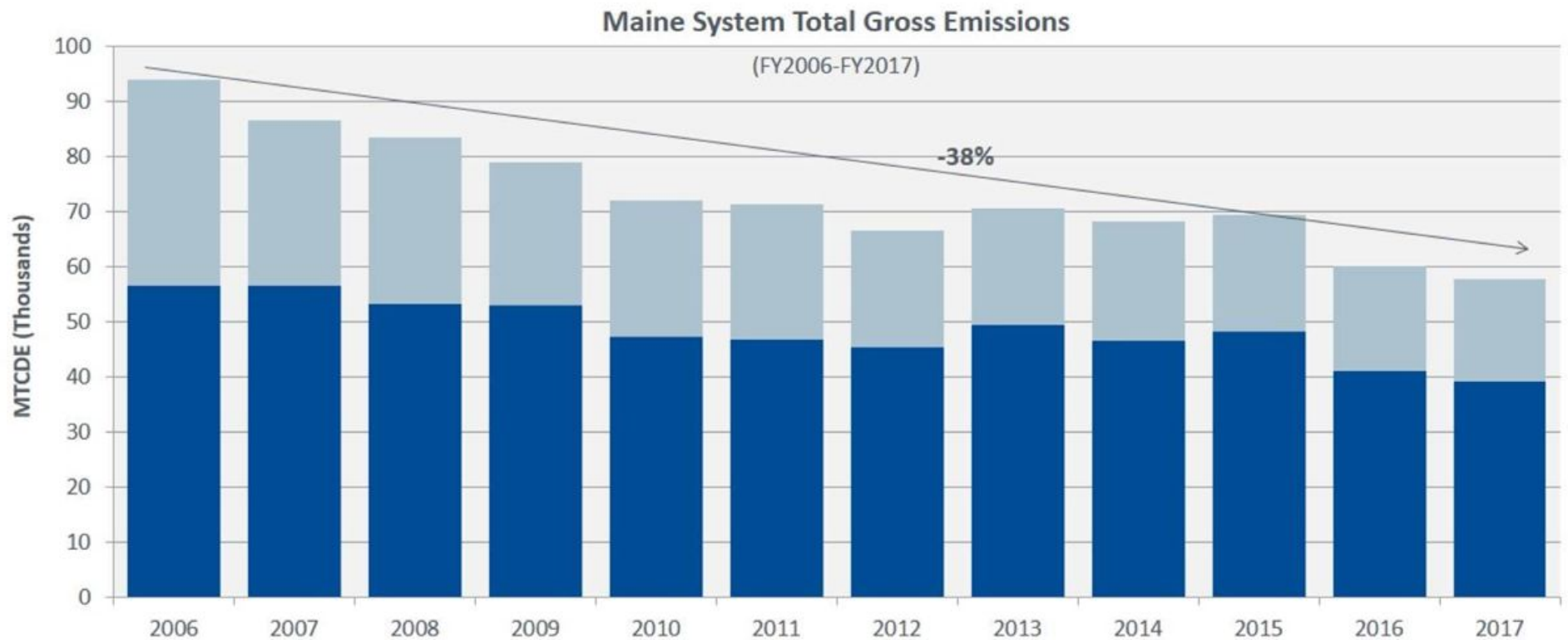
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## UMaine System Fuel Mix Emitting Less Carbon



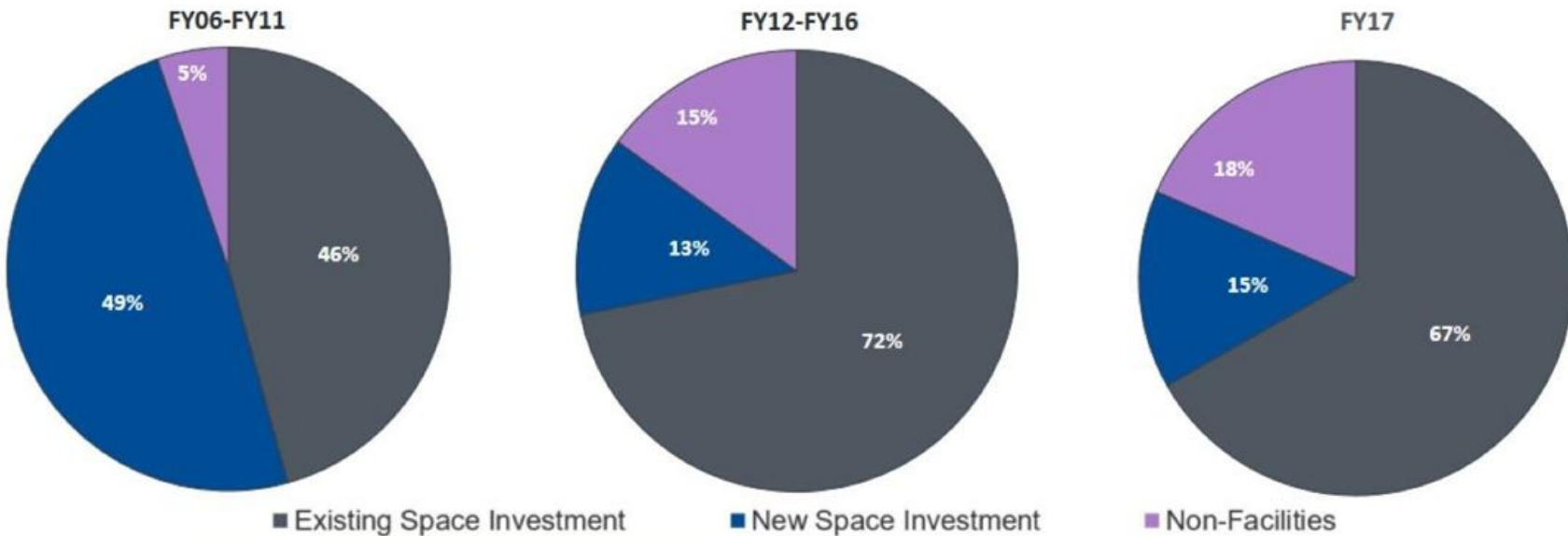
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## Total Gross Emissions Over Time



MTCDE = Metric Tons of Carbon Dioxide Equivalent

## Investments Focus on Existing Space



### Significant Projects in FY17:

UM – Animal Plant & Insect Lab  
 UMA – Lewiston Hall Renovation  
 USM – Softball Field Improvements

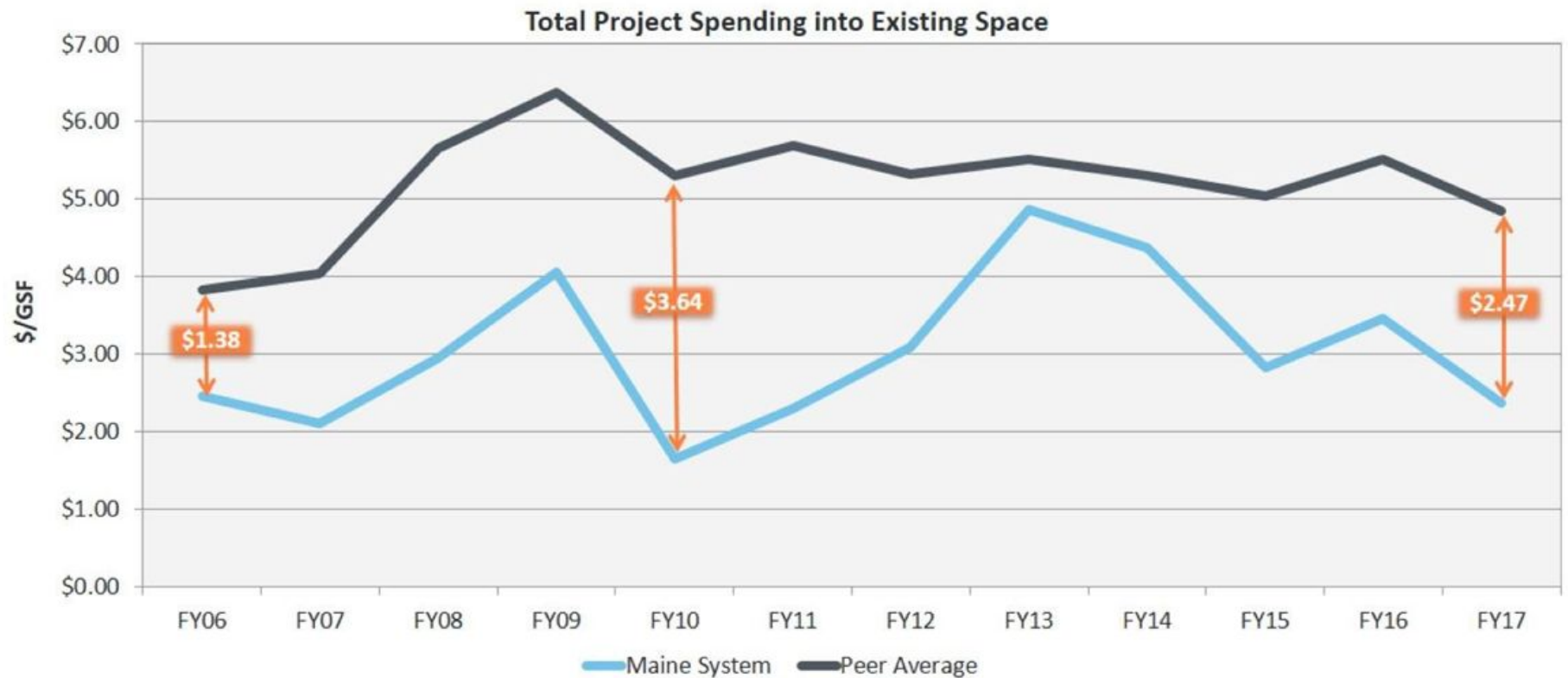
### New Space Projects in FY17:

UM – AEWG Wing, Stewart New Media/Art Complex  
 UMF – Central Energy Plant



## Gap In Investment Widens

An additional \$22M needed to hit peer levels in FY17

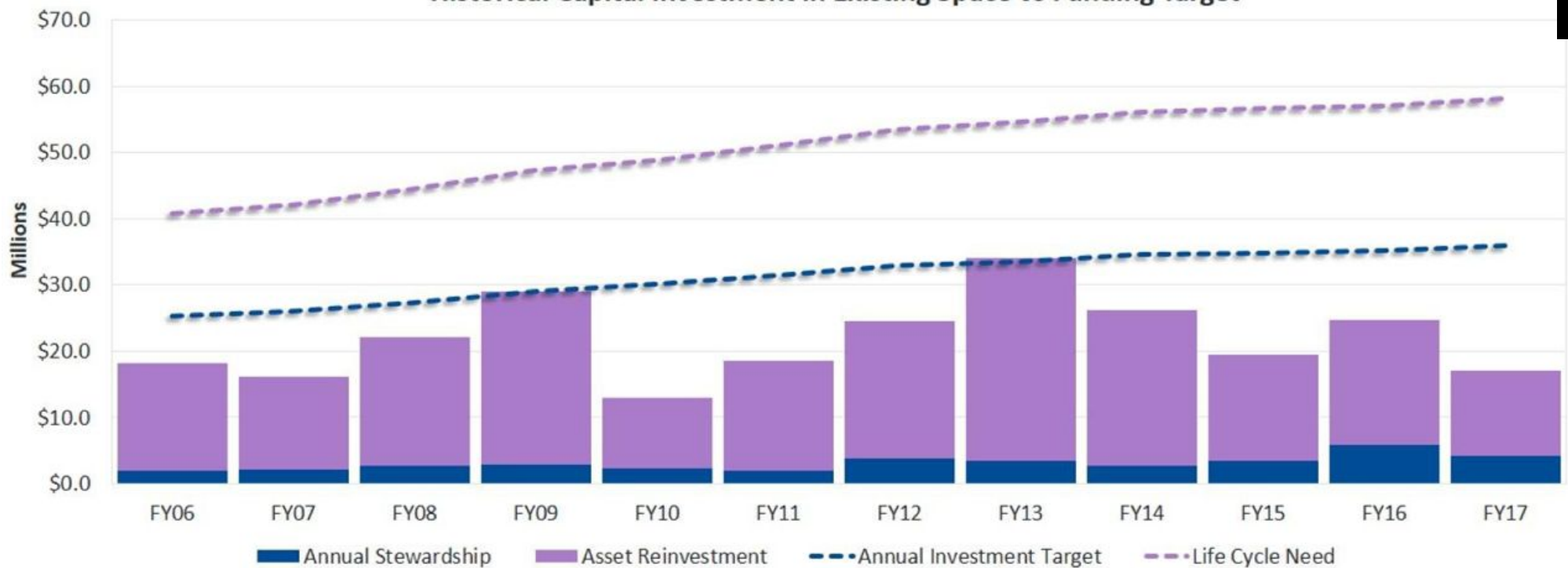


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## Deferral to Backlog of Need Increases in FY2017

Gap between funding in target results in backlog growth

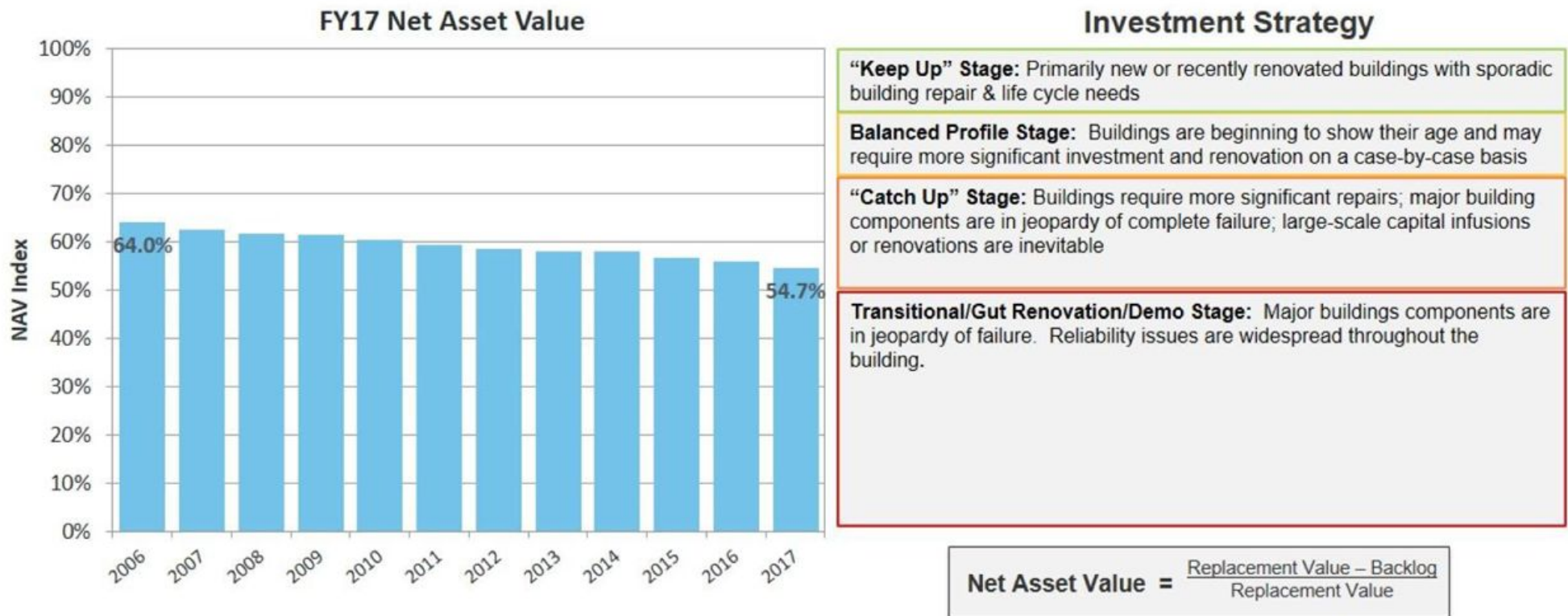
Historical Capital Investment in Existing Space vs Funding Target



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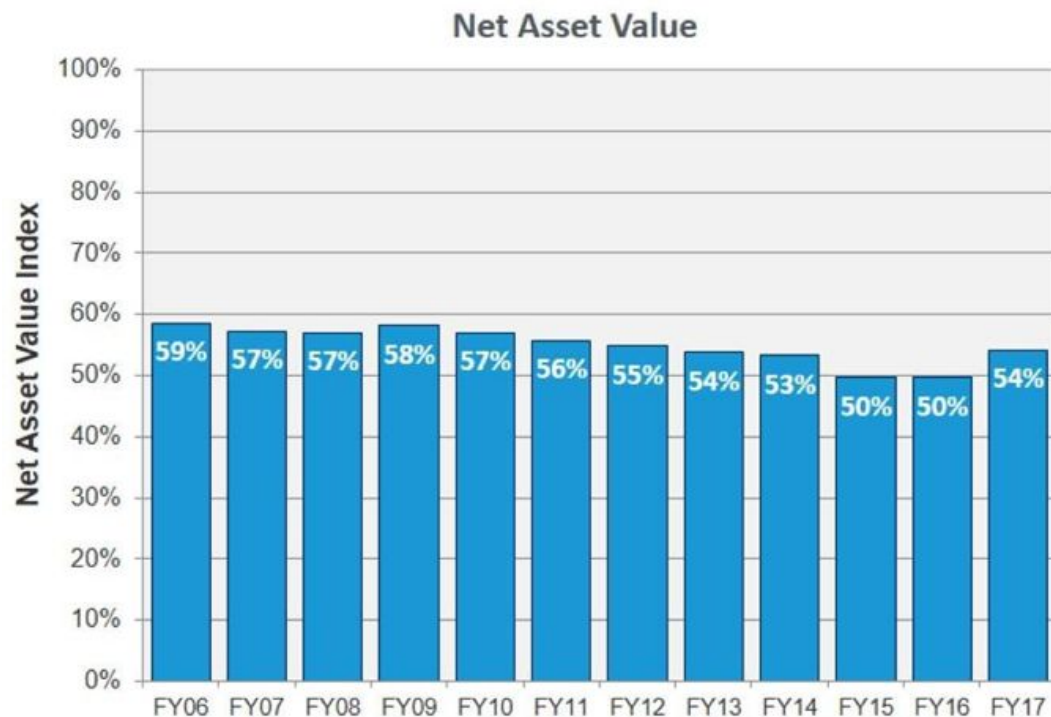
## NAV Decreases Over Time

NAV dictates large-scale capital infusions or renovations are inevitable



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## Case Study – Demolition of Kimball Hall at UMM



### Investment Strategy

**“Keep Up” Stage:** Primarily new or recently renovated buildings with sporadic building repair & life cycle needs

**Balanced Profile Stage:** Buildings are beginning to show their age and may require more significant investment and renovation on a case-by-case basis

**“Catch Up” Stage:** Buildings require more significant repairs; major building components are in jeopardy of complete failure; large-scale capital infusions or renovations are inevitable

**Transitional/Gut Renovation/Demo Stage:** Major buildings components are in jeopardy of failure. Reliability issues are widespread throughout the building.

$$\text{Net Asset Value} = \frac{\text{Replacement Value} - \text{Backlog}}{\text{Replacement Value}}$$





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# Strategic Roadmap to Achieve UMS Goals

*Updated August 2017*





## Assumptions

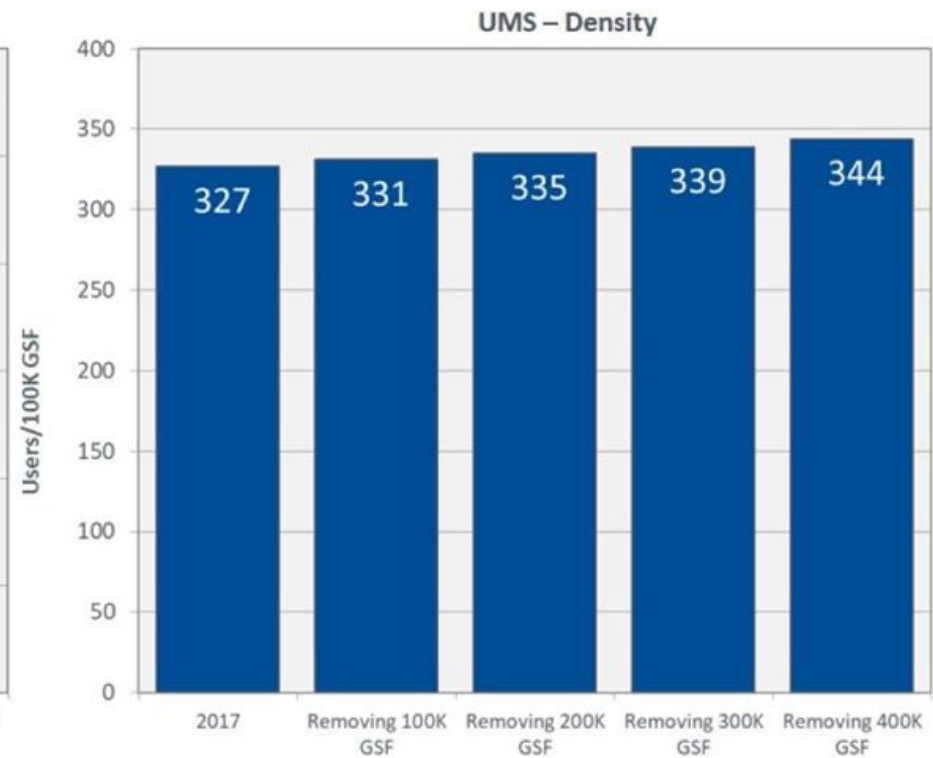
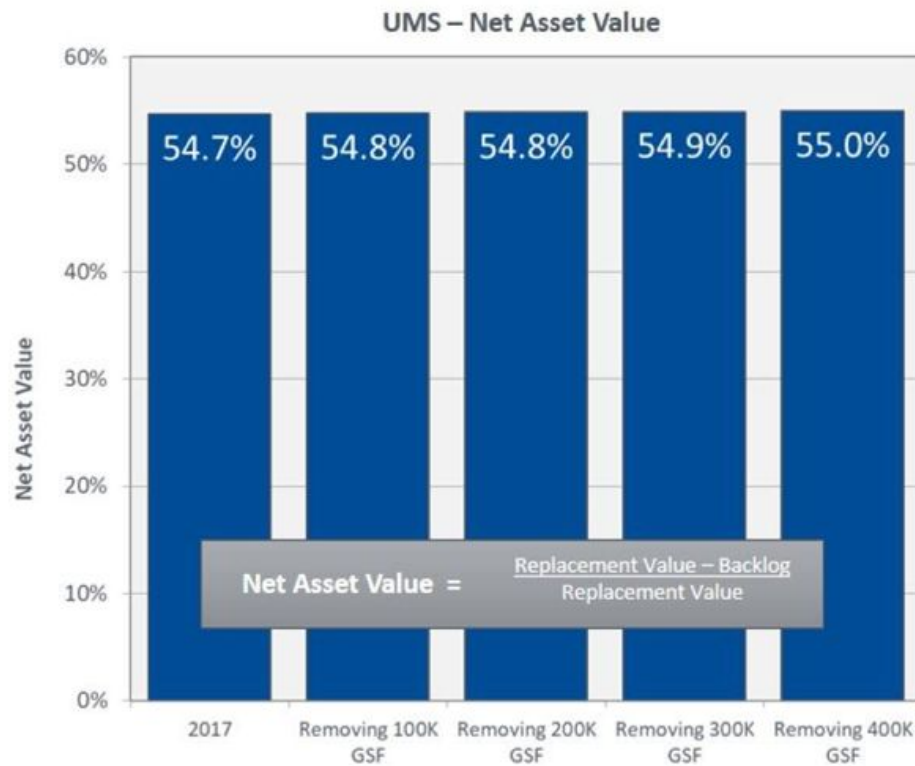
- The values used are for removing buildings with a NAV of 60% or lower.
- The average backlog of these buildings is \$139/GSF.

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GSF Removed	Backlog Eliminated
100,000 GSF	\$13.9M
200,000 GSF	\$27.9M
300,000 GSF	\$41.8M
400,000 GSF	\$55.8M

- Student enrollment, faculty and staff counts remain stable with FY2016 data.
- The GSF reductions are net and assume the University will not increase space or will remove enough space to achieve net reductions of the amount as shown.

## Removing GSF from the UMaine System Inventory



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## Concluding Comments

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### ✓ Strategically Keep Up and Catch Up

- Explore individual building needs over time and strategically identify sequencing for major renovations.
- Buildings with needs coming due gradually over time should be “kept up,” or stewarded. Buildings with large spikes of need should be “caught up,” with non-critical life cycle projects intentionally deferred and then addressed with a major renovation.
- A large capital infusion will be needed to address all the needs coming due in the next 10 years.

### ✓ Construct Building Portfolios

- Create Building Portfolios to segregate those buildings that will be demolished or renovated to provide a clearer view of the stewardship needs for remaining inventory.

### ✓ Understand Operating Performance

- Given the new IWMS, develop system wide reports to track and monitor operating resources.
- Understand customer expectations through consistent customer satisfaction surveys.
- Work to align expectations to the available operating resources.



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# Questions and Comments





## ITEM SUMMARY

1. **NAME OF ITEM:** Capital Project Status Report
2. **INITIATED BY:** Karl W. Turner, Chair
3. **BOARD INFORMATION:** X **BOARD ACTION:**
4. **OUTCOME:** **BOARD POLICY:**
5. **BACKGROUND:**

Attached is the Capital Project Status Report for the March 1, 2018 meeting of the Finance, Facilities, and Technology Committee.

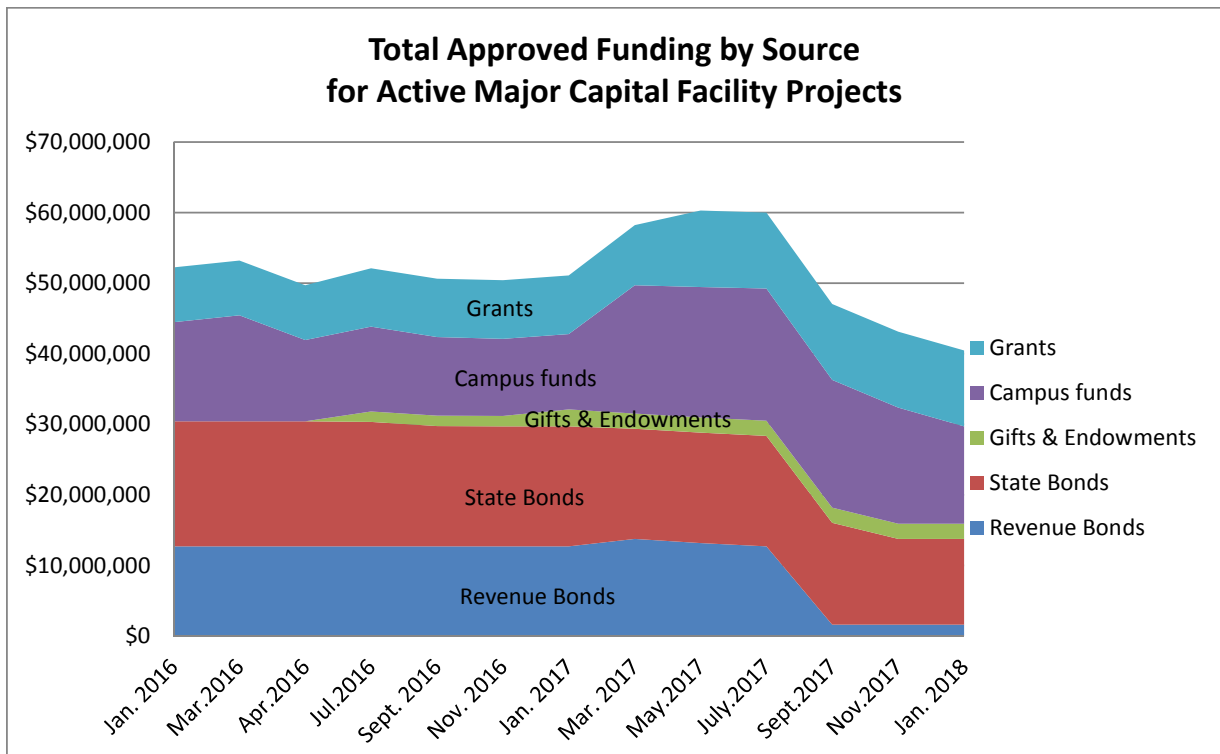
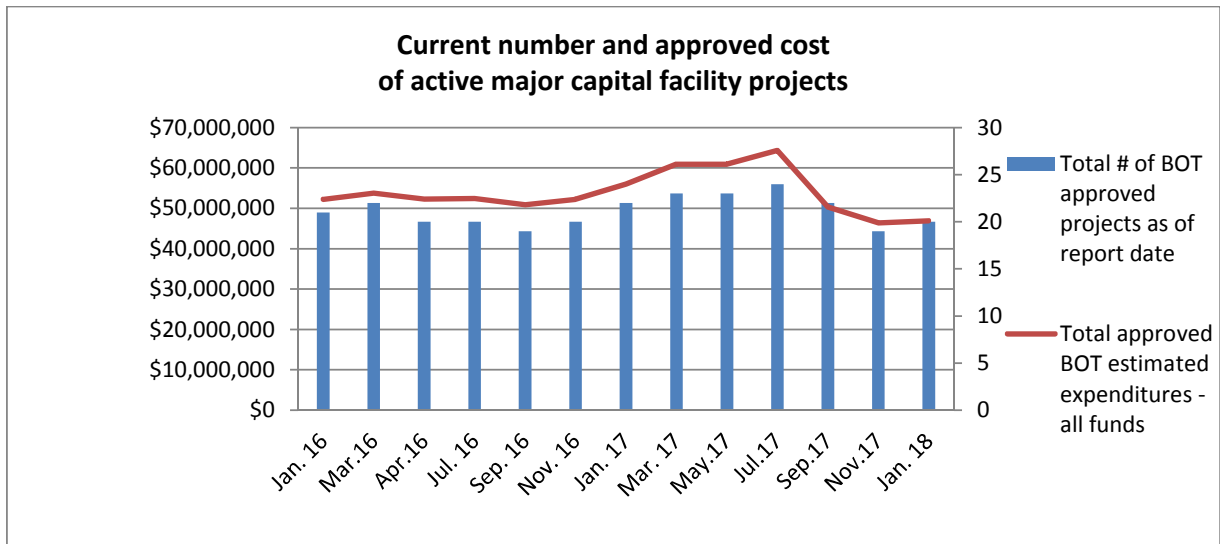
The report reflects a total of 20 projects, with one project being removed since the previous report, and two new projects added to this report.

The Lewiston Hall Renovation (1100528) project at UMA is complete and has been removed from this report. Two new projects are included in this report. They are the Wells Commons Generator (5100433) at UM and the Center for the Arts (6100300) at USM. Both projects were approved by the Board at the January 29, 2018 meeting, with current approved budgets of \$525,000 and \$1,000,000 respectively.

One project will be removed from the next Capital Projects Status Report. That project is USM's Anderson Hall Renewal & Renovations project (6200191, 6100272). With a limited timeline for this project, this project was terminated early, with costs coming in under budget.

Four projects on the report which were completed in 2017 continue to be listed and have not yet been marked for removal because, while the construction is complete, the documentation and financial work associated with each has not yet been concluded.

2/21/2018



2/21/2018



**Capital Project Status Report**  
**Board Approved Projects**  
**March 2018 - Finance, Facilities & Technology Committee**  
**With Grand Totals and % of Current Approved Estimates**

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
<b>UM</b>								
Advanced Structures and Composites Center Expansion/ASCC Equip W2-Thermoplastics Lab/ASCC Equip W2 Tow Carriage (5100316, 5100414, 5100432)	Grants (77%), 2010 State Energy Bond (11%), Gifts (12%)	Project 5100316 is Complete, Project 5100414 Design in Progress, Project 5100432 is Design in Progress	2014	2018	\$6,400,000	\$10,400,000	90%	Board Approved \$6.4M in November, 2012. Board approved \$1.6M in March 2014. Board approved increase of \$871,000 in March 2015. BOT approved additional \$1.5M in May 2016 for equipment project.
Cooperative Extension Diagnostic & Research Lab (5100387)	2014 State Bond (85%), Campus E&G Funds (10%), Grants (5%)	Construction in Progress	2016	2018	\$9,000,000	\$9,400,000	83%	BOT approved \$9M in July, 2015. Board approved increase of \$400,000 in July 2017.
Aquatic Animal Health Facility (5100440)	Grants (82%), Campus E&G Funds (18%)	Construction in Progress	2017	2018	\$2,300,000	\$2,800,000	5%	Board approved \$2.3M in January, 2017. Board approved increase of \$500,000 (8.6%) in project cost in November, 2017.
Barrow's Hall ESRB Lab Renovations (5100424)	Campus E&G Funds (100%)	Construction in Progress	2017	2018	\$1,900,000	\$1,900,000	38%	Board approved \$1.9M in March, 2017
Memorial Union Bear's Den Renovations (5100427)	Campus AUX Funds (100%)	Construction Complete	2017	2018	\$3,600,000	\$3,600,000	86%	Board approved \$3.6M in March, 2017
Darling Marine Center Waterfront Infrastructure (5200484)	2017 University Bond (100%)	Design in Progress	2017	2018	\$3,000,000	\$3,000,000	0%	Board approved \$3M in July, 2017.
Engineering Education and Design Center (5100458)	Bond (0%), Campus E&G Funds (100%)	Design in Progress	2024	2024	\$1,000,000	\$1,000,000	1%	Board approved \$1M in September, 2017.
* Wells Commons Generator (5100433)	Campus Auxiliary Reserves (100%)	Design in Progress	2019	2019	\$525,000	\$525,000	1%	Board approved \$525,000 January, 2018.
<b>UMF</b>								
Science Labs Renovations (Preble & Ricker (2100065, 2100068)	2013 Lab & Class State Bond (100%)	Substantially Complete	2014	2018	\$1,377,000	\$1,377,000	88%	Board approved \$1.377M in July 2014.
<b>UMFK</b>								
Forestry Geographic Info Sys Tech Labs/Nursing Lab Renov/Teleconf Ctr Upgrades (3100029 3100030 3100031)	2013 Lab & Class State Bond (100%)	Construction in Progress	2014	2018	\$1,200,000	\$1,200,000	99%	Board approved \$1.2M in May 2014.
<b>UMM</b>								
Science Building Laboratory Upgrades (4100027)	2013 Lab & Class State Bond (100%)	Substantially Complete	2014	2018	\$600,000	\$600,000	98%	Finance & Facilities Committee Approved \$600K in January, 2014.
Compressed Natural Gas Heating Conversion (4100028)	Revenue Bonds (100%)	Substantially Complete	2014	2017	\$1,800,000	\$1,800,000	84%	Board approved \$1.8M in July 2014.
Card Access Project (4100036, 41000037)	Campus E&G Funds (21%), Campus Auxiliary Funds (79%)	Construction in Progress	2018	2018	\$571,000	\$597,500	64%	Board approved \$571,000 in July, 2017. Change in project cost to \$597,500 (4.6% change) approved by Chancellor in October 2017 per Trustee policy 701.

Finance, Facilities, Technology Committee Meeting - Capital Project Status Report

Campus, Project Name (Project ID)	Funding Source(s) & each source's share of expenditures to date	Status	Original Estimated Completion	Current Est. Completion	Original Approved Estimate	Current Approved Estimate	% Expended of Current Approved Estimate	Prior Actions, Information & Notes
<b>USM</b>								
Campus Card Access Install (6100271)	Campus E&G Funds (100%)	Construction in Progress	2017	2018	\$700,000	\$700,000	83%	Board approved \$700K in March, 2017.
Gorham Softball Field Improvements (6200181)	Campus E&G Funds (100%)	Construction Complete	2015	2017	\$1,500,000	\$2,389,000	97%	BOT approved \$1.5M in July, 2015. Board approved increase to \$2.2M in March, 2016. Change in project cost to \$2.389M (8.6% change) approved by Chancellor in January 2017 per Trustee policy 701.
Brooks Kitchen Exhaust Upgrade (6100245)	Campus E&G Funds (100%)	Construction Complete	2016	2018	\$819,000	\$893,000	95%	Board approved \$819,000 in March, 2016. Change in project cost to \$893K (9.04% change) approved by Chancellor in March 2017 per Trustee policy 701.
Costello Field House Floor Replacement (6100280)	Gifts & Endowments (100%)	Construction Complete	2017	2017	\$900,000	\$900,000	91%	Board approved \$900,000 in November, 2016.
Science Building Renovations & Build-Out (6100274)	Campus E&G Funds (100%)	Construction Complete	2017	2017	\$1,600,000	\$1,600,000	75%	Board approved \$1.6M in January, 2017.
*** Anderson Hall Renewal & Renovations (6200191, 6100272)	Campus E&G Funds (100%)	Complete	2017	2018	\$1,250,000	\$1,250,000	16%	Board approved \$1.25M in January, 2017.
* USM Center for the Arts (6100300)	Gifts (100%)	Design in Progress	2022	2022	\$1,000,000	\$1,000,000	0%	Board approved \$1M in January, 2018.
Explanatory Notes: * Project is new as of this report. ** Details of this project include updates since the last report. *** This project has been completed since the last report and is not expected to appear on the next report.	Funding source(s) reflects primary source(s) for project.	Calendar Year unless otherwise noted.					Percentage expended reflects total expended as of January 31, 2018 as a percentage of the current approved project estimate.	