

**Towson University
Office of Technology Services**

**Classroom and Computer Lab Technologies
Annual Report**

**Fiscal Year 2018
July 01, 2017 – June 30, 2018**

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Overview

Classroom and Computer Lab Technologies (CCLT) team within Office of Technology Services (OTS) supports and promotes student success through a collaborative approach of inspiring faculty, designing and maintaining standardized yet innovative learning and teaching environments, and providing effective resources and services to wisely and proficiently use technology.

This report provides information on the work by CCLT over the past fiscal year (FY18) and is made available to the TU community. Some of the highlights include:

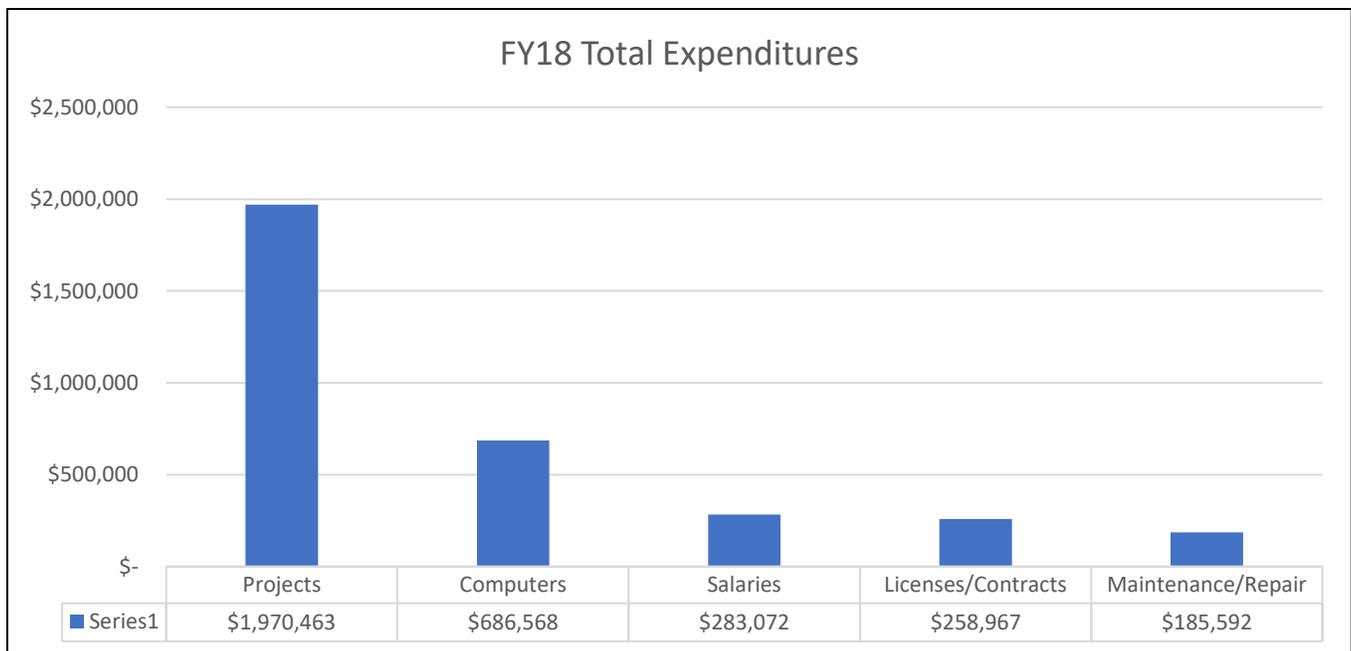
- Completed 269 classroom projects, detailed in finances and projects section
- Developed new process for Software and Cloud Apps requests
- Collaborated with TU community on special events and projects, including the Microsoft Tech Tour, detailed in the communication and collaboration section
- Expanded support services through Student Employee Technology Corps (SETC) program
- Piloted Classroom Chat support at Towson University Northeastern Maryland (TUNE)
- Added an AV Lead Technician to the CCLT team, detailed in service and repair section
- Handled over 1639 service requests, documented through TechHelp

As Towson University continues to grow and expand its presence on campus and in the community, Client Services and CCLT will lead the discussion on the changing face of learning and teaching to ensure TU maintains its position as a national leader in the innovative delivery and development of comprehensive classroom and instructional technology solutions, services, and products.

Student Technology Fee (STF) Finances and Projects

TU's instructional technology infrastructure includes about 550 instructional spaces, conference rooms, and other facilities with audiovisual and presentation technology. It is one of the largest higher education collections in the US with central oversight and funding. Key points for this year's Student Technology Fee (STF) Program finances include:

- FY18 budget was just over \$4.1 million
- Over 85% of all funding is used directly on projects for student facing technology, including classroom upgrades, computer replacements and software purchases
- Over 95% of all 269 projects submitted were approved
- 3746 computers are available for students and faculty in TU classrooms and labs, 580 were replaced this year
- Less than 7% is spent on salaries for three coordinators and one audiovisual technician
- Since its inception in FY11, the program has spent over \$26 million dollars on student facing technology projects. (**Appendix 1: Expenditure by College last five fiscal years**)
- All project requests and reports are distributed to the Academic Committee on Technology (ACT) and saved on the ACT SharePoint site



Project Highlights

- Specialty projects made up 18% (over \$758,000) of total budget. In just the third year of the split-fee program, this exceeded the 15% allocated to Extended, Curriculized, and ALIST projects. (**Appendix 2:** Project Allocation Charts, projects and cost by college)
- Purchased Augmented Reality/Virtual Reality equipment for Student Computing Services lab, with the equipment available for student and faculty use
- Created a new collaborative classroom for classes and student use in Computer Science (YR0407)
- Managed the design and installation of pilot classroom for Fisher College of Science and Mathematics faculty available for Fall 2018 classes (SM0400)
- Finalized MakerSpace and student collaboration space in Hawkins Hall for College of Education with scheduled opening for Fall 2018 classes

Software and Cloud Apps

We continue to purchase campus-wide software products and services, such as Adobe Creative Suite, Lynda.com, and Panopto, with Student Technology Fees. To ensure proper distribution of funds, we implemented Sassafras K2 KeyServer software, an asset program to track deployment and usage of software on classroom and lab computers (**Appendix 3:** Usage Reports).

Additionally, as the STF program has expanded, the Academic Committee for Technology (ACT) has been exploring broadening support for curriculized software since it could benefit students in specific programs, majors, courses, and disciplines across the university. A task force was formed to propose a process to more effectively and efficiently operationalize our software and cloud apps lifecycle (**Appendix 4:** Flowchart).

The proposed process includes the following advantages and is planned for implementation in FY19:

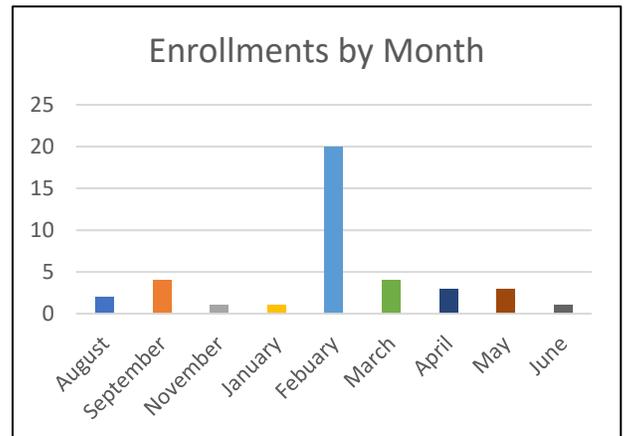
- Provides a systematic way to request, review, fulfill, catalog and track the adoption and use of software and cloud apps
- Provide a single, user-friendly, simple front end to accept new software requests
- Provide tool for managing adoption and usage of purchased software
- Give departments and colleges the ability to re-assess needs regularly and make informed decisions

Service, Repair, and Support

Projects take up most of the budget and the CCLT team's time, however, service and support are critical to the successful use of classroom technology for teaching and learning. We have had the same model in place since the second year of the STF program, providing first-level telephone support for all classrooms and computer-equipped labs. As the student enrollment, the amount of specialty equipment and the number of supported classrooms increases, the demand for support steadily increases. We continued to work closely with technology staff from the colleges and departments and added the following programs and services to enhance our coverage:

- **AV Lead Technician:** OTS hired an AV Lead Technician to provide support for out-of-warranty audiovisual equipment and performance of small and add-on installations, reducing our repair expenses to our AV Contractor. This position is responsible for:
 - Providing more timely support for classrooms and other technology enabled spaces
 - Planning and conducting our preventative maintenance program
 - Inventory management
- **Chat:** Using the same chat service as the University Library and Student Computing Services, CCLT conducted a pilot to offer chat support for classroom technology, providing another support option where phone service is not available or practical. Full deployment is scheduled for FY19.
- **Student Employee Technology Corps (SETC):** Developed and launched in FY17, this OTS-led program is designed to train student employees working in offices to be technology "first aid providers." Client Services hopes to expand the reach of SETC to every building on campus. Also, in partnership with the Career Center and other offices, training continues to be fine-tuned to better suit the needs of the campus community and keep the training fresh and relevant.

- Providing fast, on-site answers, guidance, and support for simple issues
- SETC students are trained to help out with in-class technology problems that can occur while they are in class
- SETC participation grew 173% over FY18, with a total of 63 students enrolled by the end of the fiscal year
- Six academic offices and twelve other offices across campus were new to the program in FY18



- **HeRO:** Classroom Technology Help Resources Online (HeRO), an app developed in FY17 and maintained by Client Services and student employees, is deployed to over 100 instructor computers, with College of Education participating this year. During FY19, the coordinators will work with their colleges to encourage deployment in all remaining colleges and departments. The application launches on startup and provides instant access to the following to help faculty successfully use technology in the classroom: (**Appendix 5:** HeRO app screen shot)

- Technology news
 - Self-help videos and instructions
 - Room specific link to Virtual Tour
 - Request for classroom technology orientation
- **On-going Support efforts:** Client Services, and the CCLT team specifically, continues work in many areas to ensure the reliability of our teaching and learning environments:
 - Performing scheduled room inspections to ensure reduced classroom audiovisual system outages and failures
 - Coordinating installation and repair work with contractors
 - Conducting quality assurance checks following installations and repairs
 - Working with others to communicate during emergency system outages or known college-wide issues
 - Maintaining the classroom virtual tour, providing one place for faculty, students, and guests to find details on classroom spaces, including available technology, instructions, and trouble-shooting resources

Support Statistics:

- \$185,591 spent on repair and maintenance in classrooms
- Tracked 1639 service requests for all classrooms, labs, active learning spaces and conference rooms
- Average less than three calls per room, based on 550 rooms as of July 1, 2018
- TUNE had 54 service requests for classroom issues, or just 3% of all requests
- Issues tracked to spot trends, apply fixes and provide training when necessary

Top 5 Classroom Support Categories	Total by Issue
Projection: Projector won't display anything	188
Monitor or SMART Podium	88
Crestron: touch panel won't respond	83
Instructor Computer: unlisted issue	67
Sound: No sound from system	62

Collaboration, Events, and Communications

OTS CCLT coordinators, along with others in Client Services, regularly meet with college staff and technology committees to identify new needs, reaffirm projections, and provide how-to consultations and resources for supporting teaching and learning. This year, our efforts also included creating and participating in the following programs, projects and special events:

- **Campus Realignment Project:** OTS, with funding through STF, managed the technology portion of the Linthicum/Enrollment Services realignment project. Overall, technology in 20 classrooms was installed, upgraded, or reconfigured. It included:
 - Relocating the Department of Occupational Therapy & Occupational Science from Enrollment Services to Linthicum
 - Reconfiguring and relocating classrooms within Linthicum
 - Temporarily relocating the Applied Information Technology (AIT) program to the Enrollment Services building
- **EduCycle and Donations:** Decommissioned computers and audiovisual equipment from classrooms and labs are transferred to the EduCycle program (www.towson.edu/educycle) and redistributed on campus to fulfill unmet needs. Once all campus needs are met, they are donated to local partner school districts.
 - OTS spent over 110 hours preparing TVs for donation when the Marriott (now 10 West Burke) was converted to student housing. Over 400 TVs were donated to schools in Baltimore County and Baltimore City
 - Decommissioned over 580 PCs and MACs from classrooms and labs
 - Audiovisual donations included 60 projectors, 15 document cameras and nine speakers to five schools in Baltimore City and Baltimore County
- **Non-STF Projects:** OTS Client Services and the CCLT team are also active in projects outside of the STF process, to ensure standards are met and proper purchasing processes are followed. In FY18, we were involved in the following projects:
 - New multipurpose room in the renovated Residence Tower
 - Upgraded conference rooms, AD0113N, AD0408, AD0413B, PY0128, TC0319, CK0013, and Y20111 (7400 York Rd), with some using repurposed equipment from EduCycle
 - Created four new collaborative study rooms and added digital signage in Cook Library
- **TUNE VW Pilot:** The Office of Technology Services (OTS) conducted a software virtualization pilot that made software available on the main campus accessible for students, faculty, and staff through Towson's Virtual Workspace (vw.towson.edu).



- Virtualization of software puts the applications faculty and students use in “the cloud”
- Accessible in the student lab and classrooms at TUNE, or from anywhere else, at any time
- Software is regularly maintained to provide the latest security and functionality updates
- **CCLT Blog:** The newly launched Classroom and Computer Lab Technologies Blog is displayed in our HeRO app. It focuses on technology related news, events, and quick tips which are useful to our faculty and students. The blog, found here <https://wp.towson.edu/cclt> is updated weekly.
- **Campus Technology Coalition (CTC):** The coalition, established in 2008, provides a formal structure for technology staff in colleges and departments to communicate, collaborate, cooperate and coordinate with the Office of Technology Services (OTS). OTS partners with CTC members in colleges and departments on university technology initiatives and support, including Instructional Technology. Some of the initiatives this year included:
 - Open house in Student Computing Services for CTC members and faculty for demonstrations of new emerging technologies, including Augmented and Virtual Reality equipment
 - Task group participated in the development of the Software & Cloud Apps process
- **Fresh Tech Blog:** Office of Academic Innovation, Student Computing Services, and Client Services created this blog to highlight emerging technologies at TU. Freshtech hopes to expand to include video and audio in future postings. Read the Fresh Tech Blog at <https://wp.towson.edu/et>.

It launched in early April and covers the following topics:

- Mixed Reality and Virtual Reality in education
- 3D printing
- Spherical Cameras
- Structure from Motion
- **HoloLens Capstone Group:** OTS and OAI have partnered together to provide access to emerging technologies for teaching and learning. The Microsoft HoloLens is one of the technologies and OTS worked with a Capstone group comprised of students from the Department of Computer Information Sciences on the development of educational content for this device.
 - The student group worked with the Fischer College of Science and Mathematics to evaluate using augmented reality (AR) to develop a HoloLens training application for the PLD laser located in Smith Hall
 - The group provided a feasibility analysis report on using AR in an educational environment

- **Crestron Roundtable, Virtualization panel & VR Showcase:** Towson University in conjunction with Maryland Instructional Technology Professionals (MITP) and Crestron hosted a Crestron Roundtable discussion and 24/7/365 Virtual Computer Lab/VDI panel.

- Roundtable with Crestron and MITP members on Instructional Technology
- Hands-on time with Virtual Reality solutions
- Virtualized computing environments panel, with representatives from UMUC, Montgomery College and UMBC as panelists, sharing their experience planning and implanting virtualized environments for application delivery



- **Microsoft Tech Tour:** Tech Tour @TU, an evening of free lectures presented by Microsoft and hosted by the Department of Computer and Information Sciences, Office of Technology Services (OTS), and the Office of Academic Innovation (OAI).

- Over 125 students, faculty, and staff attended
- Six local Microsoft MVPs spoke about and answered questions on the areas of emerging technologies, machine learning, and cloud computing technology
- Career planning panel and discussion of the Microsoft Academy of College Hire program



- **LabMan 2018 – UMD, College Park:** LabMan Conference focuses on the overarching aspects of academic computing services, including computer labs, bring your own device (BYOD), wireless support, classroom support, and innovation spaces for students and other patrons. Brian Raley presented a session on how TU uses an SQL database to track classroom AV equipment, provide real time valuation data, and populate the Virtual Tour.
- **CCUMC – Fall 2017:** Michael Bachman and Brian Raley attended the annual Consortium of College and University Media Centers (CCUMC) conference at the University of Notre Dame. This included many breakout sessions of topics involving AV in higher education including active learning spaces and emerging AR/VR technologies and a tour of the university to see how other colleges and universities are working.
- **Student Storage and Sharing Options Chart:** Based on feedback from students, Client Services created a Storage and Sharing Options chart to better identify the file storage locations available to

them. It included recommendations on handling confidential data as well.

<https://www.towson.edu/technology/student-services/documents/storing-data-risks-vs-benefits-03-05-18-students-draft-5.pdf>

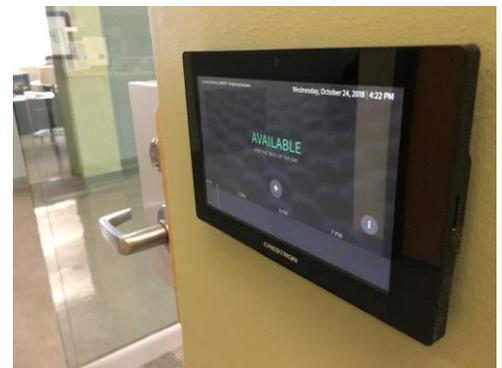
Looking Ahead

- **New Science Complex:** The new home of scientific research and discovery opens for Fall 2020 classes. Over FY19 and into FY20, Client Services is working in the following areas:
 - Planning with FCSM and facilities for the technology in the new building
 - Status communication and ongoing conversation with Faculty and Staff regarding building and room design
 - Exploring new technologies for:
 - Immersive reality space – projectors and dome screen
 - Virtual dissection table by Anatomage
 - Developing customized instructions based on teaching pedagogy, collaboration scenarios and room configurations
 - Developing equipment specific videos and training documentation
 - Offering faculty workshops and one-on-one sessions in pilot classroom (SM0400)
 - Gathering feedback from faculty and students prior to finalizing technology in new classrooms
 - Assisting with frequently asked questions (FAQs) development
- **Reviewing Support Strategy:** Each of our three coordinators is assigned two colleges. As the STF program has expanded, the needs of the colleges are more than we can support. With the addition of the new science building and a new health professions building after that, we are anticipating an even greater demand for faculty support in the classrooms. We will begin evaluating expanded coverage models, including:
 - Add three coordinators to the CCLT team, so each college has its own coordinator and will allow more time to work towards:
 - Assisting faculty with enhancing their teaching using technologies already available
 - Greater support for colleges in proposing design concepts for existing and new spaces that facilitate collaborative, experiential, and active learning
 - Increasing use of Panopto, Lynda.com, WebEx, Adobe Creative Suite, LanSchool, and Blackboard and Blackboard Collaborate, wireless projection, collaboration software, and other technologies among faculty
 - Maintaining and assisting with further development of college's technology plans
 - Regularly scheduled classroom technology training
 - Training and mentoring students from their college participating in the Student Employee Technology Corps
 - Developing resources to help faculty and students such as videos
 - Reduce operational complexity by consolidating some of our offices
 - Allowing for improved cross-training of Client Services' staff

- Improved, coordinated management of back-up support internally and to colleges and departments
 - Providing staff to new buildings as they are opened
- **Virtualization:** We need to evolve our application access and delivery architecture by moving toward a virtualized approach. The current desktop PC focus has been used since the 1990s and is costly, labor-intensive, difficult to secure, and software is not available 24/7/365 as our students and faculty expect. This should also reduce the work of department lab managers who partner with OTS to create, install and maintain complex computer lab images.
- **Active Learning Spaces and Next-Generation Design:** Literature shows active learning spaces can significantly improve learning outcomes and are in demand by students and faculty. As evidenced by the two collaborative classrooms and the student learning spaces in Cook Library created in FY18, they are in more demand by students and faculty. OTS, OAI, facilities, and other stakeholders will continue to devote resources to furthering these learning spaces on our campus and supporting faculty as they use them.

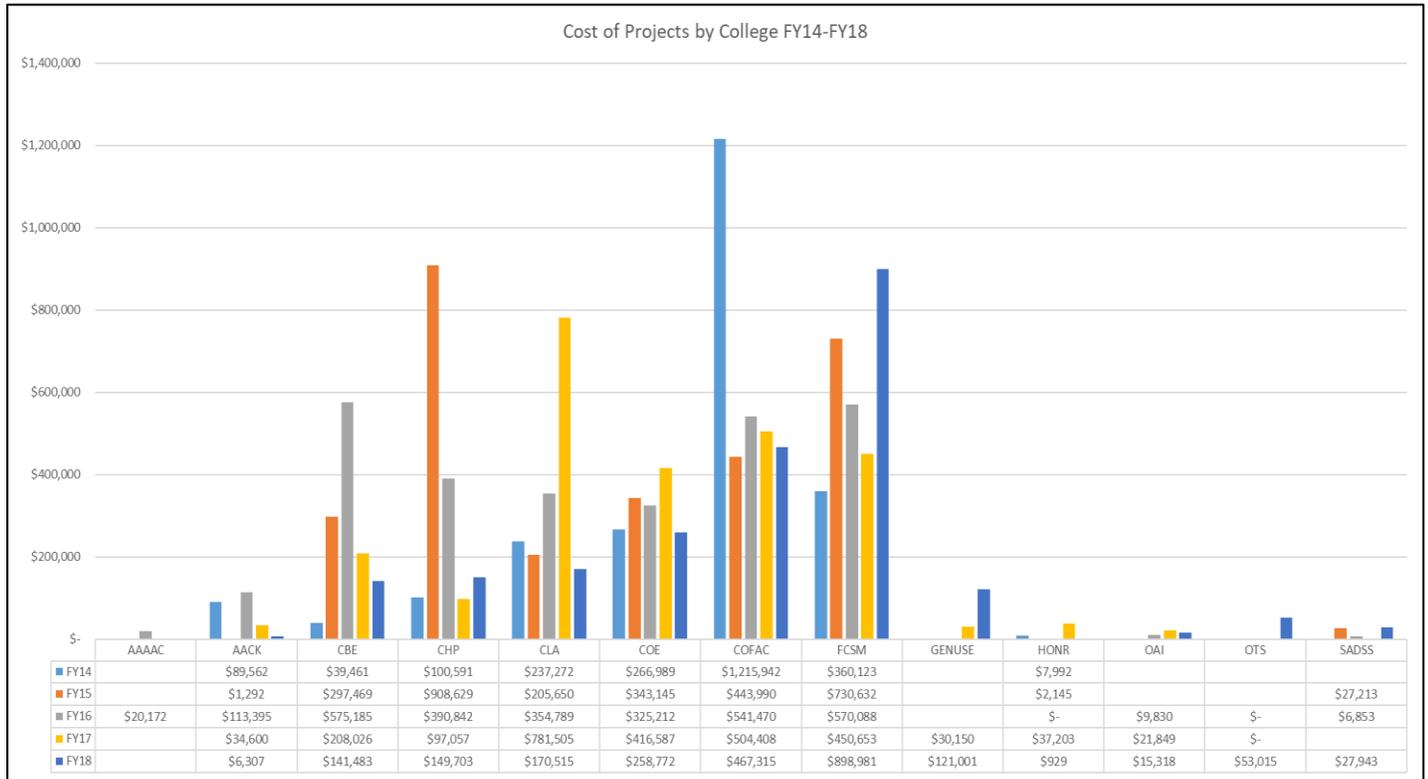
These spaces require:

- Increased investment - \$90,000 for collaborative vs \$42,000 for standard classroom, not including furniture
 - Increased time for design and installation
 - Faculty investing time to learn to use them
 - Developing additional resources addressing the different ways the rooms can be used
- **Room Scheduling Panels:** As room styles change and students look for more places to collaborate, installing a touch scheduling panel outside the classroom shows when a room is in use and allows students and faculty to instantly reserve the space. We are testing this feature in the new Computer Information Science collaboration classroom (photo) and will continue to gather feedback to determine their effectiveness. Panels were requested for the new Science Complex, but will not be funded through the capital budget.

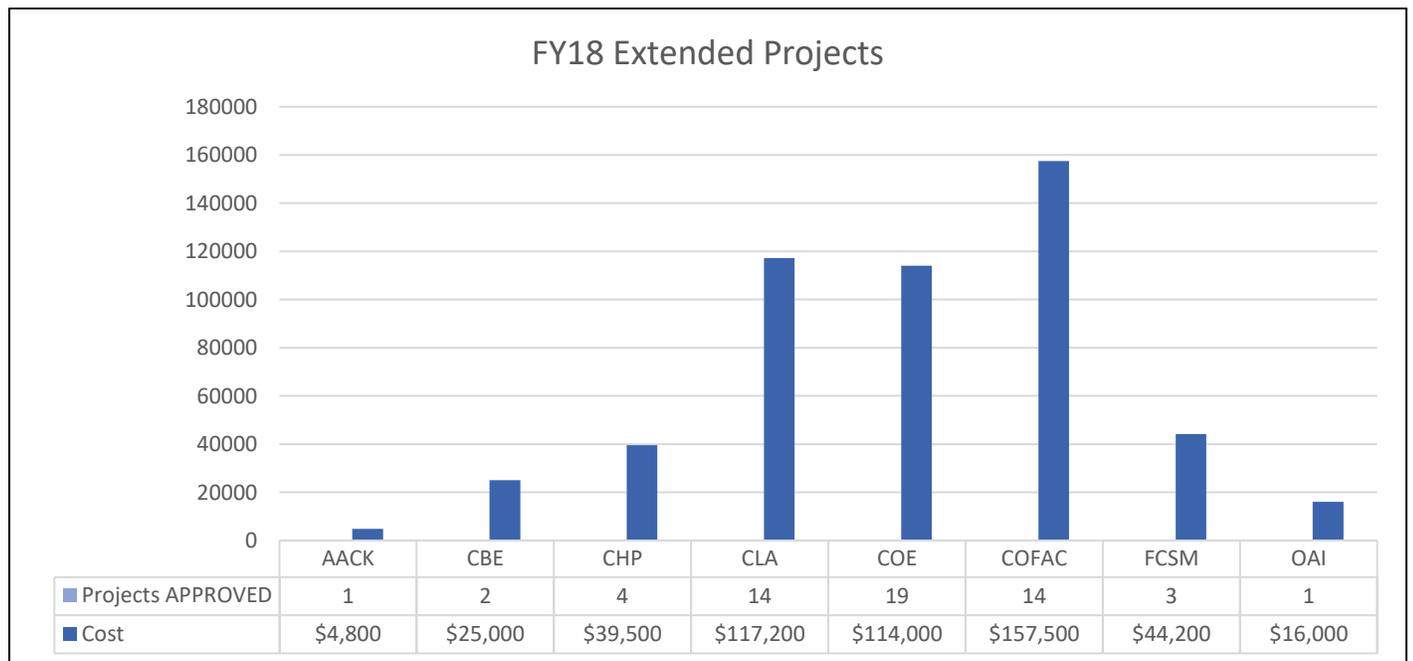
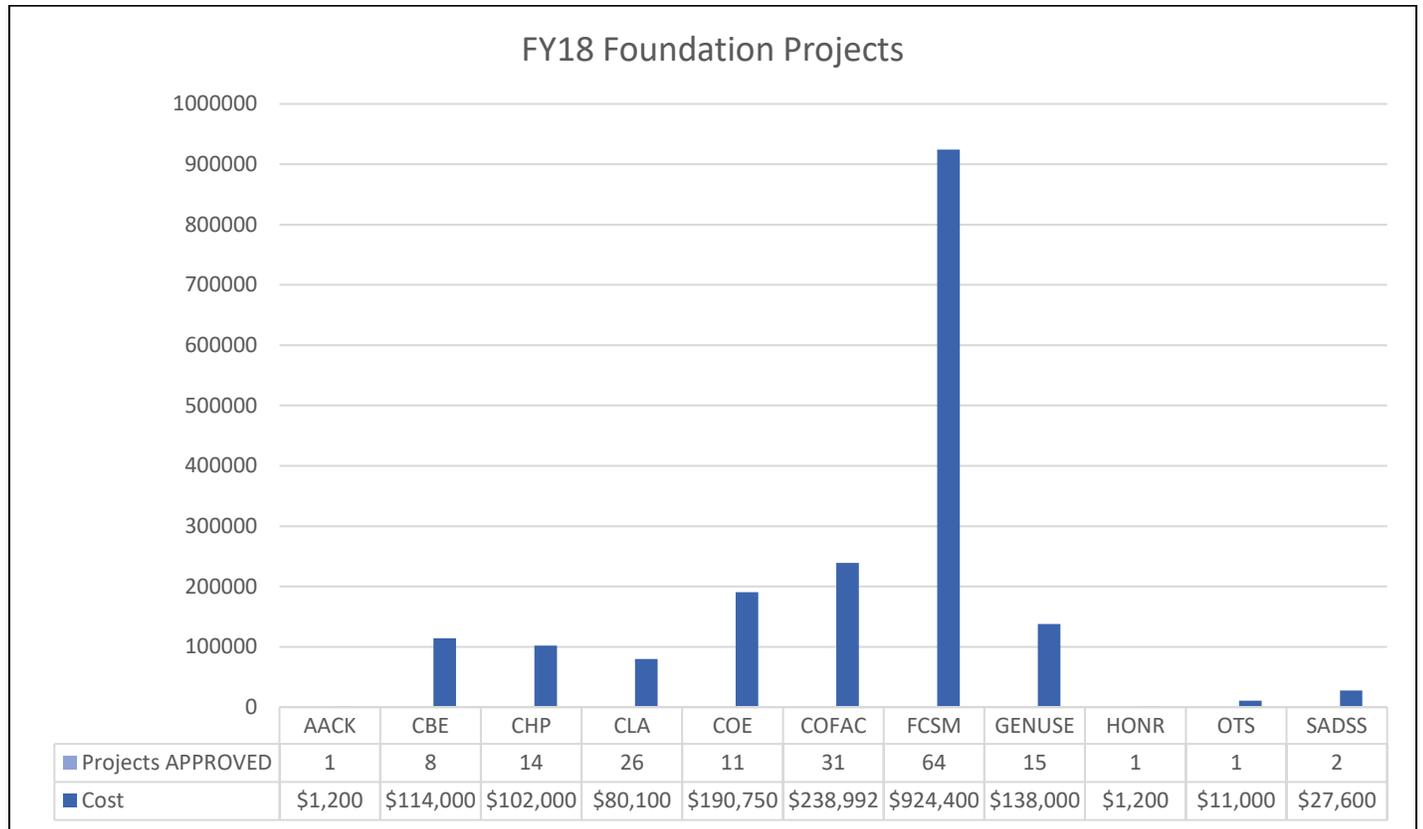


- **Continue Collaboration with OAI:** Augmented, Mixed, and Virtual Realities are quickly gaining interest across many colleges and departments and potential for exists for instructional use across all disciplines. As the cost of these technologies decrease and the body of academic software grows, in partnership with the Office of Academic Innovation, we will continue to research classroom applications and bring these findings to faculty. In addition, CCLT will assist in fostering cross disciplinary relationships where mutually beneficial projects can be created.

Appendix 1: Expenditure by College last five fiscal years



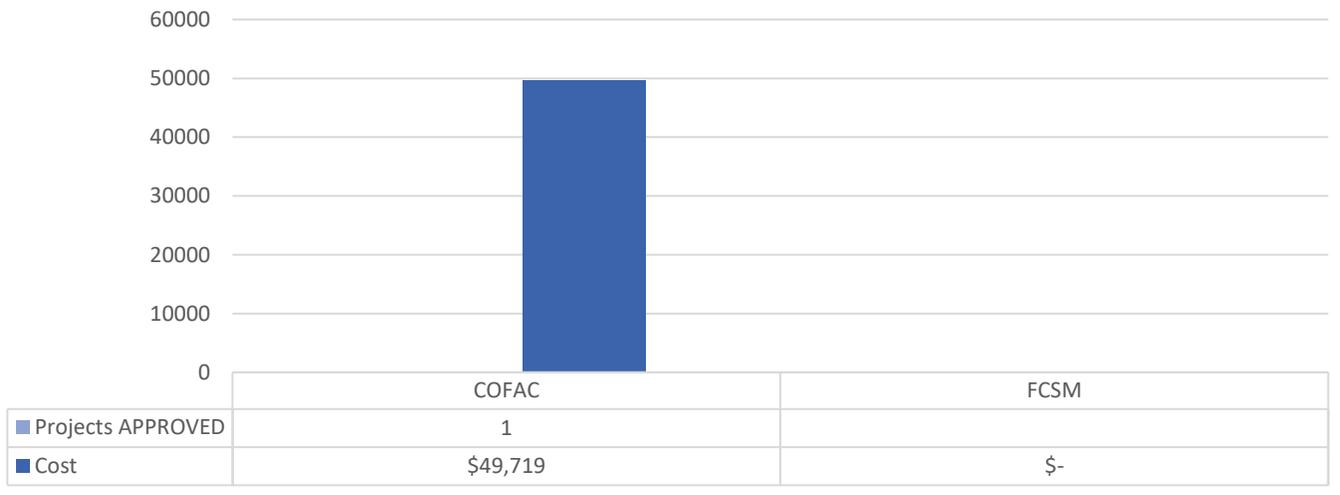
Appendix 2: Project Allocation Charts



FY18 Curriculized Projects

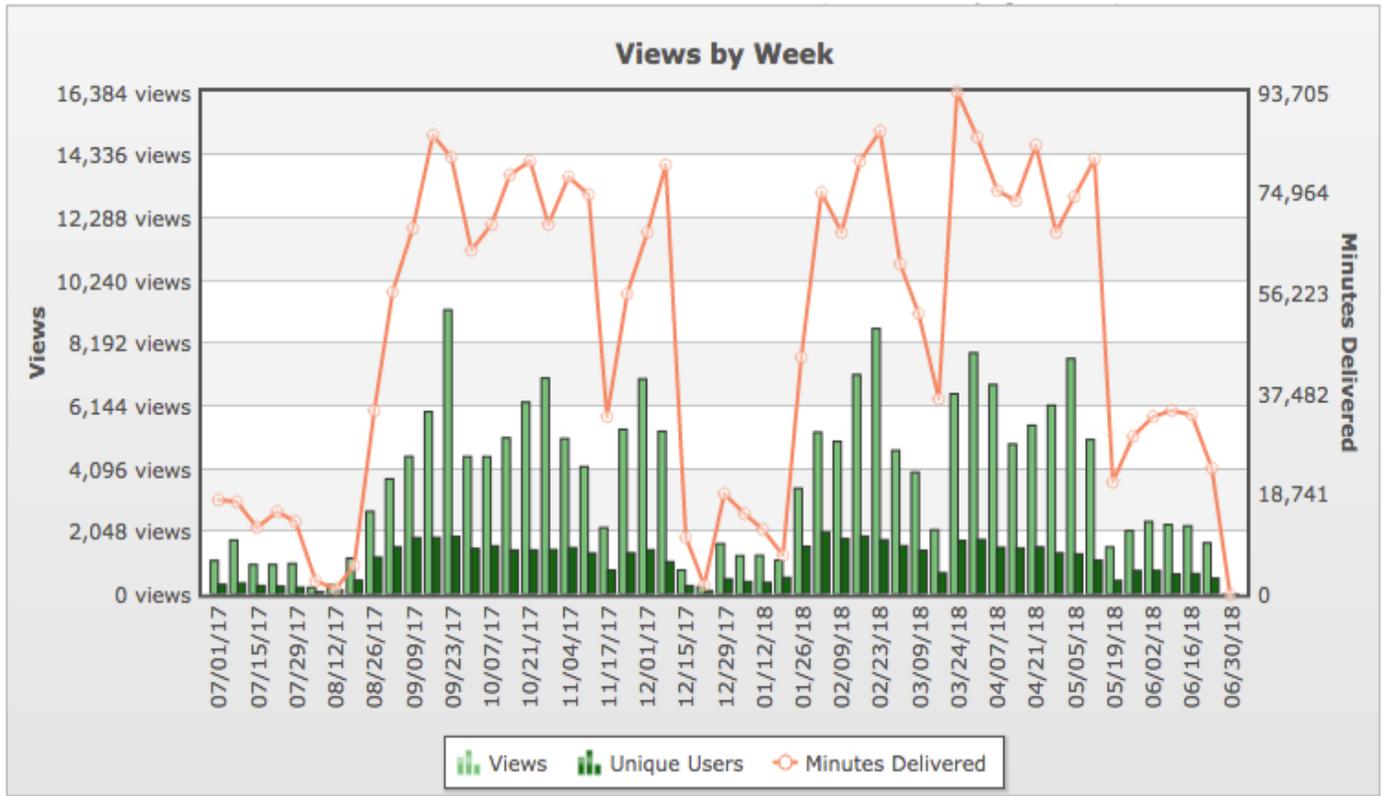


FY18 ALIST Projects



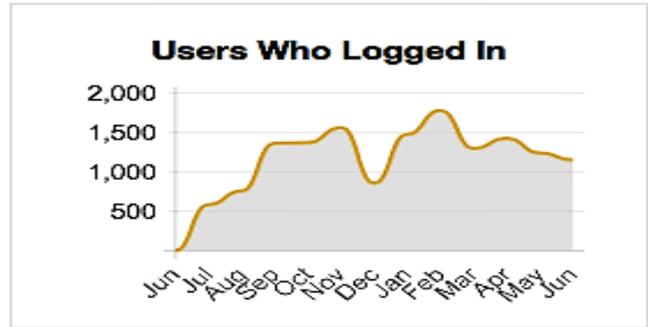
Appendix 3: Software and Cloud Apps Usage Reports

Panopto Usage 7/1/2017 – 6/30/2018



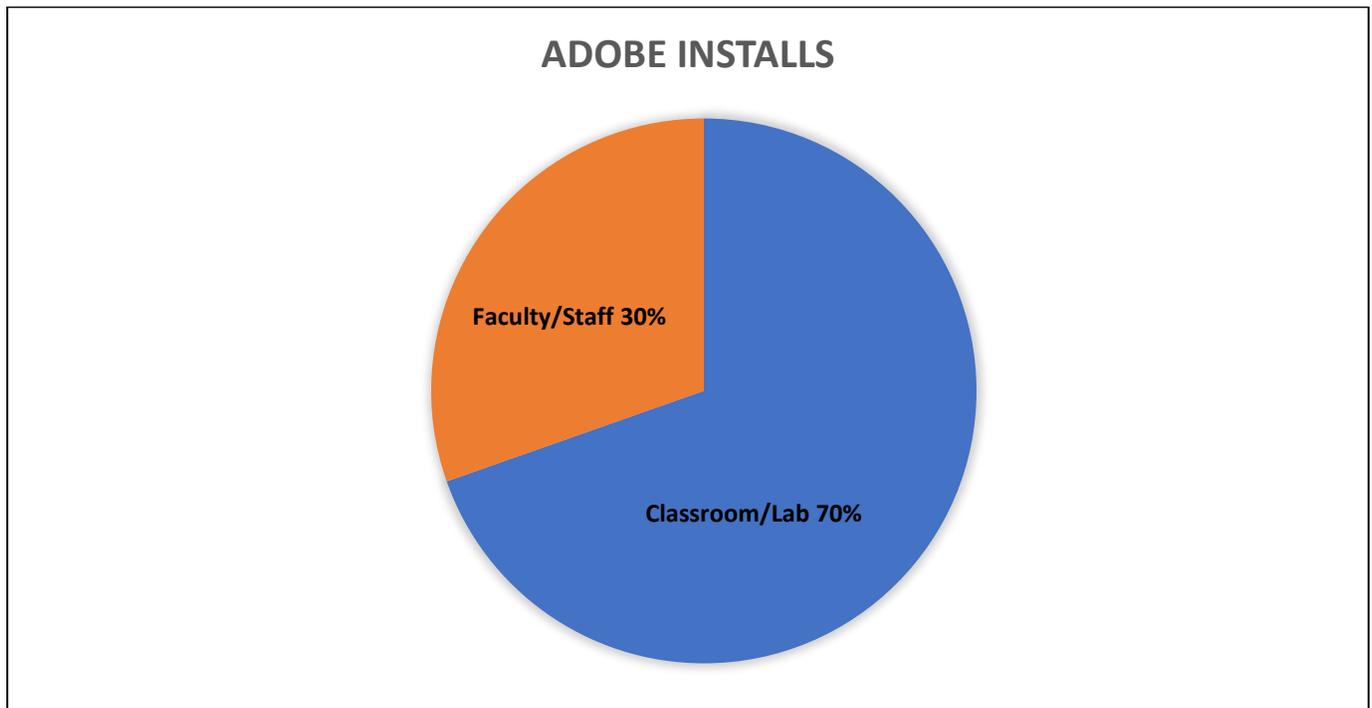
Lynda.Com

Summary for Jul 1, 2017 to Jun 30, 2018



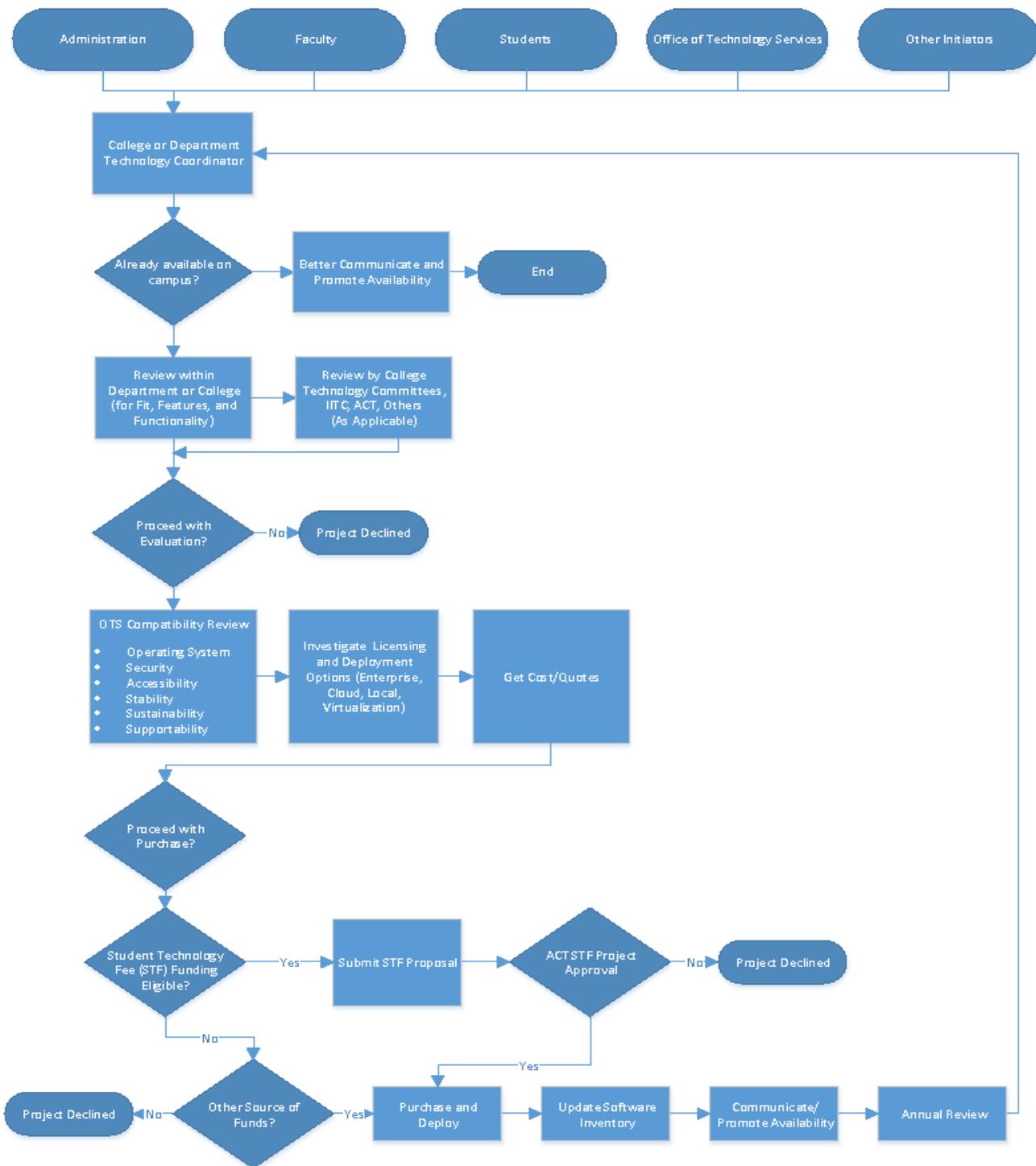
Adobe Creative Suite

1,784 classroom and lab machines, STF funded
779 faculty/staff machines, OTS funded



Appendix 4: Software and Cloud Apps Flow Chart

Proposed Software and Cloud Application Lifecycle (Learning, Teaching, and Research) 3/1/2018 Draft v6



Appendix 5: HeRO App Screen Shot

HeRO: Classroom Technology Help Resources Online v2.0.0
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Logged In CK06-04
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General Information

Getting Started Video	Virtual Tour and Instructions
Support Information	Reporting a Problem Video
News and Alerts	Classroom Tech Website
Request Orientation	Launch TechHelp
Common Links	About

How-To Resources

Solving Common Problems	Playing DVD, CD, Blu-Ray
Using Laptop or Other Device	Using Document Camera
Projecting Wirelessly	Using Panopto for Recording
Multiple Displays and Dual Image	More Resources

Exit
Minimize

Always show at logon

Classroom and Computer Lab Technologies News and Alerts

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HERO UPDATES

Active Learning at Towson: An Introduction to YR0407 and SM0400

Posted on October 22, 2019 by Carosella, William J.

In YR0407 and SM0400, Towson University is piloting two new designs for active learning in the classroom. But what is active learning? In general, the underlying principle of active learning is active student engagement rather than passive student listening. It has become an increasingly hot topic in higher education – typically discussed alongside new learning technologies, the “flipped classroom,” and all manner of mobile devices and apps. In this post you receive a brief rundown of YR0407 and SM0400, comparing the two rooms’ designs and the manner in which they can help foster active learning.

YR0407



YR0407 is designed around seven “Collaboration Centers,” which are essentially group tables that can each accommodate 3-5 students. Every Collaboration Center is equipped with its own wall-mounted flat panel display and lab computer, with additional HDMI inputs

Home
Close

Report a Classroom Technology Problem
Call 4TECH (410-704-8324)