



# Achievements Report

HACC STRATEGIC TECHNOLOGY PLAN  
HACC STRATEGIC PLAN | 2015-2017

JUNE 2017

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## FY15-FY17 HACC Strategic Technology Plan Achievements Report

**Goal 1:** *The Office of Information Services and Technologies (OIST) will identify technologies within the classroom to promote teaching and learning.*

**OBJECTIVE 1:** Identify, design and build a campus wireless network for supporting wireless devices both within the classroom for instructional needs and throughout the campus for all of the college community.

### *Achievements:*

OIST purchased, configured and deployed 340 wireless access points to expand the wireless network coverage (Spring/Summer 2014).

Campus	Installed Wireless Access Points
Gettysburg	19
Harrisburg	173
Lancaster	48
Lebanon	21
Midtown	30
York	49
66 additional access points will be installed in 2017. 406 access points will be installed college-wide.	

OIST conducted a review of the wireless network configuration, which identified the following issues (Spring 2015).

- Poor connectivity:
  - Upon connection to open wireless, users must accept a license agreement. This failed to pop-up on user's devices and caused users to believe the wireless network was broken.
  - The duration of a connection to open wireless was limited to 1 hour and provided no indication to the user that their connection expired and reconnection was required.
- Security risk:
  - Users are not required to provide login credential to open wireless, which results in the College's inability to hold any users accountable for any actions performed on wireless.

- The open wireless network resides on the college’s data network and is restricted by firewalls and access point rules.
- Uniform use:
  - Employee radius and HACC radius were not uniformly used at all campuses. The Lebanon campus used a different wireless SSID which caused Lebanon staff’s devices to not connect when visiting different campuses and vice versa.
  - Many HACC owned devices were configured to connect to HACCPSK using a pre-shared key with no ability to change the key without requiring IT support.
  - HACCRadius has a shared username and password (account in AD) but there are no provisions for expiring the password.

The following changes were implemented to the wireless network (Fall 2015):

- Removed the license agreement-landing page from the open wireless network.
- Extended the duration of a connection to open wireless to 8 hours.
- Uniformly named all wireless service set identifiers (SSID) to ensure staff can access wireless without reconfiguring their devices when traveling between campuses.
- Purchased a Cisco Identity Services Engine (ISE) system to provide extended user management of the wireless network, improved security controls, and guest management (Spring 2016). This system will provide extended capabilities by providing a student only SSID, and a guest SSID account for visitors of HACC who do not have an account but need wireless internet access (2017)
- Tested a Student Wi-Fi wireless network at Harrisburg and Lancaster to test students accessing wireless using their HACC username and password. Go-live is planned for mid-2017 at all campuses.

**OBJECTIVE 2:** Develop institutional capacity in the area of technology training and deliver training for commonly used applications.

*Achievements:*

OIST invested in the following technology professional development training, materials and conferences for staff in 2015 and 2016.

- Safari E-books (20 named users)
- CBT Nuggets (10 concurrent users)
- Banner On Demand Subscription Library (10 named users)
- SANS Organization “Securing the Human” security training

- Ellucian Live - Banner
- PA Banner User Group (PABUG)
- Cisco Live
- FUSION - Desire2Learn
- New Horizons Training Courses (Ms. Exchange, Ms. Systems Center Configuration Manager, Ms. PowerShell, CISCO, and VMWare)
- Capital City Tech Expo
- Cisco Security Roadshow
- Jamf conducted a training session for “Train the Trainer”
- Microsoft conducted a training session for operating system deployment
- Google Certified Educator
- Extron Audio Visual Training
- EDUCAUSE
- Learning Tree
- Oracle
- League of Innovations
- KINBER
- PA Educational Technology Expo & Conference (PETE&C)

Contracted with a Banner consultant to provide one-on-one training for the following Banner staff:

- Student Affairs - Business Analyst ( C. Dietz)
- OIST - Systems Analyst (M. Gonsalves)
- OIST - Systems Analyst (D. McCardle)
- Finance - Business Analyst (R, Ramirez)
- OIST - Systems Analyst (P. Sungkarat)
- OIST - Systems Analyst (C. Deiterich)

Training sessions/resources delivered by OIST in 2015 and 2016:

- Microsoft Outlook - Calendaring, Scheduling and Email Rules - in person training
- MyHACC Portal - Tabs and navigation - video series
- Process Mapping - Finance & Workforce Development – in person training
- Information Security - Cyber security newsletter
- Banner XE Student Registration - video series
- Microsoft Office 2016 - in person training
- Microsoft Windows 10 - in person training
- PaperCut Printer Management - in person training
- Remote Desktop – in person/online tutorials

- iTunes – online/tutorials
- Hawkmail (Google Apps for students) - online/tutorials
- SnagIt - video series
- Microsoft Office 365 for staff and student – online/tutorials
- Microsoft Imagine (formally DreamSpark) – online/tutorials
- Computer Lending Program – online/tutorials
- Brightspace - Platform, Tools, eVolutions - in person/online training
- Google Apps suite - in person training
- GoREACT - in person training
- Camtasia - in person training
- Microsoft Excel - Finance, Accounts Payable – in person training
- Adobe Creative Cloud - in person training
- Efficiency Tips and Tricks, presentation and hands on demo (presentation/demo team)

**OBJECTIVE 3:** Support faculty, staff, and students wireless devices with a Bring Your Own Device (BYOD) policy and a support plan.

*Achievements:*

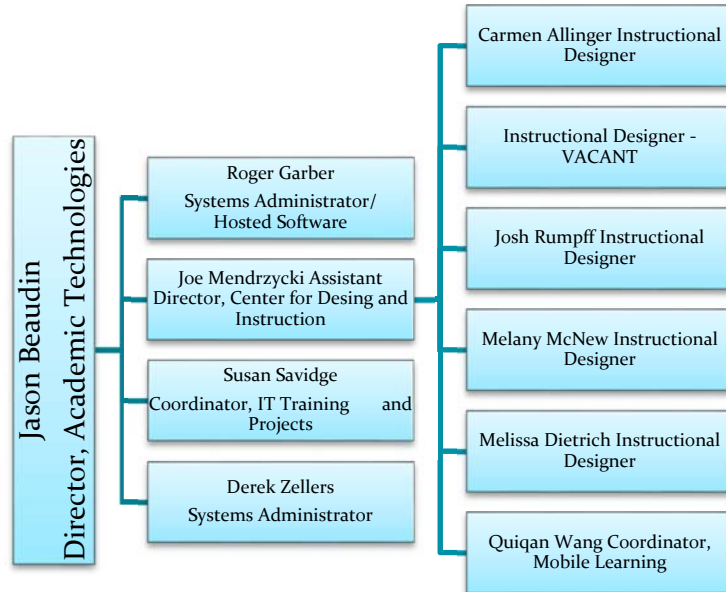
- Purchased the Cisco ISE system (2016).
- Secured Google Apps for Education access for all HACC students, faculty, and staff, supporting document access and other work from any device (2015).
- Acquired Office365 subscriptions for all HACC faculty, students, and staff. (2016).
- Created and circulated a draft Bring Your Own Device (BYOD) policy for review by the technology governance committee. This policy will move through the shared governance process after the Cisco ISE system is implemented (2017)
- Academic Technologies drafted a formal college-wide classroom technology standard designed to support BYOD in HACC classes (2017).

**OBJECTIVE 4:** Cultivate, establish, and build strong relationships with Center for Innovation and Teaching Excellence (CITE) and Teaching Technology Services (TTS) to promote collegiality, improved communications and technology planning.

*Achievements:*

- Established the Academic Technologies (AT) department with the mission to bridge the needs of instruction and technology working closely with faculty to identify and meet instructional technology needs (2014).

- Expanded the AT department to include the Center for Design and Instruction (formerly Teaching Technologies Services) (2015).
- AT and the CDI are active participants at CITE events, offering sessions on Brightspace, classroom technology, Google Apps, GoReact, the One Button Studio room, and collaboration and active learning rooms.



**OBJECTIVE 5:** Expand support to include Macintosh and other non-windows based devices.

*Achievements:*

- Purchased Casper Suite by Jamf Software to provide software management tools for Macintosh devices. Casper suite provides security policies, application and patch deployment, account recovery, device tracking, device wiping, and device encryption features. By using Casper Suite, Lightweight Directory Protocol (LDAP) was used to allow Mac users to authenticate to the college's network (2015).
- Implemented a cross training program for OIST technicians college-wide to ensure that each campus has at least one person onsite who can respond to Apple requests; and that college-wide Apple support calls can now be handled by a larger number of trained technicians, resulting in greatly reduced ticket turnaround time.

**OBJECTIVE 6:** Expand email services to include all students

*Achievements:*

- Non-credit students were added to hawkmail.hacc.edu system (2014) using the following guidelines:



- Only those non-credit students who were taking HACC courses that spanned multiple days were provided hawkmail.hacc.edu email addresses.
- This account creation process also provided those non-credit students with access to MyHacc portal and to HACCweb.
- Approximately 6,000 email addresses were provided to non-credit students in 206-2017

**OBJECTIVE 7:** Identify, plan and deploy a portal system with Single Sign-On capabilities.

*Achievements:*

- Deployed [MyHACC](#) portal system (2015). AT provided project management support and training, including one session on MyHACC announcements and 8 sessions for MyHACC content creators for this project.
- Realized annual savings of \$38,000 because of the implementation of this open source portal system, which replaced the existing portal.
- Single-Sign On was implemented by the Enterprise Applications Team across 15 systems: Human Resources performance management(Halogen); Total Rewards Point Recognition; Google Apps; Sci-Quest Purchasing System; reporting tool (Argos/MAPS); business intelligence tool (Tableau); Library catalog and checkout systems (EasyProxy, SIRSI); webmail (Outlook); EAB; Banner XE; Academic Works; and Video Conferencing (Zoom).

**OBJECTIVE 8:** Establish a classroom technologies department within the information technology division to promote the use of classroom technology and improve teaching and learning.

*Achievements:*

- Created Academic Technologies department (2014) and added a Director (2015). This unit's sole task of supporting teaching and learning with technology. Initial projects included a review of our Learning Management System (Brightspace by D2L), a solution to improve recording of presentations in order to allow communications classes to meet assessment requirements while also standardizing the experience for online and face-to-face students, and the commencement of work on a unified classroom technology standard to be implemented across the college.
- Restructured Teaching Technology Services (TTS) as the Center for Design and Instruction (CDI) and merged into Academic Technologies (2015). This allows Academic Technologies to continue to improve

teaching practices by providing instructional design assistance for faculty and offering training and workshops that support the technology that our faculty use most often.

**OBJECTIVE 9:** Ensure planning, development, design, and implementation of classroom technologies are coordinated uniformly across campuses to ensure consistency.

*Achievements:*

- All campuses have submitted current classroom technology equipment inventories.
- Selected Extron Electronics as the vendor whose products will be integrated into the classroom technology specification, with input from Academic Technologies, Campus IT Directors, and Media Services.
- Academic Technologies surveyed faculty to determine current technology usage and to collect feedback from live demonstrations and testing of classroom technology options.
- Received funding through The HACC Foundation to bring in a vendor-agnostic audiovisual consultant group (Sextant) to offer recommendations for the remaining specification components. The report of findings presented by the consultant (January 2017) was used in the creation of the classroom standards document.
- Continued exploration of wireless projection, a key area of increasing interest to faculty, after initial findings did not identify an adequate solution for inclusion as a requirement in the college-wide standard. AT anticipates that the standard will include a recommendation for those campuses looking to include wireless projection in some of their classroom spaces.
- Prepared draft of the full [classroom technology plan](#) provided to stakeholders for review (April 2017).

**Goal 2:** *The Office of Information Services and Technologies (OIST) will identify and request professional training needed for technical staff to promote improved technical services and support.*

**Goal 3:** *The Office of Information Services and Technologies (OIST) will provide training to employees on commonly used applications and classroom technologies.*

**OBJECTIVE 1:** OIST staff will attend IT training courses and IT conferences to train IT staff and implement” best practices” in use at other higher education institutions.

*Achievements:*

OIST invested in the following technology professional development training materials and conferences for staff (2015-2016):

<b>Training</b>	<b>Venue</b>
Safari E-books (20 named users)	Online
CBT Nuggets (10 concurrent users)	Online
Banner On Demand Subscription Library (10 named users)	Online
SANS Organization “Securing the Human” security training	Online
Ellucian Live - Banner	In person
Pennsylvania Banner Users Group (PABUG)	In person
Cisco Live	In person
Fusion Live - Desire2Learn	In person
New Horizons Training Courses (Ms. Exchange, Ms. Systems Center Configuration Manager, and Ms. PowerShell, VMWare vSphere, VMWare Customer Training, Interconnecting Cisco Networking II & II)	Online
Capital City Tech Expo	In person
Cisco Security Roadshow	In person
JAMF Training	Online
Microsoft Operating System Deployment (OSD)	
Microsoft System Center Configuration Manager (SCCM)	Online
Fred Pryor Seminar - Dealing with Difficult People	In person
Administrative Master’s Program, International Association of Administrative Professionals (IAAP)	In person
TEC15 Technology Conference, IAAP	In person
HR for HACC Supervisors, HACC	In person
Google Certified Educator	Online

Educause	In person
League of Innovations	In person
Extron Audiovisual Associate	Online
Learning Tree	Online
Oracle	In person
KINBER IPv6 Fundamentals	In person
PA Chamber of Commerce IT Security Conference	In person
PA Education Technology Expo & Conference (PETE & C)	In person

OIST visited the following colleges/universities to obtain best practices (2014 -2016):

- Bucks County Community College
- Montgomery County Community College
- Beaver County Community College
- Northampton Community College
- Lehigh Carbon Community College
- Delaware County Community College
- Penn Highlands Community College
- Franklin & Marshall College
- Gallaudet University
- Millersville University
- Penn State University - Harrisburg
- Penn State University - University Park
- Dickinson College

**OBJECTIVE 2:** Train and certify two IT staff in project management and employ a train-the-trainer model to further project management understanding throughout the IT organization.

*Achievements:*

- Sue Savidge and Juanita Mort received training or release time to pursue project management certification.
- Collaborated with the Office of Human Resources to schedule a professional development course in Project Management for the OIST team completed 2017. Twenty-seven Members of the OIST team attended this training.

**OBJECTIVE 3:** Ensure technical training and end-user training is identified and becomes a component of the request for proposal (RFP) processes.

*Achievements:*

- Implemented process to closely work with the Office of Finance purchasing department to review new software contracts to ensure integration and user training are included as components of the purchase. In most cases, OIST is included in the RFP process; however, no formal procedure is in place to ensure this. The following products were implemented with training identified in the bidding process:
  - Cornerstone/Human Resources
  - Rasier’s Edge/Financial Edge
  - Desire2Learn (D2L)/Brightspace
  - Digital Signage/Brightsign
  - Casper Suite by Jamf

**OBJECTIVE 4:** Identify, determine delivery method, and implement training for commonly used applications throughout the college.

*Achievements:*

Training sessions and resources delivered by OIST in 2015 and 2016:

Training Delivered	Venue
Microsoft Outlook - Calendaring, Scheduling and Email Rules	In person
MyHACC Portal - Tabs and navigation	Video series
Process Mapping - Finance & Workforce Development	In person
Information Security -	Cyber security newsletter
Banner XE Student Registration	Video series
Microsoft Office 2016	In person
Microsoft Windows 10	In person
PaperCut Printer Management	In person
Remote Desktop	Online/tutorials
iTunes	Online/tutorials
Hawkmail (Google Apps for students)	Online/tutorials
SnagIt (videos)	Online/tutorials
Microsoft Office 365 for staff and student	Online/tutorials
Microsoft Imagine (formally DreamSpark)	Online/tutorials
Computer Lending Program	Online/tutorials
Camtasia (videos)	Online/tutorials
Excel Training - Finance, Accounts Payable	In person

Efficiency Tips and Tricks, presentation and hands on demo (presentation/demo team)
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In person

**OBJECTIVE 5:** Develop, promote, and offer information security awareness training for faculty and staff.

*Achievements:*

- Licensed a learning management system for information security called securing the human (2015-2016).
- Cyber Security Awareness/Training
  - Offered at all new faculty and employee orientation training. This presentation establishes a relationship with the Data Security Administrator as a resource to provide insight or answer questions at any time from anyone throughout the year about cyber security matter.
  - Promote good cybersecurity habits during October - National Cybersecurity Awareness Month
    - HACC took advantage of this time to promote security awareness.
    - Instituted a pilot program for security awareness (2016).
    - OIST is planning to continue with these events on a bi-annual basis with events scheduled in October and during each spring semester.
- Collaborated with faculty and students to keep the HACC community more informed about protecting information and computers through user awareness.
  - As part of their course work, Professor Kari Meck's CISE 200 students create two User Awareness Articles each semester. Those meeting established criteria are entered into a twice a semester competition judged by faculty from the CIS, CNT, and WEB disciplines, in conjunction with HACC's Data Security Administrator. The Data Security Administrator distributes the winner's article to the college community to improve computer and information security awareness.

- Distribute college-wide email when security incidents happen, such as a phishing attack, to raise the awareness of the threat, remind the community with tips on identifying said threat(s), and provide instructions if they fell victim to the attack.

Greetings Colleagues!

You may have recently heard about a cyberattack affecting organizations around the globe. The attack is has been dubbed "WannaCrypt" and is part of a ransomware campaign. Ransomware is a type of malicious software designed to block access to a person's files by encrypting them. It will demand that you pay money (a "ransom") to get access to your PC or files, but there is no guarantee that paying the fine or doing what the ransomware tells you will give access to your PC or files again.

You should know that the WannaCrypt ransomware affected mostly older versions of Microsoft operating systems; newer, updated versions are not affected. Back in March, our HACC computers received the patch to protect them against this type of attack. If you are running any version of Microsoft Windows at home you should update your computer immediately (especially if you are still running Windows XP or Vista), and then regularly apply Microsoft updates to stay protected.

Many of these cyberattacks begin as email "phishing" attacks. This incident provides an opportunity to remind everyone to be suspicious of emails from unknown sources. To protect our HACC systems and community, you need to know what to look for to prevent becoming a victim.

**How to recognize phishing emails?**

- Do you know the sender, or is it an unusual "From" or "Reply-To" address instead of a recognizable @hacc.edu address?
- Does it lack a descriptive email "Subject" line?
- Does it create a sense of urgency, fear, or curiosity?
- Does it include links to a web site that is not a hacc.edu address? HINT: hover your mouse cursor over the link to see the true web address.
- Does it have attachments that you weren't expecting?
- Does it lack detailed contact information, HACC's Mission/Vision statement, HACC logo, or other marks identifying it as a HACC source?

As a reminder, it's also extremely important to be **SUSPICIOUS** of emails appearing to come from IT or the helpdesk and contain little information.

Legitimate emails from the Office of Information Services & Technologies (OIST) will contain greater details and contact information.

**OIST will NOT send you emails that:**

- Ask for your password, claim it is expiring, or direct you to reset it via a link.
- Mention anything relating to your mailbox quota or storage limit.
- Direct you to verify or validate your mail account by clicking a link.
- Claim you need to update settings on your email account because of a system upgrade (to Web Mail, Outlook, OWA, Office 365, etc.)

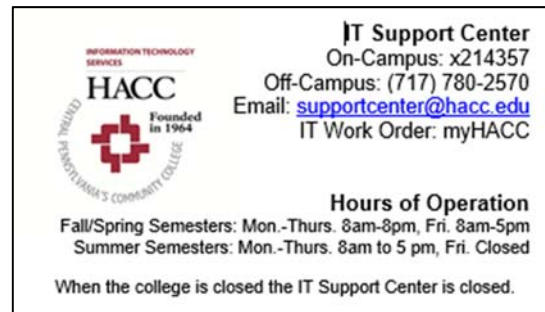
- Established a security notifications process, which emails employees at strategic times during the year when there is a rise in cyber security threats.
  - These are opportunities to educate the HACC community to the specific types of threats, which may occur.
  - Examples of these are (1) the holiday season, which sees a rise in phishing attempts due to fake websites and fake order confirmation emails, and (2) periods of natural disasters where there is a rise in fraud websites meant to tap into the charitable nature of our community for "donations."
- Periodically, the Data Security Administrator works directly with departments to speak about cyber security, with emphasis on raising security awareness as it pertains to their processes.

**OBJECTIVE 6:** Review and recommend improvements to streamline the onboarding process with respect to technology access and training.

*Achievements:*

- A technician assigned to meet with employees on their first day of employment will provide a quick tutorial on how to login, check their email and search for documentation.

- Identified, through end-user feedback, that new employees received too much information, which made it problematic to find important information quickly. OIST resolved the issue by creating a business card for new employees to keep with them that contained information such as the IT Support Center phone number, web address, and more. Support documentation was also condensed and updated.



- In conjunction with Human Resources, OIST launched Forefront Identity Manager (FIM), a Microsoft product that automates the creation, management, and deactivation of network user accounts (2015).
- Created a presentation designed to familiarize new faculty and staff with the services offered by the IT Support Center.
- Upgraded Banner/myHACC Single-Sign On process enabling accounts and security to be assigned through electronic approval.

**Goal 4:** *The Office of Information Services and Technologies (OIST) will enable agility and realize additional computing capacity to address growing needs of the college.*

**OBJECTIVE 1:** Identify single points of failure within the campuses networks, staffing, services and design solutions to resolve those identified as critical.

**Achievements:**

- Enterprise Application Services (EAS) added the following infrastructure and knowledge base in order to strengthen current operation and reduce risks of failure.
  - Installed a new Oracle/ Banner Server with VMWare that resolves HyperV failures, reduces the risk of hardware failure, and promotes compliance for Oracle database support.
  - Installed a Backup server (Disaster Recovery) that reduces the risks for single point of failure for Banner.
  - Improved Oracle/ Banner security by eliminating the default roles. This enhancement prevents unauthorized access to student data and reinforces FERPA standards.



- Developed plans to create documents for existing processes with the assistance of Sue Savidge (In progress).
  - Brightspace (Roger / Sue / Derek / Joe).
  - Adobe Connect (Joe / Melany).
  - Google Apps administration (with Matt Gordon / Sue).
  - GoReact (Roger / Melany).
  - Extron tier 2 support (in progress: Derek / Brandon Sheppard)
  - Created distributed security model to delegate responsibilities.
  - Negotiated external stakeholder (EAB) access control policy to minimize data breach.
  - Completed access policy for HR and Payroll to establish separation of duties.
  - Established redundancy in Banner XE architecture to improve availabilities.
  - Recruit Oracle Database Administrator and Web Programmer to support modernizations.
- **System Services added the following infrastructure:**
    - Upgraded primary data center.
    - Establish a new backup system to protect non-Banner data.
    - Conducted cross training between members of the systems services staff to ensuring operations are maintained during vacations, or similar events.
    - Installed new fiber-ringed network at the York campus to eliminate single points of failure.
    - Installed new network redundant core at the Lancaster Campus to support a College backup data center and provide redundant links to all of the wiring closets college-wide.
    - Established network monitoring from outside of the college to notify key staff members when issues are occurring that may be out of our control.
    - Created external domain name service (DNS) servers outside the HACC network through our Internet Service Provider (ISP) to



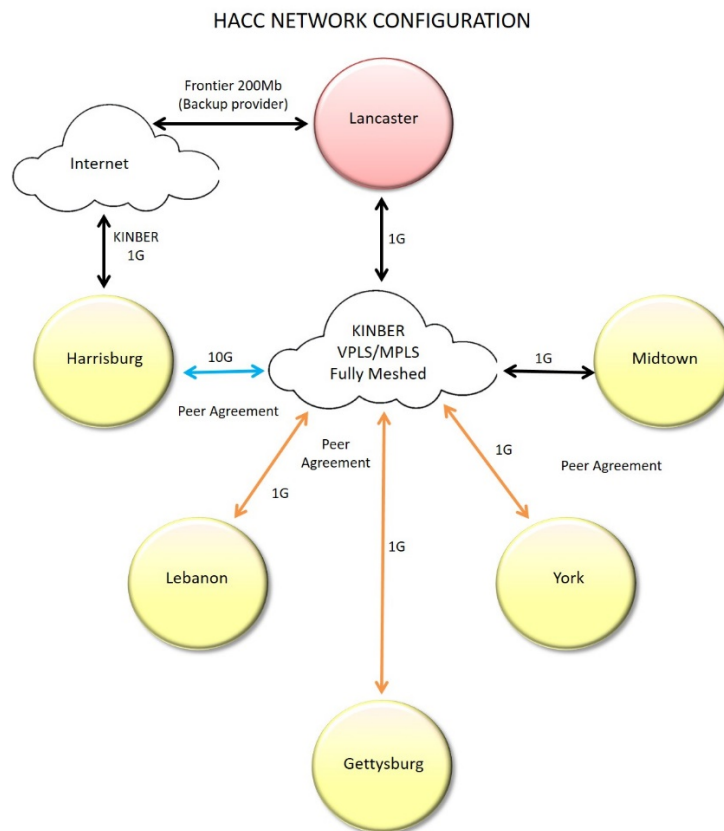
eliminate connectivity issues to the HACC website (hosted off network) if connection to the internet was lost.

- Established a redundant Internet Service provider originating from the Lancaster Campus that will become a backup to our primary ISP.

- **Computing and Media Support**

- Ensured multiple staff members are trained administrators for the Microsoft Imagine/DreamSpark subscription, resolving a single point of failure should a person become unavailable.
- Implemented a new process to route Pearson support requests through the IT Support Center, instead of to a specific person, resulting in an enhanced service level.
- Increased service levels to all campus and to support staffing shortages, IT Support Technicians are now available college-wide.

**OBJECTIVE 2:** Identify, redesign and build local area networks within the campuses that are capable of supporting 1GB of throughput to the desktop and 10GB between buildings.



*Achievements:*

- Started Verizon Wireless project at the Harrisburg Campus to add four micro-cell towers to their network to relieve congestion created by the high density of users at the Harrisburg Campus from other cellular towers that would normally service the Harrisburg Campus location. As part of this project, Verizon Wireless agreed, at HACC's expense, to trench and install conduit for use by the College in areas not used by Verizon Wireless. Two four-inch conduits were installed between the "core" buildings on the Harrisburg Campus: Blocker Hall, McCormick Library, Stabler Hall, Lehrman Arts Center, Cooper Student Center, Overholt Bookstore and Hall Tech Center/Mumma Hall/Ted Lick Administration Building (Summer 2016).
- Initial planning began at the York Campus and Lancaster Campus to expand their on-campus network connections to 10 GB between buildings.
  - Installed a new core switch in Lancaster that is capable of providing 10G Ethernet at the Campus (2016).
  - Opened bidding for a new core switch for York that will also be capable of delivering 10G Ethernet between buildings (2016).
- Lebanon and Gettysburg currently are located within one building complexes.

**OBJECTIVE 3:** Investigate, plan, design, and migrate enterprise college resources into hosted (cloud), virtualized, or on premise environments.

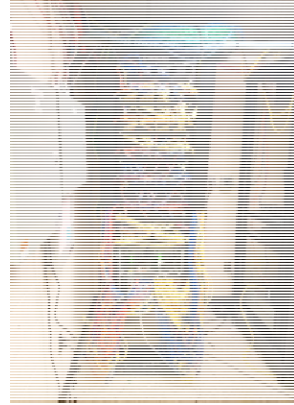
*Achievements:*

- Implemented Google Apps for Education (now G-Suite for Education) for HACC employee and student use, providing cloud storage and video distribution capabilities for individual users.
- Initiated and continuing a pilot of Brightspace's Virtual Classroom capability (Fall 2016).
- Successfully piloted Real Presence Desktop with Virtual Learning faculty. Increasing interest in this product warrants wider distribution.
- Academic Technologies is investigating Zoom as a provider for video-connected learning spaces.

**OBJECTIVE 4:** Investigate, plan, design, and build a new data center for the college.

*Achievements:*

- Renovated and upgraded the data center located in the Blocker building on the Harrisburg campus. These renovations and upgrades included: replacement of the existing cooling units with redundant computer room air conditioning (CRAC) units, replacement of existing uninterruptible power supply (UPS) with a new larger UPS system, and addition of a natural gas powered generator and automatic power transfer switch. Improvements included an overhead power distribution bus system, overhead wire management ladder system, new overhead power, and network cabling (2015).



- Construction began on a secondary data center at the Lancaster campus (2016). This secondary data center will house backup network services to ensure critical college operations continue in the event of a failure at the primary (Harrisburg) data center. Computer racks have been delivered and electrical and HVAC work is currently underway with completion slated for 2<sup>nd</sup> quarter 2017, Computer hardware and software licensing has been approved and is ready for install. Business Continuity Team will begin planning in mid-2017 what mission essential function will be implemented in this new location.



**OBJECTIVE 5:** Identify, align, establish, and communicate regular maintenance schedules for all technology systems and ensure they are aligned with the academic operations.

*Achievements:*

- Advance notification of monthly upgrades and maintenance to the Brightspace system are communicated via the Brightspace landing page.

- Defined customer service procedures and business hours (8:00 am - 4:30 PM) for the Enterprise Applications team to more effectively manage service priorities and critical production downtimes.
- Advanced notifications for the following are communicated via the Change Management Calendar and during the bi-weekly Change Management meeting:
  - Systems Center Configurations Manager (SCCM) application upgrades and maintenance.
  - System maintenance schedules and outages.
  - Upgrades and maintenance to the Windows operating system.
- Created email distribution group to notify all business analysts of any scheduled upgrades.

**OBJECTIVE 6:** Develop and implement a plan to ensure all college files are stored on the college's servers and accessible from remote locations.

*Achievements:*

- Successfully piloted and tested Folder Redirection and determined it can be implemented successfully with no impact to the end user.
- Identified a pilot group at each of the campuses and deployed Folder Redirection to each of these groups.
- Identified and addressed the need for additional resources such as disk space and internal operating procedures.
- Delivered college policy documents through the myHACC portal.

**OBJECTIVE 7:** Develop, plan, and expand the support center operations and critical technical services to include weekend support.

*Achievements:*

- Expanded Support Center hours by utilizing all campus IT technician's college-wide from 7:30 a.m. to 5:30 p.m. to 8:00 a.m. to 8:00 p.m., Monday through Friday. No additional funds or positions were necessary.
- Established weekend Support Center hours to include Saturdays 10:00 a.m. to 2:00 p.m. Two casual positions were added to meet this goal.
- Changed internal procedures so that a minimum of two technicians are available to take calls.
- Implement support model to provide 24/7 back-up support for Campus IT technicians through cell phone coverage by other members of the OIST department.

<b>IT Phone Coverage before 2015</b>		
Days with Coverage	Start and End Times	Total Coverage Hours
Monday	7:30 a.m. – 5:30 p.m.	10
Tuesday	7:30 a.m. – 5:30 p.m.	10
Wednesday	7:30 a.m. – 5:30 p.m.	10
Thursday	7:30 a.m. – 5:30 p.m.	10
Friday	7:30 a.m. – 5:00 p.m.	9.5
<b>Total Hours Per Week</b>		<b>49.5</b>

<b>IT Phone Coverage after 2016</b>		
Days with Coverage	Start and End Times	Total Coverage Hours
Monday	8:00 a.m. – 8:00 p.m.	12
Tuesday	8:00 a.m. – 8:00 p.m.	12
Wednesday	8:00 a.m. – 8:00 p.m.	12
Thursday	8:00 a.m. – 8:00 p.m.	12
Friday	8:00 a.m. – 5:00 p.m.	9
Saturday	10:00 a.m. – 2:00 p.m.	4
<b>Total Hours Per Week</b>		<b>61</b>

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## Additional Achievements - not directly linked to a specific objective

- Nationally recognized:
  - Top Ten Digital Community College, Digital Community Colleges Survey
    - 2013– 2014, 7<sup>th</sup> Place
    - 2014 – 2015, 5<sup>th</sup> Place
    - 2015-2016, 5<sup>th</sup> Place
- Ellucian Banner XE article: *An updated registration system that better serves and streamlines the student experience*
- OIST intranet site
- HACC Tech News
- Operating Budget Cost Savings: \$ 500,000
  - PC lease to buy – In fiscal year 2016, the operating cost savings was over \$51,000 and a total of \$206,000 over a four-year lease. With the transition to purchasing computers in 2017, an additional savings of \$400,000+ is expected over the next four years.
  - The consolidation of software has saved approximately \$11,000 annually from 2015-2017 operating money.
    - Web Checkout was eliminated saving \$3,000
    - Microsoft Campus Agreement reduced by \$8,000
  - Servers virtualized over last 3 year.
  - Renegotiated college-wide internet contract - \$70,000 savings
  - Ellucian - 10 yr. maintenance costs reduced from seven percent (7%) annually to four percent (4%) \$36,000 savings
  - Replaced Linux portal with open source solution - \$38,000 savings
- Implemented the Right Device policy to enable end-users to choose between a desktop computer and a laptop.

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## Outstanding/Unresolved Items

**Goal 1:** *The Office of Information Services and Technologies (OIST) will identify technologies within the classroom to promote teaching and learning.*

**OBJECTIVE 1:** Identify, design, and build a campus wireless network for the purpose of supporting wireless devices both within the classroom for instructional needs and throughout the campus for all of the college community.

- Activate student Wi-Fi on all campuses (August 2017).
- Eliminate the pre-shared key with HACC owned devices using HACCPSK (August 2017).
- Create and deploy shared username and password for board of trustee's devices (August 2017).
- Decommission HACC Open Wireless (August 2017).

**OBJECTIVE 3:** Support faculty, staff, and student's wireless devices with a Bring Your Own Device (BYOD) policy and support plan.

- Carry over to new plan

**Goal 3:** *The Office of Information Services and Technologies (OIST) will provide training to employees on commonly used applications and classroom technologies.*

**OBJECTIVE 3:** Ensure technical training and end-user training is identified and becomes a component of the request for proposal (RFP) process.

**OBJECTIVE 5:** Develop, promote and offer information security awareness training for faculty and staff.

- In the future, OIST will send mock insecure emails requesting responses and direct staff who respond to training specific to phishing attacks that either will be a purchased product or developed in house. For consideration in the new strategic technology plan.

**Goal 4:** *The Office of Information Services and Technologies (OIST) will enable agility and realize additional computing capacity to address growing needs of the college.*

**OBJECTIVE 2:** Identify, redesign, and build local area networks within the campuses that are capable of supporting 1GB of throughput to the desktop and 10GB between buildings.



- Conduit has not yet been installed between Cooper and the Bookstore, nor was any conduit installed to complete the ring from Hall Tech Center back to Blocker. This work is planned as part of a 2017 capital initiative.
- Submit a proposal to the President's Cabinet to complete this conduit expansion project and to install new fiber at the Harrisburg Campus to permit 10G Ethernet connections to the campus wiring closets. New optics and in some cases new switches will need to be purchased to use the 10G capacity (2017).
- Both items will be considered in the new Strategic Technology Plan.

**OBJECTIVE 6:** Develop and implement a plan to ensure all college files are stored on the college's servers and accessible from remote locations.

- Folder Redirection was identified as the preferred method to achieve this objective. Testing continues with goal for completion in mid-2017.