Board of Trustees Finance & Facilities Committee Meeting
September 14, 2017
Agenda

I. Approval of July 27, 2017 Minutes  
   Action

II. Action and Information Items

   A. Designer Selection since last board meeting  
      Information

   B. Capital Projects Update  
      Information

   C. Campus Safety Update  
      Information

   D. Salary Increase Report  
      Information

   E. ITCS Annual Report  
      Information

   F. Other  
      Information
Board of Trustees
Finance and Facilities Committee
September 14, 2017

Agenda Item: I.A. Approval of July 27, 2017 Minutes

Responsible Person: Rick Niswander, VC for Administration & Finance

Action Requested: Approval

Notes: N/A
The Finance & Facilities Committee of the ECU Board of Trustees met in regular session on July 27, 2017 at 3:00 pm in the ECHI. Committee members present included Edwin Clark, Vern Davenport, Leigh Fanning, Max Joyner, Vince Smith and La’Quon Rogers.

I. MINUTES

Max Joyner asked the Committee to approve the minutes from April 27, 2017. Leigh Fanning made motion and La’Quon Rogers seconded and the minutes were approved.

II. ACTION AND INFORMATION ITEMS

A. The Committee reviewed a request to approve the Issuance of Special Obligation Bonds for the Southside Renovation project. Rick Niswander, Vice Chancellor for Administration & Finance, was available for questions. The Committee approved a motion to recommend that the full Board approve the request.

B. The Committee reviewed a request to purchase land 6.71 acres on East Belvoir Road. The property will eventually be utilized for a greenhouse for Biology as well as public-private research collaborations. Scott Buck, Associate Vice Chancellor for Business Services, was available for questions. The Committee approved a motion to recommend that the full Board approve the purchase.

C. The Committee reviewed a request to lease +16,169 Sq. Ft. clinical/office space at 2390 Hemby Lane to be used by Infectious Disease in ECU Physicians. Scott Buck, Associate Vice Chancellor for Business Services, was available for questions. The Committee approved a motion to recommend that the full Board approve the lease.

D. The Committee reviewed a request to approve an extended jurisdiction agreement between ECU and the City of Greenville. Bill Koch, Associate Vice Chancellor for Environmental Health, was available for questions. ECU Interim Police Chief Suggs, City of Greenville Police Chief Holtzman, and Donald Philips, attorney for the City of Greenville, were in attendance to support the request. The Committee approved a motion to recommend that the full Board approve the extension.

E. The Committee reviewed a request to approve demolishing four structures related to the Dowdy-Ficklen Stadium Southside Renovation Project. Scott Buck, Associate Vice Chancellor for Business Services, and Bill Bagnell, Associate Vice Chancellor for Campus Operations, were available for questions. The Committee approved a motion to recommend that the full Board approve the request.

F. The Committee reviewed options relative to the 5th Street property.

Meeting adjourned at 4:20pm.

Respectfully Submitted,

Rhonda Jordan, VC Administration & Finance Office
Agenda Item: II.A. Designer Selection Since Last Board Meeting

Responsible Person: Rick Niswander,
                  VC for Administration & Finance &
                  Bill Bagnell,
                  Associate VC for Campus Operations

Action Requested: Information

Notes: N/A
MEMORANDUM

TO:    Dr. Rick Niswander, Vice Chancellor Administration and Finance
       Approved:
       Date: 8/23/17

FROM:  John G. Fields, PE  
       Director

DATE:  August 23, 2017

SUBJ:  Designer Selection Recommendation
       Cotten Bathroom Renovations
       SCO #17612
       RFB-2017-34-MC

On August 22, 2017, the designer pre-selection committee for the above referenced project conducted interviews with five (5) firms who were shortlisted based on a qualifications based selection criteria as required by the State Building Commission.

The committee consisted of Michael Talton and L.L. Everett of Facilities Engineering & Architectural Services, Bill McCartney and Aaron Lucier of Housing, and Paul Carlson of Facilities Services.

Based on the interviews and requirements of this project the committee recommends the following firms in prioritized order with Top firm being the top recommended firm.

Davis Kane Architects  Raleigh, NC
MHAworks  Greenville, NC
310 Architecture  Raleigh, NC
JKF Architecture  Greenville, NC
Kirwan Architecture  Raleigh, NC

To the best of our knowledge and belief all steps in the selection process were conducted in accordance with State Building Commission requirements as they apply to the institutions of the University of North Carolina.

Approval of the recommended firm, Davis Kane Architects, is requested.

If you have any questions or need additional information, please do not hesitate to call.

Enclosure:  Interested Designer Memo
cc:    William Bagnell
       Pre-selection Committee Members
MEMORANDUM

TO: Interested Designers

FROM: John G. Fields, PE

DATE: July 18, 2017

SUBJECT: Cotten Residence Hall Bathroom Renovation

East Carolina University is seeking the services of a qualified firm for design, bidding and construction coordination for the renovation of Cotten Residence Hall Bathroom Renovations.

The bathroom facilities in Cotten Residence Hall have not been substantially renovated in the last 40 years. This renovation will make the first floor bathrooms accessible as that floor is currently accessible with bathrooms that are not. This project includes the full demolition of the existing bathrooms and a redesign of the bathroom layout. Waterproofing issues will be addressed. Existing 92 year old sanitary waste lines will be replaced. All past electrical upgrades are surface mounted, and the project will conceal behind new walls. Currently, all shower plumbing is exposed. Project will conceal and insulate plumbing behind tile walls. The project will be last tracked through design with construction occurring in the summer of 2018.

The selected firm will review the existing building in consideration of development of design to produce bid documents, conduct bidding services and construction coordination through closeout.

Interested firms should submit six (6) copies of their current SF330, a portfolio of relevant work and a letter of interest. To be considered for this project, ensure that your submission is received at the following address before 5:00 p.m. on August 7, 2017:

L L Everett
East Carolina University
Facilities Engineering & Architectural Services
1001 E. Fourth St.
Greenville, North Carolina 27858

In accordance with our qualifications-based selection system, designers are expected to make no contact with our University staff, faculty or trustees at this stage of the selection process. All questions should be directed to the attention of this office. East Carolina University encourages participation by MWBE firms and supports UNC system’s policy of ensuring and promoting opportunities for Historically Underutilized Businesses.

Thank you for your interest in East Carolina University.
MEMORANDUM

TO: Dr. Rick Niswander, Vice Chancellor Administration and Finance
FROM: John G. Fields, PE Director
DATE: September 6, 2017
SUBJ: Direct Select Designer Recommendation

Below is a list of designers that have been direct selected since January, 2017, for informal projects (less than $500,000.) Approval of the selection of these firms is requested. Going forward approval of designers for informal projects will be requested periodically prior to engagement of firms.

<table>
<thead>
<tr>
<th>Project(s)</th>
<th>Designer</th>
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</thead>
<tbody>
<tr>
<td>Fletcher High Rise Study</td>
<td>MHA Works</td>
</tr>
<tr>
<td>Coastal Studies Marine Fueling Station</td>
<td>Albemarle &amp; Associates, Ltd.</td>
</tr>
<tr>
<td>Tyler Smoke Curtain</td>
<td>Davis Kane Architects</td>
</tr>
<tr>
<td>FEAS Renovation and Roof Replacement</td>
<td>MHA Works</td>
</tr>
<tr>
<td>Messick Studio Theater Floor Replacement</td>
<td>JKF Architecture</td>
</tr>
<tr>
<td>Legacy Hall Service Drive &amp; Parking - Repair &amp; Repave</td>
<td>Rivers &amp; Associates</td>
</tr>
<tr>
<td>West Research Center - QAR Building - Crane</td>
<td>MHA Works</td>
</tr>
<tr>
<td>MC - Electric Meters - POD 1&amp;2</td>
<td>The East Group</td>
</tr>
<tr>
<td>Erwin Bloxton MDP</td>
<td>The East Group</td>
</tr>
<tr>
<td>HSC Utilities Masterplan Study - Phase 3</td>
<td>RDK Engineers</td>
</tr>
<tr>
<td>Student Rec Center - Training Room - STUDY</td>
<td>MHA Works</td>
</tr>
<tr>
<td>Research Greenhouse Site Study</td>
<td>Lord Aeck Sargent</td>
</tr>
<tr>
<td>HSC BSOM - Replace Sectionalized Breakers in</td>
<td>Stanford White</td>
</tr>
<tr>
<td>Switchboards A&amp;B</td>
<td>MHA Works</td>
</tr>
<tr>
<td>Chancellor's Residence Renovation</td>
<td>JKF Architecture</td>
</tr>
<tr>
<td>HSC Brody Building Diversity Affairs/Cashier Suite Renovations</td>
<td>Davis Kane Architects</td>
</tr>
<tr>
<td>Speight Building 103 Study - Room Alterations</td>
<td>MHA Works</td>
</tr>
<tr>
<td>HSC Brody 2E92 Smart Classroom Study</td>
<td>JKF Architecture</td>
</tr>
<tr>
<td>Dean of Students Furniture Inventory &amp; Finishes</td>
<td>Davis Kane Architects</td>
</tr>
<tr>
<td></td>
<td>MHA Works</td>
</tr>
</tbody>
</table>
If you have any questions or need additional information, please do not hesitate to call.

cc: William Bagnell
    Kim Aheiner
FOR INFORMATION
Below are designers selected for repair and renovation formal projects, with a cost greater than $500,000.

1 Greene Residence Hall- Commissioning Agent
   February 1, 2017 Advertisement
   March 20, 2017 Pre-Selection Committee Recommendation
   May 9, 2017 Approval of Committee Recommendation
   FIRM SELECTED: Affiliated Engineers, Inc., Chapel Hill, NC

2 Croatan Chick-Fil-A Renovation
   June 16, 2017 Advertisement
   August 11, 2017 Pre-Selection Committee Recommendation
   August 16, 2017 Approval of Committee Recommendation
   FIRM SELECTED: 310 Architecture and Interiors

3 Cotton Bathroom Renovations
   July 18, 2017 Advertisement
   August 22, 2017 Pre-Selection Committee Recommendation
   August 23, 2017 Approval of Committee Recommendation
   FIRM SELECTED: Davis Kane Architects
MEMORANDUM

TO: Dr. Fredrick Niswander, Vice Chancellor Administration & Finance
FROM: John G. Fields, PE Director
DATE: May 5, 2017
SUBJ: Commissioning Agent Pre-Selection Committee Recommendation Greene Residence Hall Renovation Code: 41536 Item: 301

On March 20, 2017, the Consultant Pre-Selection Committee for the subject project reviewed consultant proposals received in response to public advertising as required by the State Building Commission (SBC). Consultant interviews were not conducted and are not required under the SBC design selection process, as amended by UNC General Administration, when expected fees will be less than $500,000.


Based on the requirements of the project and the qualifications of the firms submitting proposals, the Consultant Pre-Selection Committee recommends the following firms in prioritized order with Affiliated Engineers, Inc. being the top recommended firm.

Affiliated Engineers, Inc. Chapel Hill, NC
Systems WorCx Charlotte, NC
Building Solutions Durham, NC

To the best of our knowledge and belief, all steps in the selection process were conducted in accordance with requirements of the State Building Commission as they apply to the institutions of the University of North Carolina.

Approval of the recommended firm, Affiliated Engineers, Inc. is requested.

If you have any questions or need additional information please do not hesitate to call.

Enclosure: Interested Designer Memorandum

cc: William Bagnell
Pre-Selection Committee Members
MEMORANDUM

TO: Interested Consultants

FROM: John G. Fields, PE
Director

DATE: February 1, 2017

SUBJECT: Greene Residence Hall Renovations
Code: 41536 Item: 301

East Carolina University is seeking a Building Commissioning Agent (CxA) to evaluate the finished building and all supporting service systems planned for the renovation of Greene Residence Hall on the campus of East Carolina University.

Project information is as follows:

Key features of the renovation project are as follows:

- Re-skinning 1968-era 10 story residence hall
- Remodel ground floor public spaces
- Renovate all corridors, laundry and bathrooms, lounges and resident rooms
- Remodel and expand main entry
- Fire-proof structural steel and abate remaining asbestos and PCB’s
- Renovate building hydronic heating system OR installation of a stand-alone ductless system in each bedroom

The CxA will initiate the commissioning with a review of the drawings, specifications, and construction documents. In addition, the CxA will be responsible for verifying the building's performance test results to insure that building systems are operating within normal limits of the design criteria and meets the owner’s project requirements as well as evaluate building’s envelope to ensure air and water tightness.

The Agent's scope of work will include, but not limited to, the following commissioning services for an aggressively scheduled project duration (September 15, 2018 to July 31, 2019):
• Commissioning Plan
• Design Review
• Review and approval of the building’s service systems.
• Review and approval of building envelope systems.
• Review equipment and services documentation and coordinate the training needed to bring the buildings to a fully functional state.
• Performance testing of the building’s service support systems to verify design performance.

The selected CxA shall have demonstrated experience in providing commissioning services. The Letter of Interest should include a comprehensive listing of the CxA’s previous experience, including work on university campuses and experience (if any) with The State of North Carolina. In addition, a current list of references with specific points of contact shall be provided. All members of the CxA’s team should be indicated along with their individual experience and qualifications.

Interested firms should submit eight (5) copies of a letter of interest and current SF330 to ECU’s project manager at the following address by February 22, 2017.

Gina Shoemaker, PE
East Carolina University
Facilities Engineering & Architectural Services
1001 E. Fourth St.
Greenville, North Carolina 27858

In accordance with our qualifications-based selection system, applicants are expected to make no contact with University staff, faculty or trustees during this stage of the selection process.

The use of email is highly recommended. East Carolina University encourages participation by MWBE firms and supports UNC system’s policy of promoting opportunities for Historically Underutilized Businesses.

Thanks in advance for your interest in working with East Carolina University.
MEMORANDUM

TO: Dr. Rick Niswander, Vice Chancellor Administration and Finance

FROM: John G. Fields, P.E. Director

DATE: August 14, 2017

SUBJ: Designer Selection Recommendation Croatan Chick-Fil-A Renovation RPB-20/7-35-MC

On August 11, 2017, the designer pre-selection committee for the above referenced project conducted interviews with four (4) firms who were shortlisted based on qualifications-based selection criteria as required by the State Building Commission.

The committee consisted of Michael Talton and L.L. Everett of Facilities Engineering & Architectural Services, Joyce Sealey of Dining Services, and Paul Carlson of Facilities Services.

Based on the interviews and requirements of this project the committee recommends the following firms in prioritized order with Top firm being the top recommended firm.

310 Architecture + Interiors Raleigh, NC
MIA/works Greenville, NC
Davis Kane Architects Raleigh, NC
BW Architecture Greenville, NC

To the best of our knowledge and belief all steps in the selection process were conducted in accordance with State Building Commission requirements as they apply to the institutions of the University of North Carolina.

Approval of the recommended firm, 310 Architecture + Interiors, is requested.

If you have any questions or need additional information, please do not hesitate to call.

Enclosure: Interested Designer Memo
cc: William Bargnall

Pre-selection Committee Members
MEMORANDUM

TO: Interested Designers

FROM: John G. Fields, PE

DATE: June 16, 2017

SUBJECT: Croatan Chic-fil-a renovation

East Carolina University is seeking the services of a qualified firm for design, bidding and construction coordination for the renovation of the existing Chic-Fil-A in the Croatan dining hall.

The existing Chic-Fil-A is an express concept. The University is upgrading to a full service concept.

The selected firm will review the existing building in consideration of development of design to produce bid documents, conduct bidding services and construction coordination through closeout.

Interested firms should submit six (6) copies of their current SF330, a portfolio of relevant work and a letter of interest. To be considered for this project, ensure that your submission is received at the following address before 5:00 p.m. on June 30, 2017:

Gina Shoemaker, PE, LEED AP
East Carolina University
Facilities Engineering & Architectural Services
1001 E. Fourth St.
Greenville, North Carolina 27858

In accordance with our qualifications-based selection system, designers are expected to make no contact with our University staff, faculty or trustees at this stage of the selection process. All questions should be directed to the attention of this office. East Carolina University encourages participation by MWBE firms and supports UNC system's policy of ensuring and promoting opportunities for Historically Underutilized Businesses.

Thank you for your interest in East Carolina University.
MEMORANDUM

TO: Dr. Rick Niswander, Vice Chancellor
   Administration and Finance

FROM: John G. Fields, PE
       Director

DATE: August 23, 2017

SUBJ: Designer Selection Recommendation
      Cotten Bathroom Renovations
      SCO #17612
      RFB-2017-34-MC

On August 22, 2017, the designer pre-selection committee for the above referenced project conducted interviews with five (5) firms who were shortlisted based on a qualifications based selection criteria as required by the State Building Commission.

The committee consisted of Michael Talton and L.L. Everett of Facilities Engineering & Architectural Services, Bill McCartney and Aaron Lucier of Housing, and Paul Carlson of Facilities Services.

Based on the interviews and requirements of this project the committee recommends the following firms in prioritized order with Top firm being the top recommended firm.

Davis Kane Architects          Raleigh, NC
MHA works                      Greenville, NC
310 Architecture               Raleigh, NC
JKF Architecture               Greenville, NC
Kirwan Architecture            Raleigh, NC

To the best of our knowledge and belief all steps in the selection process were conducted in accordance with State Building Commission requirements as they apply to the institutions of the University of North Carolina.

Approval of the recommended firm, Davis Kane Architects, is requested.

If you have any questions or need additional information, please do not hesitate to call.

Enclosure: Interested Designer Memo
cc: William Bagnell
    Pre-selection Committee Members
MEMORANDUM

TO: Interested Designers
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DATE: July 18, 2017
SUBJECT: Cotten Residence Hall Bathroom Renovation

East Carolina University is seeking the services of a qualified firm for design, bidding and construction coordination for the renovation of Cotten Residence Hall Bathroom Renovations.

The bathroom facilities in Cotten Residence Hall have not been substantially renovated in the last 40 years. This renovation will make the first floor bathrooms accessible as that floor is currently accessible with bathrooms that are not. This project includes the full demolition of the existing bathrooms and a redesign of the bathroom layout. Waterproofing issues will be addressed. Existing 92 year old sanitary waste lines will be replaced. All past electrical upgrades are surface mounted, and the project will conceal behind new walls. Currently, all shower plumbing is exposed. Project will conceal and insulate plumbing behind tile walls. The project will be fast tracked through design with construction occurring in the summer of 2018.

The selected firm will review the existing building in consideration of development of design to produce bid documents, conduct bidding services and construction coordination through closeout.

Interested firms should submit six (6) copies of their current SF330, a portfolio of relevant work and a letter of interest. To be considered for this project, ensure that your submission is received at the following address before 5:00 p.m. on August 7, 2017:

L L Everett
East Carolina University
Facilities Engineering & Architectural Services
1001 E. Fourth St.
Greenville, North Carolina 27858

In accordance with our qualifications-based selection system, designers are expected to make no contact with our University staff, faculty or trustees at this stage of the selection process. All questions should be directed to the attention of this office. East Carolina University encourages participation by MWBE firms and supports UNC system's policy of ensuring and promoting opportunities for Historically Underutilized Businesses.

Thank you for your interest in East Carolina University.
Board of Trustees
Finance and Facilities Committee
September 14, 2017

Agenda Item: II.B. Capital Projects Update

Responsible Person: Rick Niswander,
VC for Administration & Finance
Bill Bagnell,
Associate VC for Campus Operations

Action Requested: Information

Notes: N/A
Agenda Item: II.C. Campus Safety Update

Responsible Person: Rick Niswander,
VC for Administration & Finance
Bill Koch,
Associate VC for Environmental Health and Campus Safety

Action Requested: Information

Notes: N/A
Board of Trustees
Finance and Facilities Committee
September 14, 2017

Agenda Item: II.D. Salary Increase Report

Responsible Person: Rick Niswander,
VC for Administration & Finance
Kitty Wetherington,
Interim Assistant VC for Human Resources

Action Requested: Information

Notes: N/A
MEMORANDUM

TO: ECU Board of Trustees

FROM: Kitty H. Wetherington
      Interim Associate Vice Chancellor for Human Resources and
      Chief Human Resources Officer

DATE: August 25, 2017

RE: Report of Approved EHRA Employee Salary Adjustments
    Pursuant to 9/30/16 Expanded Authority (March 1, 2017 – July
    31, 2017)

The attached informational report is provided to you in accordance with the
Resolution to Delegate Expanded Authority to the Chancellor of East Carolina University for
Certain Salary Actions for Employees Exempt from the State Human Resources Act, as
approved by the Board of Trustees on September 30, 2016. Please note that the
attached spreadsheet contains confidential personnel information in accordance
with N.C. GEN. STAT. §126-22, et seq.

Attachment

cc: Dr. Cecil Staton
    Chancellor

    Dr. Ronald L. Mitchelson
    Provost & Senior Vice Chancellor for Academic Affairs

    Dr. Rick Niswander
    Vice Chancellor for Administration & Finance

    Dr. Phyllis Horns
    Vice Chancellor for Health Sciences

    Dr. Virginia Hardy
    Vice Chancellor for Student Affairs

    Dr. Jay S. Golden
    Vice Chancellor for Research, Economic Development and Engagement
Board of Trustees
Finance and Facilities Committee
September 14, 2017

Agenda Item: II.E. ITCS Annual Report

Responsible Person: Rick Niswander,
VC for Administration & Finance
Don Sweet,
Associate Vice Chancellor and Chief
Information Officer

Action Requested: Information

Notes: N/A
2016-2017

Year in Review

Information Technology and Computing Services
A MESSAGE TO THE ECU COMMUNITY

On behalf of ECU’s Information Technology and Computing Services (ITCS) department, I am pleased to present this Year in Review on Information Technology (IT) for the 2016-2017 fiscal year.

This report highlights a number of the important, high-impact projects we completed this year. In total, we completed 132 IT projects, while providing a consistently high-level of operational reliability in a very complex environment. Our achievements over the past year continued to build on a solid platform for future growth and development.

Highlights from the past year include...

- meeting our goal of 99.5% uptime, with less than 0.5% unplanned downtime for the infrastructure of critical systems and the network.
- expanding the university’s wireless network to accommodate the heavy and growing reliance on Wifi service on campus, including installing outdoor access points in student-centric locations.
- upgrading hardware and software to optimize the university’s mobile and interactive reporting and analytics solution.
- establishing processes and formalizing procedures to create a solid IT Accessibility framework for the university.
- implementing new security solutions and mandatory employee training to ensure a more secure and reliable technology infrastructure in an increasingly hostile cybersecurity environment.
- beginning the migration of the Banner application tier to Linux virtual machines, in preparation for the Banner 9 implementation.
- developing for FY18 deployment, a more structured, highly-reliable web development environment using Red Hat technology and WordPress.
- piloting and implementing several new educational technology tools in support of student success and faculty teaching.
- assisting campus departments through the Central Project Office (CPO) to help guide projects through their full life cycle, from ideas to decisions to delivery.

Looking ahead, we will continue to provide vital services while pursuing additional projects in support of the university’s progressive strategic plan.

Don Sweet
Chief Information Officer
East Carolina University
ECU employs 213 central ITCS staff and there are approximately 106 decentralized IT (non-ITCS) staff units across campus. Approximately 140 students are employed within ITCS and distributed across colleges in IT positions during the academic year.

We aspire to build an organization with committed and skilled people accountable to and serving students, faculty, and staff; streamlined processes making it easy to work with us, do our jobs and deliver results; and innovative technology that is the right technology for the right reasons.

- ITCS Mission

Sue Stox
Executive Assistant to the CIO
manages the CIO calendar and internal and external meeting invitations, coordinates special projects and social events within ITCS, performs specifically-assigned research on a wide variety of topics as requested by the CIO, and resolves specific duplicated student records in Banner.

Andy Anderson
Director
Network Services – provides technology leadership on the design and support of voice communications and enterprise wired and wireless network infrastructure including storage infrastructure for the enterprise.

Wanda Sandeford
Director

Skip Kirby
Director
Strategic Information Services – ensures the security, integrity and availability of ECU’s mission-critical data; enables data-driven decision making in support of the university’s mission, strategies and objectives; and promotes effective management and strategic use of institutional data.

Ray Drake
Director
Systems and Application Support – provides technology leadership and support of desktop technologies, the administration of enterprise applications, enterprise systems and operations, operational security, and the university data centers.

Wendy Creasey, EdD
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Academic Technologies – provides leadership and support for educational platforms, audio visual and classroom technology, video conferencing and telemedicine, student computer support and computer labs, multimedia creation and communications, service desk management, and university web platforms.

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Zach Loch
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Hector M. Molina
Director
Central Project Office – in partnership with team leaders, coordinates high-impact and high-risk IT projects in collaboration with technical and functional managers, subject matter experts, vendors and users throughout the ECU community.
Throughout the year, we work with information technology committees comprised of representatives across campus to seek input into priority setting, IT planning, risk assessment and planning, policy setting, and customer-centered decision-making processes.

The Information Resources Coordinating Council (IRCC) is the primary IT Governance committee at ECU and has representatives from all areas of campus. This year, the IRCC:

- Reviewed technology-enhanced classroom standards and the prioritized list of 110 classrooms.
- Reviewed the IT Accessibility Regulation, approved by Faculty Senate, and continued to move the regulation forward in the ECU Policies, Regulations, and Rules (PRR) process.
- Reviewed features of the faculty and staff cloud archive environment in Microsoft Office 365.
- Reviewed the software purchase process developed in conjunction with the university’s Purchasing Department, Materials Management, and Disabilities Support Services that provides a framework for the procurement of all technology for the university.
- Discussed the development of the mobile regulation to define employee responsibilities for ensuring the protection of university information.
- Reviewed plans for Data Center upgrades and growth, including Banner Hardware replacements (database and application phases); expanding the Data Center to meet growth patterns and ensure the necessary power, server rack space, and cooling needs are in place; and replacing ~25 Blade systems to maintain functionality.
- Reviewed the university’s multiple security layers in place to prevent ransomware attacks and the tools in place to retrieve data in the event an attack occurs, including but not limited to Cisco SourceFire, which prevents file-sharing traffic and blocks known malware vulnerabilities and spam sites; Cisco Umbrella, which provides DNS and IP-level protection that stops malware from reaching the network; Piratedrive (125gb available) storage space, used for sensitive data, which is secure, password protected, and backed up twice daily; Microsoft OneDrive storage space that is FERPA approved; and the CrashPlan utility that backs up data to the cloud.

Highlights from the Web Oversight Committee (a subcommittee of the Information Resources Computing Council) include:

- Reviewed plans for a restructured university website environment that will create a stable and distributed environment that takes advantage of open-source tools.
- Reviewed and provided input on the development of an updated ECU website homepage, being launched in September 2017, with the new university branding.
- Reviewed updated Web Standards that include guidelines for URL management and website hosting on and off campus, as well as vendor involvement.
- Discussed the implementation of Siteimprove reporting for Quality Assurance (broken links and misspelled words) and Accessibility set up for website owners upon request. When migrating a site to WordPress, website owners are signed up to receive both reports automatically.

ITCS is working closely with Data Stewards and other institutional data stakeholders from academic and business units across the campus to operationalize the University’s Data Governance Program, as framed in the interim Data Governance Regulation that was approved in May 2016. In addition to providing technical input and resources, ITCS facilitates meetings for the Enterprise Data Management Steering Committee and the Data Stewardship Committee. In so doing, ITCS is contributing to the successful completion of projects and other work activities in support of the effective governance of institutional data. Examples of these activities include:

- Classification of institutional data according to level of sensitivity
- Establishing and maintaining a comprehensive inventory of institutional data
- Augmenting existing Banner data standards to encompass the entire complement of institutional data spanning all line-of-business systems

The Administration Information Systems Committee is continuing planning and rollout for Banner 9, which will be available in production starting summer 2018. Banner 9 will bring an updated user interface and the ability to access Banner on mobile devices.

A few highlights from the Clinical Information Systems Committee (CIS, a subcommittee of the IRCC) include:

- Reviewed $1 (+8% increase from FY 15/16) systems with a healthcare component to ensure compatibility with existing healthcare information technology systems while promoting operational efficiency, limiting storage of patient information outside of the university’s designated Electronic Health Record (EHR) system(s), and ensuring both patient and university data are protected within the scope of applicable university policies, government regulations, and state laws.
- Began including research systems in the assessment, review, and approval process.
- Worked collaboratively with ITCS to streamline and enhance the assessment request process, including refined communication with the requestor.

The Distance Education and Learning Technologies Committee:

- Reviewed and provided input regarding the rollout of Microsoft Office 365 to faculty and staff. Through Office 365, users have access to 1 terabyte of OneDrive storage, which was approved for managing and storing student FERPA data.
- Reviewed and approved the WebEx conferencing solution pilot.
- Reviewed and approved the IT Accessibility Regulation and the accompanying request process.
- Provided suggestions for the Blackboard Operating Procedure on course access.
- Provided valuable input on the transition from Tegrity to VoiceThread and Mediasite.
- Provided support for the adoption of a Turning Clicker license for students.
In 2016-2017, on a 5-point scale, where 5 is very satisfied and 1 is very dissatisfied, average student ratings were:

<table>
<thead>
<tr>
<th>ECU Information Technology Services Student Survey Average Rating</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training on the technology I need to use</td>
<td>3.9 3.6</td>
<td>3.9 3.8</td>
</tr>
<tr>
<td>Assistance from the help desk in solving my technology problems</td>
<td>3.9 3.8</td>
<td>4.0 3.9</td>
</tr>
<tr>
<td>Hours of operation for university computer labs</td>
<td>4.0 3.9</td>
<td>4.0 4.0</td>
</tr>
<tr>
<td>Availability of equipment and software in university computer labs to meet my needs</td>
<td>4.1 3.9</td>
<td>4.1 4.1</td>
</tr>
<tr>
<td>Availability of wireless access on campus</td>
<td>3.5 3.1</td>
<td>3.7 3.6</td>
</tr>
<tr>
<td>Online course management system(s) used in my classes (e.g., Blackboard)</td>
<td>4.1 3.9</td>
<td>4.1 4.0</td>
</tr>
<tr>
<td>Effectiveness of information technology in improving my learning experience</td>
<td>4.1 3.9</td>
<td>4.1 4.0</td>
</tr>
<tr>
<td>Information technology services overall</td>
<td>4.0 **</td>
<td>4.1 **</td>
</tr>
</tbody>
</table>

*Significant investments have been made the past several years to improve the university’s wireless connectivity including adding wireless access points across campus and in particular, to outdoor common areas that receive high traffic from students; upgrading wireless management tools to provide additional levels of support when troubleshooting network issues; implementing the eduroam world-wide roaming access service; and replacing the Pirates wireless network with ecu-wifi to provide an open, non-secure network for ECU users to onboard to eduroam.

** This question was not included on the Sophomore Survey.
As part of our commitment to improve accessibility, ITCS partnered with the Office for Disability Support Services to initiate an Information Technology Accessibility Committee with the responsibility of advising the university on IT Accessibility. The overarching goal of the committee is to provide governance on Information Technology Accessibility and provide equitable access to all students, faculty, and staff to technology and information. Although this was the IT Accessibility Committee’s first year, we have made tremendous progress. During this time, we have established many processes and worked on formalizing procedures that will establish a solid IT Accessibility framework for the university.

Our progress and highlights from FY17 are listed below:

- The IT Accessibility Regulation was approved by various committees and was passed by Faculty Senate and sent to the Chancellor. We received notification that the proposed regulation was received by the Chancellor as Faculty Senate advice. The proposed regulation is awaiting the next step in the PRR process.
- The Web Regulation was updated to include improved accessibility standards and requires all university websites conducting ECU official business to link to the university’s Accessibility webpage that includes a statement of ECU’s commitment to Web Accessibility.
- A report form was added to all web pages in CommonSpot to make reporting accessibility issues easier.
- Web Governance software that scans all ECU websites was implemented and users were notified on how to access reports that detail accessibility issues, broken links, and misspellings.
- We created and offered training on IT Accessibility for the developer, those responsible for IT communications, web content, and for faculty developing instructional materials.
- We have created video tutorials for faculty creating instructional materials and FAQ’s, checklists, and universal design materials.
- We have created a process for assessing course content for accessibility and offered the review service to campus.
- We developed criteria for assessing existing campus software for accessibility and documenting issues. We have assessed Kronos, Pirate Port, Office365, Blackboard, SabaMeeting, iWebfolio, Mediaste, Tegrity, WordPress, Omeka, lynda.com, Yammer, Qualtrics, WebEx, and WordPress; we continue to move through the remaining systems and tools.
- Public access electronic terminals were evaluated for accessibility.
- Standard ADA compliance language was added to MOU’s and bids issued by Materials Management.
- We implemented a process to document ADA compliance, which includes approval of exemptions, exceptions, and alternative access plans.
- We notified campus regarding ways to make campus communications accessible and offered training.
- We created a closed-captioning recommendation regarding accessibility and have distributed to campus.
- To support faculty, an instructional module was developed on Universal Design for Learning (UDL). The module focuses on designing courses with multiple types of content, engagement and assessment in order to increase accessibility. The primary goal of this module is to discover and demonstrate ways ECU educational technologies can assist faculty with incorporating UDL into course design.

For FY18, we plan to focus on the following IT Accessibility goals:

- To formalize ECU’s position on IT Accessibility, we will continue the process of creating an IT Accessibility Regulation.
- To improve instructional resources to support accessibility, we will pilot Blackboard Ally. Blackboard Ally will provide an overall course accessibility score, provide input on how to fix accessibility issues, and convert select content into five accessible formats.
- To improve website accessibility, we will continue to develop WordPress as a replacement for CommonSpot as a Content Management System. Generally, all content moved into WordPress will be accessible and mobile responsive. Additionally, we will continue the Site Improve scans to alert users of inaccessible content.
- To support building accessible materials for instruction, we will continue to develop educational materials for course development, i.e., modeling Blackboard courses by teaching style.
- To improve knowledge of distributed IT and communications personnel on campus, we will add targeted communications and training for these groups.
- To ensure accessible applications are available to faculty, staff, and students, we will continue to target applications currently used on campus that are broadly used, evaluate the applications, and provide feedback to the functional owners of the applications.
- To support campus with closed captioning of videos, we will continue to work with the Closed Captioning working group to develop standards, processes, and recommendations for campus closed captioning.
- To enhance knowledge of accessibility, Disability Support Services will create materials for distribution that inform departments of ways they can advocate for accessibility with an emphasis on IT.

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To ensure compliance with the purchasing process, we will randomly review IT purchases to determine if users are following the IT Accessibility process correctly and determine how we can better support purchasers of software.

In addition to the goals stated above, we will continue researching Universal Design for Learning in order to develop additional resources and training. Universal Design for Learning (UDL) focuses on designing courses in a way which creates a more inclusive learning experience for all students. Additionally, UDL is often considered the pathway to designing courses to best meet the needs of individuals with disabilities. The primary goal of this effort is to discover and demonstrate ways our educational technology toolset can assist faculty with incorporating accessibility into course design.
May 12, 2017 – WannaCrypt Ransomware, also known as WannaCry, was used in a massive cyber attack that infected more than 300,000 computers in 200,000+ companies in 150 countries. ECU was not impacted.

May 19, 2017 – ECU began combative measures spanning several weeks against a series of phishing email campaigns. While a minimal number of ECU accounts were compromised, this number quickly increased as a snowball effect was created. Aggressive security solutions already in place at ECU enabled IT staff to successfully contain these campaigns. ITCS is in the process of implementing increased as a snowball effect was created. Aggressive security solutions already in place at ECU.

A cloud-based solution, Umbrella incorporates a world-wide network of servers that handle over 80 billion internet requests per day. Updated in real-time, this security layer prevents computers from accessing known malicious websites before the connection is ever established. It also protects computers against the theft of information and the execution of ransomware encryption. In a typical month, the Umbrella security solution blocks 368,000 malware, phishing, botnet and known bad sites from devices on the ECU network. Additionally, Umbrella helps ITCS pinpoint compromised computers before a threat spreads throughout the university network. When a computer on the ECU network attempts to access a harmful website, it will be blocked, and the web browser will be redirected to an authorized ITCS webpage.

We are committed to quickly identifying and stopping malicious cyber attacks and potential breaches before they cause serious damage. Our security solutions provide multiple layers of protection. As phishing campaigns usually occur through email, our primary source of protection is through university email gateways and technologies that inspect email messages at the perimeter network before coming into the mailbox.

In fall 2016, to increase visibility into internet activity across all locations, devices, and users, we implemented the Cisco Umbrella security solution. Umbrella provides increased protection against malware, phishing and phishting threats for devices connected to the ECU network. A cloud-based solution, Umbrella incorporates a world-wide network of servers that handle over 80 billion internet requests per day. Updated in real-time, this security layer prevents computers from accessing known malicious websites before the connection is ever established. It also protects computers against the theft of information and the execution of ransomware encryption. In a typical month, the Umbrella security solution blocks 368,000 malicious, phishing, botnet and known bad sites from devices on the ECU network. Additionally, Umbrella helps ITCS pinpoint compromised computers before a threat spreads throughout the university network. When a computer on the ECU network attempts to access a harmful website, it will be blocked, and the web browser will be redirected to an authorized ITCS webpage.

An additional layer of protection is now in place following the implementation of Splunk, a security information event management (SIEM) solution that allows us to monitor logs throughout the day, creating a baseline for “normal” activity across the system. With this data in hand, it becomes easier to identify and address aberrations as they arise. Data can also be used in a forensic capacity to help analyze incidents when they do happen and to help us prevent repeat incidents.

Training the campus community addresses a vulnerable link in the quest of a secure environment - human error. Through outreach and security training, we have begun transforming the ECU population into a strong line of defense in support of information security and privacy.

This past year, ITCS launched the university’s first mandatory Information Security Awareness course for all ECU employees. The course was developed in collaboration with stakeholder representatives from across campus to educate employees on ECU’s best practices for protecting university information. The course is hosted online in the university’s Cornerstone Learning Management System, where it is now part of the official employee training record. As of June 2017, 4,943 traditional employees have completed the IT Security course (~80% of those assigned) and 1,665 student employees (~60% of those assigned).

We also established a new information risk management process based on ISO 27005, an internationally recognized framework for information risk management. The ITCS Information Security Office conducts an annual Information Risk Assessment, which identifies enterprise-level information risks that are subsequently documented in a risk register for tracking. The associated risk management plans are documented in the ECU TeamDynamiX Project Management System for progress tracking and reporting.

ECU departments maintain more than 100 HIPAA systems campus wide. HIPAA administrators are required to review system logs on a monthly basis. We implemented an automated log management solution to enable automatic notification of security events, log review and reporting for HIPAA administrators to help them comply with requirements. This involved installing, monitoring and alerting software on approximately 100 HIPAA workstations and servers. This software assists system administrators by combing through system logs alerting them to suspicious activity.

We implemented a new Intrusion Protection System (IPS) to monitor incoming and outgoing threats and vulnerabilities. This system improves security and permits greater capacity and increased granular control of permitted and non-permitted network traffic.

We underwent a Security Risk Assessment performed by an external risk assessor agency to gauge ITCS’s security and vulnerability posture. An internal Security Assessment was also performed on our Windows-based systems to ensure consistent adherence to internal best practices on supported systems.

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Behind the Scenes

Powering Critical IT Resources

Infrastructure / Data Center

Supporting ECU’s complex infrastructure is no small feat. Tremendous effort is dedicated each year to routine maintenance and upgrades that are necessary to keep the network and other systems running smoothly. Though these resources are invisible to most, they are critical for their continued success in learning, research and day-to-day operations. Being proactive at efficiently updating, maintaining and supporting these systems provide confidence to our campus community that the work and activities in which they engage will not be impeded by outdated systems.

Past Year’s Activities:

- Additional Cisco Nexus Data Center switches were installed to provide resilience, unified technologies and increased data rates.
- We upgraded and installed portions of equipment in the overall core, distribution and access layers to provide greater redundancy and fault tolerance. New equipment delivers increased data throughput for endpoints and higher power over ethernet capabilities.
- We deployed several additional network switches and installed infrastructure cabling in various campus locations to increase network growth and capacity needs. This included additional capacity for users, new technology-enhanced classrooms, IP cameras, access points, fire alarms, burglar alarms, HVAC monitoring and electrical system monitoring.
- Consolidated critical databases on clustered database systems. This not only delivered system consolidation but also provides fail over redundancy for many of our critical database systems.
- To accommodate our growing server-hosting infrastructure, we worked with ECU Facilities and a 3rd party engineering firm to conduct a preliminary study and cost estimate for expanding the Cotonche Data Center. The study assessed the physical expansion of the server room floor space, upgrades to the electrical infrastructure, replacement of aging chillers and modifications to the Data Center’s fire suppression system. To provide needed cooling redundancy, we deployed a 5 ton A/C unit in our telecommunications room. To ensure efficient and appropriate responses in a fire emergency situation, Data Center staff successfully completed FM200 fire suppression training.

Wireless

We continue to expand the university’s wireless LAN capabilities. Over 2,500 access points are now in production supporting 23,000 concurrent users during peak times, providing greater density for the increasing number of devices and reducing the contention for a limited resource.

This past year, we installed campus outdoor Wi-Fi access points, allowing students, faculty and staff to connect to the web with their own devices and take their studies outside of the classroom. Locations include College Hill area, various areas on Main Campus and the North Recreational Complex. This will provide a greater continuity of mobile services as our users move around the campus.

Additional areas we installed or upgraded wireless connectivity include the new Health Sciences Campus Student Center (100% coverage with 802.11AC dual band access points); Hendrix Theater to provide high-density access (700-seat capacity); outdoor areas near the ECU Transit bus stops; and several areas within the following locations: Joyner Library, Austin, Messick, McGinnis, Rawl, Rivers, Jenkins Art, Science and Tech, Brewster, Flanagan, Bate, Joyner East, Fletcher Music, and Umstead.

In addition, we upgraded wireless management platforms and access point software levels to provide additional levels of support when troubleshooting network issues.

A new set of firewalls, with greater capacity, was installed to serve the dorms and provide greater access to the Internet.

A new set of firewalls was also installed for the university internet connection as well, providing greater capacity and throughput.

Eduroam, a secure, world-wide roaming access service developed for international research and education community was implemented in fall 2016. Many institutions are now members, including several other UNC institutions. Eduroam has resolved many of the student connection issues we were experiencing and has improved service in this area.

In May 2017, the ecu-wifi network replaced the Pirates wireless network to provide an open, non-secure network for ECU users to onboard to eduroam and connect internet-ready devices such as Smart TVs and other multimedia devices that connect through eduroam for internet access; however, users must authenticate each time they connect. As part of accessing ecu-wifi, My Devices Portal, mydevices.ecu.edu, was also deployed offering users to register their device to avoid the login process each time connecting through the ecu-wifi network. Users may register 2 devices at a time. The ecu-guest SSID turn on was in August 2016.

Wired

We added networking to several new locations and upgraded existing networking in others, including the Health Sciences Campus Student Center, Eastern Area Health Education Center (Eastern AHEC; main Greenville office) and Office of Clinical Skills Assessment and Education, and Environmental Health and Safety. These additions along with other upgrades have increased ECU’s total data capacity to approximately 65,000 for Main and Health Sciences Campus. In addition, we upgraded the university Digital Radio System from analog to digital technology.

During the spring of 2016, ECU Voice Services started a multi-phase VoIP Technology Refresh project to upgrade 7,500+ 7900-series VoIP phones on campus. These phones have been in use since the early 2000’s and have become obsolete from a support and repair perspective. A new telephone platform was identified which allows for enhanced features. Phase 1 of the project was completed in April of 2017 with over 4,000 new phones installed. During this project, ITCS worked with 6 student employees to assist with the phone deployment which included the local data connection, training users on new phone features and working through the inventory process. Phase 2 includes the distribution of over 3,000 VoIP phones. This phase started in May 2017.

In FY17, Voice Services applied two upgrades for Unified Contact Center Express (UCX) to implement enhancements and bug-fixes. The year started at version 10.5 and is now operating at version 11.5. The UCX platform had a standard reporting suite built-in that did not allow for customized reports. To improve reporting features, Voice Services deployed the Cisco Unified Intelligence Center solution. This application is a web-based reporting tool that provides metrics on automatic call distribution and auto attendant phone systems allowing ECU Call Center Supervisors to create customized reports to meet their reporting requirements.

Additionally, ECU began transitioning to Cisco Unity Connection (voiceemail). Unity Connection lets users access and manage voice messages from an email inbox, web browser, Cisco Jabber, Cisco Unified IP Phone, smartphone, or tablet. Unity Connection also provides flexible voice message access and delivery format options, including support for voice commands, speech-to-text transcription, and even video greetings.

Back To Agenda
DEVELOPING CONTEMPORARY SYSTEMS
Supporting the Effectiveness of University Operations

This year Kronos was implemented in Enrollment Services, Parking and Traffic, University Advancement, School of Dental Medicine, REDE, IPAR, Honors College, Office of Equity and Diversity, Academic Library Services, and the Advising Collaborative. In all, over 1,000 new users were brought into Kronos. Next year the Kronos project team will focus on implementation in the academic areas with the Kronos project slated to be fully completed in 2018.

ITCS provides programming support for MATCH (Motivating Adolescents with Technology to CHOOSE Health), a grant-funded initiative that uses middle school curriculum to promote healthy living. We assisted with the programming for version 3 of this online system that includes an innovative Android and iPhone application that allows middle school students to track their healthy activity. The MATCH system has also been fully migrated from a 3rd party hosting provider to the ECU Data Center.

ECU works with thousands of vendors to conduct business, and managing vendor information such as contact information and payment changes can consume significant university resources. To provide support in this area, ITCS assisted with the implementation of Total Supplier Manager by SciQuest (TSM). TSM allows vendors to manage their own contact and payment information from within an innovative supplier portal. With the implementation of TSM, all ECU vendors now have access to and leverage the portal for updates.

To improve our database administration this past year, we:

- Replaced the Banner Database Hardware, utilizing the latest database appliance technology with Oracle's Database Appliance. The migration enabled many improvements in support, performance and availability of the Banner database. As part of the migration, the database software was upgraded to Oracle 12c and Oracle’s Real Application Clusters, providing high availability in the event of a hardware failure. Additionally, we implemented Oracle's Data Guard, with three additional databases to enable fast disaster recovery and offload ad-hoc reporting to the alternate databases, thereby maximizing the computing resources on the Banner production databases for the core Banner OLTP system.

- Consolidated 12 Oracle databases on the new Oracle Database Appliance hardware, reducing the number of physical servers necessary to support the environment, reducing maintenance overhead, upgrading the databases to Oracle 12c, and utilizing a common operating system. The consolidation was estimated to save over $150,000 in maintenance and support costs.

- Installed SQL Server clustering to provide high availability for our SQL Server databases – our other major database management platform, supporting many of our third-party, business-critical applications.

- Began the migration of the Banner application tier to Linux virtual machines, in preparation for the Banner 9 implementation.

The migration of our existing Internet Native Banner (INB) and Banner Self Service (SSB) application environment was completed this fiscal year. We installed a prototype database for Banner 9 and configured the new Ellucian Solution Manager (ESM) toolset to deploy and manage Banner 9 software installations and upgrades.

In fall 2016, the ecuBIC infrastructure’s hardware was upgraded to accommodate larger reporting and analytics workloads, and to provide high availability in the event of a hardware failure. In addition to these hardware enhancements, ecuBIC’s software was also upgraded to provide a significant number of new features, including: viewing reports in any modern browser, and on mobile devices for on-the-go, anywhere insights; Power BI interactive analytics; data-driven report delivery, exporting reports to PowerPoint; integration with R (a statistical language for data scientists); bookmarking analytics solutions to greatly improve accessibility; and new chart types, such as tree maps, Sankey, and waterfall.

In support of ECU’s Data Governance initiative, a new software application, Adaptive's Metadata Manager (AMM), was purchased and implemented to capture and maintain technical and business process information for ECU's institutional data. Metadata, which is data that describes, and provides context for “raw” data, allows both functional and technical information workers to better understand and manage the University’s valuable data assets. AMM organizes, integrates and centralizes this metadata for a number of useful purposes: to enable “impact analyses” to assess the impact that an interruption in business processes would have on the availability of institutional data; to create “data lineages,” which are process flows representing the movement of data through our line-of-business applications on its journey to reporting/analytics solutions and other destinations; to categorize data for the appropriate assignment of stewardship responsibilities; and to classify institutional data according to its level of sensitivity. ECU is currently maintaining an inventory of the ECU’s data/metadata for Banner and the ODS. The scope of this work will expand to incorporate all institutional data in the coming years.

In an effort to increase the timely graduation of our students, ECU implemented Ellucian’s DegreeWorks application to aid departments in determining optimal course offerings. This past year, the Registrar’s office and ITCS worked together to create a suite of DegreeWorks reports that is helping the university meet established goals. These reports will allow advisors and university executives to monitor the effectiveness of their students’ plans, provide course projections, and deliver support and information to the Finish in Four initiative.

The College of Business and ITCS expanded the collection of Preliminary Registration Statistics dashboards (completed last year) to include a set of views of data specific to the College of Business. The reports and visualizations contained in this series of dashboards delivers more focused insights into college-level student enrollments.
EFFICIENCY AND EFFECTIVENESS IN OPERATIONAL DELIVERY OF SERVICES
Ensuring Quality IT Services for the University Community

The Pirate Print service allows students to print at a variety of campus locations while also reducing paper, toner, and energy waste. During the 2016-2017 academic year, 6,261,219 pages were printed by students from 154 printers across campus. Color printing increased significantly, with 431,029 color pages printed, a 96% increase from the previous year.

We made available to the campus community an upgrade from Lync to Skype for Business, and rolled out Office 2016 to users by request.

We developed new layers of the campus map based on input from campus. Campus Maps facilitate navigation of ECU for visitors and others on campus.

We created an improved interface for the ECU Software Download Center, used to distribute software to faculty, staff, and students, that is more user-friendly and better aligns with the ITCS website.

We implemented the second phase of TeamDynamix, a solution that integrates Service Desk Management and Project Portfolio Management into one combined system, integrating several colleges and departments.

Printed the equivalent of 1.1 million bulb hours, 18,800 kg CO2, and 52 trees

In addition, we analyzed the change, asset, and knowledge management within this system.

We created a video tour for prospective students as part of the Admissions website. This website will incorporate videos captured by Creative Services for various areas on campus to promote campus to prospective students.

We simplified the process for PRR (Policies, Rules and Regulations) administrators, giving them complete control through the entire 3-step process.

This past year, we adopted a more structured approach for creating websites. We created a new content management system (CMS) infrastructure using OpenStack, OpenShift and WordPress. WordPress themes, widgets, and plugins have been built. The new environment is currently being piloted by several departments that are creating their departmental website. Once this pilot is complete, the new CMS will be extended to other departmental website owners to begin creating their sites in WordPress. We estimate the migration to take approximately 3 years.

Email enhancements this past year included:
- Migrating Exchange 2010 mailboxes to Exchange 2013 on new hardware with local storage.
- Upgrading our current on-premise Exchange email system from Exchange 2010 to Exchange 2013. Users now have a 5GB mailbox, increased from 1GB.
- Moving all email journaling and archiving to Office 365 in preparation for moving faculty and staff email to the Microsoft Office 365 cloud environment in the future.

To facilitate collaboration, ECU is moving to a cloud conferencing solution, WebEx Cloud. This conferencing solution will continue to provide the convenience of Outlook scheduling, desktop sharing, audio or video calling, personal meeting rooms, mobile hosting and attendance, integration with Microsoft Office and browser integration for IE, Chrome and Firefox.

Each year, ITCS coordinates the upgrade cycle for employee laptops and desktop computers. This past year, we configured, ordered, and deployed: 232 computers for faculty; 420 for administrative staff; 43 for ITCS staff; and 523 for Brody School of Medicine employees, as well as 374 monitors and 100 printers for this area.

We configured and deployed a new remote management device that will allow our Desktop Technology Support team to securely and quickly access, diagnose, control and fix remote computers. Features include remote control and screen sharing; chat support; help desk package integration; monitoring and auditing capabilities; and support collaboration.

To provide a greater presence for student technology support, Pirate Techs Student Computing Support Center closed its Rawl Building location, and relocated from its previous room in Joyner Library to a more central area within Joyner with higher traffic from students.

Pirate Techs staff are extending hours of operation by offering night and weekend support. During summer orientation sessions, Pirate Techs worked alongside Dowdy Student Stores IT staff, providing assistance to incoming students and their parents.

ITCS CORE VALUES

Knowledge
We are life-long learners, utilizing emerging technologies and skills to effect positive change and capitalize on opportunities.

Relationships
We embrace teamwork, open and honest communication, working across departmental boundaries with the strength of our diversity as we foster collaborative, supportive and empowering relationships.

Ethics
We employ the highest ethical standards to guide our decisions and actions as we meet and then exceed our commitments.

Well-Being
We are committed to the personal and professional development and achievement of the individual in an environment where everyone is a valued member, treated with respect, encouraged to contribute and recognized and rewarded for his/her efforts.

Service
We provide excellence in customer service to meet and exceed the needs of our students, faculty, staff and larger community.
Classroom

Providing faculty and students with learning spaces equipped with current technology has and will continue to be vital to the teaching and learning experience at ECU. This year rooms and labs in multiple locations across both Main and Health Sciences Campus have been expanded/ upgraded to meet growing needs. The Classroom Tech website and search tool was enhanced to incorporate instructional cards, video tutorials, contact information, room build types, and photographs of each classroom.

To improve understanding of faculty resources and the technology for instruction, we created a video tour of each type of classroom. From the classroom desktop, faculty can link directly to a webpage that details the equipment in the room and resources.

In addition to renovations and hardware upgrades, upgrades of current lecture-capture systems and pilots of applications that provide software-based lecture and video conference recording was completed. The option for faculty to record and share classroom lectures provides students on-demand content for review, which is valuable to their overall success.

This year, we piloted a new videoconferencing system with the Telemedicine Center to connect to patients across the region to replace the current system that is no longer supported. As eastern North Carolina continues to grow, services provided by the Telemedicine Center are essential to adding to the quality of life of eastern North Carolinians.

A large-scale, multi-year project involving modernizing the Brody School of Medicine’s departmental conference rooms was completed this past year. Several departments including Facilities, ITCS, and various outside vendors and contractors worked together to upgrade 81 rooms. This massive project involved identifying and walking through each of the rooms – some of which had little to no technology, while others only required analog to digital upgrades; developing a standard set of AV equipment to more quickly accomplish project goals and provide easier maintenance in the future; and developing a cost assessment for modernizing the equipment.

The following A/V standards were implemented in these rooms: Air Media (to present and share content wirelessly); Flat Panel Display; Blue Laser Projector (for large rooms); Access Point (for wireless connectivity); Connectivity for the computer and laptop in the table; and SMART kapp board.

Two new tools were launched for faculty: OneDrive for Business and Office 365 Web Applications. OneDrive for Business offers cloud storage as part of the Office 365 subscription for faculty, staff, students and alumni email. Features include 1TB of storage for non-sensitive information and FERPA data, sharing and collaboration with both ECU and non-ECU users, mobile apps for anytime, anywhere access and web apps that allow users to create new and edit stored PowerPoint, Excel and Word documents. The sync app makes saving documents to the cloud quick and easy with instant access from anywhere to the latest file version.

The Learning Management System (Blackboard Learn)

Implementing tools that improve efficiency and offer new capabilities simplifies and enhances the usefulness of our learning management system as that single, virtual location where students and faculty can engage.

Based on feedback from students and faculty, this year we implemented several tools that integrate with Blackboard to meet the needs of faculty and students:

- **Blackboard Outcomes** was utilized in English courses 1100 and 2201, with 4,000 students. Outcomes will provide the method to download all Portfolio submitted artifacts through the admin Outcomes view and provide the ability to download rubric reports all at once.
- **VoiceThread**: Based on FY16 feedback and support tickets, we identified the need for a video tool, with features and efficient workflows to facilitate student recording assignments. The VoiceThread platform has features specifically designed for student recording assignments, student feedback and threaded discussion using video, audio and text. VoiceThread integrates with Blackboard.

Audience Response: Turning Technologies

Turning Technologies has been the audience response (clicker) recommendation since 2009. Approximately 4,000 clickers are sold through the Dowdy Student Stores annually. We have acquired a campus-wide license for Turning Technologies, which provides numerous benefits to the university. Students can now use clickers at a much lesser cost and acquiring their licenses will be done conveniently through our learning management system. Also, students who previously invested in a Turning Technologies clicker will not lose use of that investment. With campus-wide licensing in place, the university will be able to remain in step with changes and trends in audience response technology such as the expected progression to mobile device app polling.
ITCS: GLANCE AHEAD

What’s In Store for 2018

In the year ahead, we plan to complete numerous projects that will enhance our technology offerings, accommodate the growth of our user community, improve our security, and enhance user experiences. A few major projects we would like to share with you are centered on technology offerings, accommodate the growth in the year ahead, we plan to complete implementation of the system.

To improve our support of student success and faculty teaching, we will

- upgrade Blackboard in May 2018.
- implement Blackboard Analytics Phase 2 to improve feedback for faculty and students, and to understand usage of the university Learning Management System.
- pilot WebEx with Blackboard integration to enhance student and faculty communication and improve student engagement.
- upgrade numerous centrally-scheduled and departmental instructional spaces with the latest in audio visual technology to improve classroom instruction.
- to improve student access to technology, upgrade computers in 39 computer labs across campus this year and increase scanning and copying functionality in campus computer labs.
- continue the creation of an IT Accessibility Regulation to formalize ECU’s position on IT Accessibility.
- implement the pilot of Blackboard Ally to improve instructional resources which support accessibility.
- implement VIVO to display faculty research information and to interface with the new faculty reporting system, Faculty 180.
- release Microsoft Office 365 collaboration tools (Teams, Sway, Forms) essential for faculty and students.

To improve our campus services, we will

- move users’ archived email to a hosted Office 365 solution.
- improve the university web presence and create a more agile web environment by implementing WordPress as a new content management system. The move to a new content management platform will increase accessibility, mobile responsiveness and easily enable branding updates.
- implement the Apple Volume Purchase Program to enable ECU units to find, buy, and distribute apps and books in bulk for faculty, staff, and student Apple devices.

What’s In Store for 2018

The three trends exerting the most influence on higher education’s IT strategy are (1) continued complexity of security threats, (2) student success focus/imperatives, and (3) data-driven decision making.

- Trend Watch 2017: Which IT Trends Is Higher Education Responding To?, ECAR, 2017

- continue increasing our bandwidth capacities from 1Gbps to 10Gbps within identified areas of the distribution and access layers. Our core bandwidth will shift from 10Gbps to 40Gbps where necessary.
- upgrade the primary Internet connection to 20Gbps to handle the increasing demand for Internet bandwidth.
- continue to replace our oldest blade servers with new blade systems and as appropriate workloads will continue to be moved to virtual infrastructure to take advantage of the built-in high availability of that platform.
- further drive infrastructure automation for provisioning, patching and configuration management to speed delivery of new or replacement systems and ensure overall configuration consistency.
- bring a new tertiary Data Center site online for disaster recovery protection against catastrophic failure of both Greenville Data Centers.
- complete implementation of the security information and event management (SIEM) system.
- develop an online information security training course for ECU supervisors and managers. This course will cover supervisor and manager obligations for ensuring their employees are aware of their security responsibilities and have the resources to carry out those responsibilities.
- establish a risk escalation process that ensures university risks arising from unmanaged or unsecured IT systems are promptly and adequately resolved.
- establish a Mobile Computing Regulation for the University, which defines management and employee responsibilities for the safe and appropriate use of mobile computing technologies.
- establish an ITCS Security Operations Center that will provide threat identification, analysis and reporting services for managing the risks to ECU’s IT infrastructures.
- enable 2-factor authentication technology for student and alumni accounts to improve security and prevent phishing and ransomware attempts.

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IN CONCLUSION

“As you have read, ITCS has been extremely busy this year. Once again, I am extremely proud of our staff and the work that was and continues to be accomplished for our students, faculty, and staff. Without hesitation and bias, of course, we have the best IT staff in the UNC system!”

-Don Sweet, CIO

Questions and Feedback

If you have questions about the major undertakings listed in this report, please contact a member of our ITCS leadership team. Your questions and comments help us better understand the needs of everyone at ECU who uses our services.
Agenda Item: II.F. Other

Responsible Person: Rick Niswander, VC for Administration & Finance

Action Requested: Information

Notes: N/A