

ITS ANNUAL UPDATE TO FACULTY SENATE

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IT SERVICES OVERVIEW



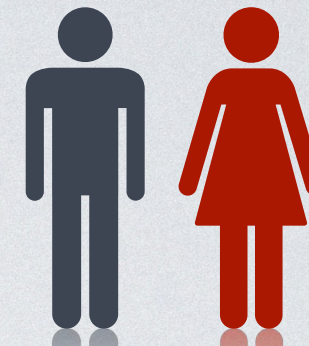
250+ Staff & Contractors



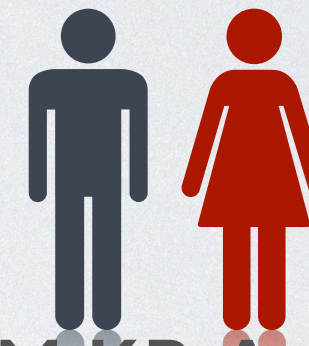
30,000+ Teams Meetings a Day




256 Classrooms




300 Students




2.2M KB Articles Utilized Annually



27,000+ HPC Cores



225TB Data Moved to the Cloud



10,000+ Interactions/Mn

CORE PRIORITIES

Faculty Support and Engagement

Student Support and Engagement

Personalization

Digital University

System Transformation

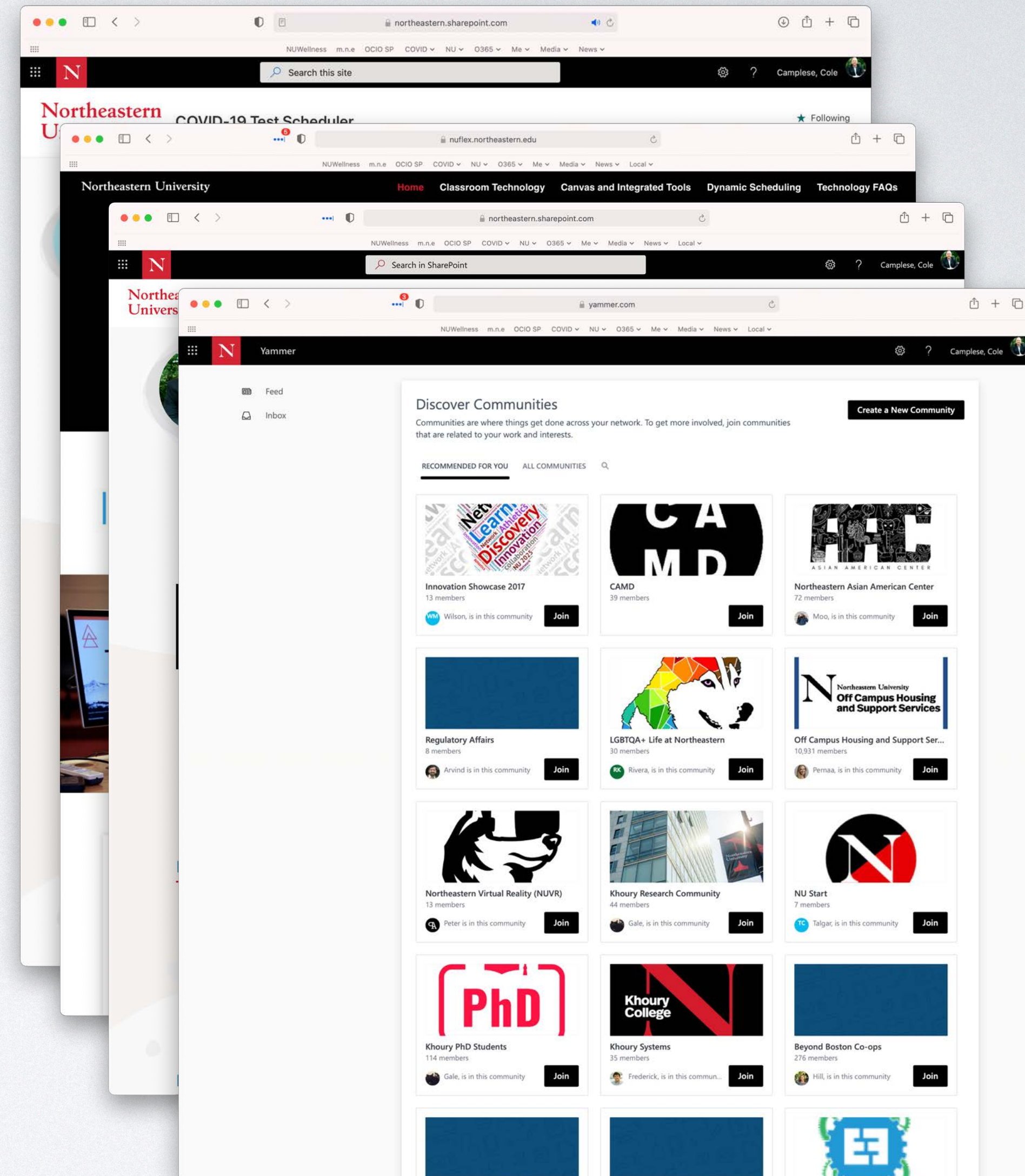
Information Security

“Each month of the pandemic has provided a typical year’s worth of digital transformation.”

–Satya Nadella, CEO of Microsoft

COVID TRANSFORMATION

- COVID-19 Test Scheduler
- COVID-19 Wellness Portal
- COVID-19 Daily Wellness Check
- 125 Classroom AV Upgrades
- Academic Technology Assistance Program & Instructional Assistants
- Student Hub
- Dynamic Class Scheduler
- Communities at Northeastern
- Zero-Touch Device Management
- Digital Signatures and Business Process Management



NOW WHAT?

SUPPORTING THE NEW ACADEMIC PLAN

1 Complete ERP Modernization

Over this time period, the primary components of a modern ERP platform will be implemented (HR, Finance, Student, Giving, and Enrollment Management).

2 Complete Network Modernization

Greatly enhance the reliability and robustness of our telecommunication and research networks across all locations of the University.

3 Hub Platform and Ecosystem

Continued development of the Student Hub, with enhanced personalization. Ongoing development of the Employee Hub and the creation of the Parent & Alumni Hub platforms.

4 Salesforce Modernization

Transform our Salesforce implementation to be industry standard to more quickly, reasonably, and easily keep pace with university demands.

5 Global Research Support

Enhance partnership with NURes to transform the research technology experience.

6 Transform Classroom Technology

Work to greatly reduce costs for AV in classrooms by moving to a simplified model and greater adoption of the Teams platform to support instruction.

7 Business Process Optimization

Investment in the modernization of university wide tools and processes that impact all. Examples include ServiceNow, list serves, and accessibility management.

8 Global Network IT Support

With the ongoing growth of the university, it is imperative to create a robust approach to supporting all locations equally.

9 Device Automation

Centralize overall procurement and lifecycle of computing devices for staff.

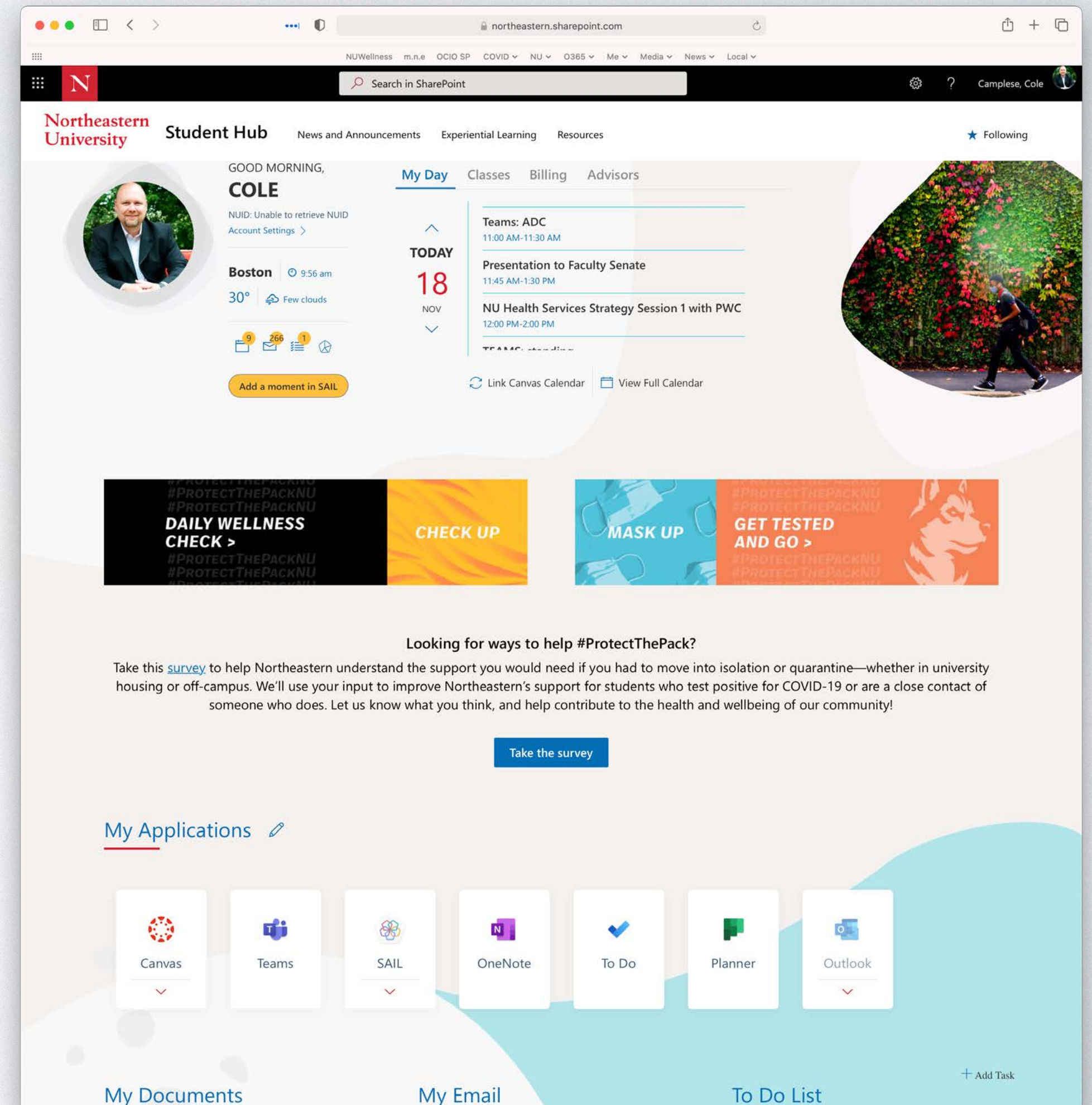
10 Enhance Digital Dexterity

Create a comprehensive faculty and staff IT training function for all locations.

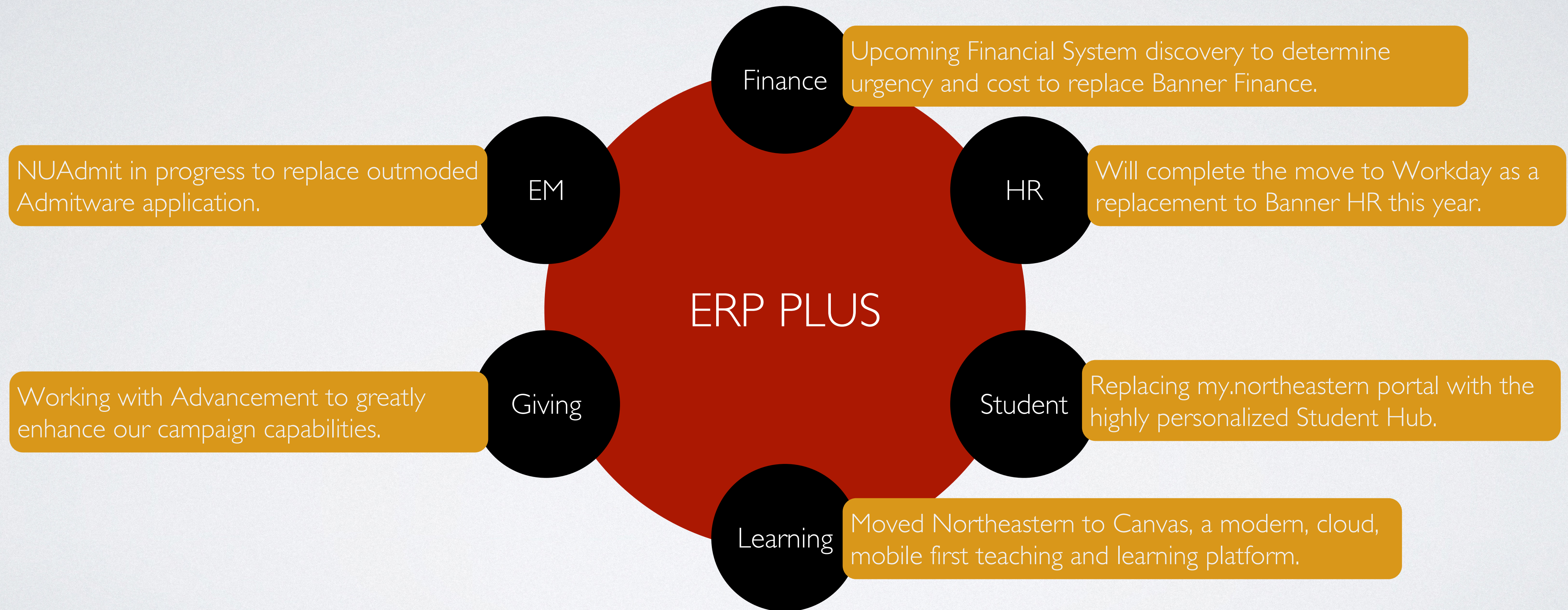
PERSONALIZATION • SYSTEM TRANSFORMATION • DIGITAL UNIVERSITY

PERSONALIZATION: THE HUB PLATFORM

- The Student Hub continues to be at the center of the digital experience for students
- Enhancing SH to be more useful in a post-COVID world by integrating more micro-services (Co-Op, event discovery, employment, wellness, etc)
- We must leverage this concept for all of our audiences
 - Faculty (Teaching, work, research)
 - Staff (Operational efficiency)
 - Parents (Modern, personalized view of the work of their student)
 - Alumni (Engagement)



SYSTEM TRANSFORMATION



DIGITAL UNIVERSITY

Digital Dexterity

Easy-to-Use
Technology

Engaging
Deployment

Audience Experience

✓ Digital Collaboration

✓ Hiring Digital

✓ Community Engagement

Digital Transformation

High-Impact
Systems

Data Governance

Business Outcomes

✓ System Transformation

✓ Data Management

✓ Personalization

Digital Academy

T & L
Environments

Experiential
Learning

Student Success

✓ Faculty Consulting

✓ Student Mentoring

✓ Research Computing

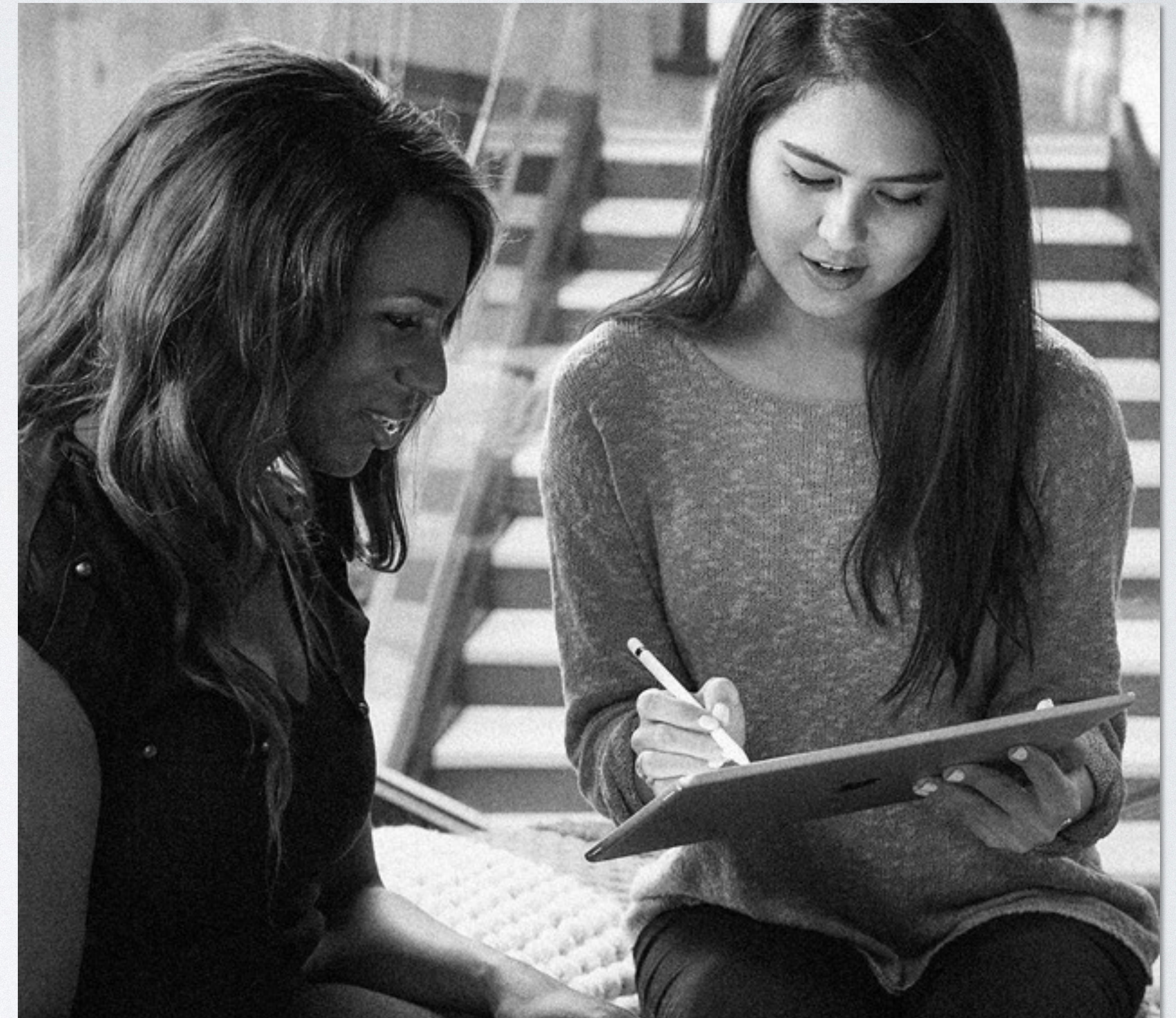
TEACHING WITH TECHNOLOGY • RESEARCH COMPUTING • INFRASTRUCTURE

ACADEMIC TECHNOLOGY HIGHLIGHTS

- 97% of sections are using Canvas
- 326 faculty consults, 313 faculty and staff watched 4,466 minutes of on-demand trainings (Canvas, Gradescope, Panopto, etc.)
- 10 new live and on demand training courses developed in Fall 2021
- Tablet pilot update: 32 tablets were provided to faculty as part of a pilot and community of practice group to assess the value of tablets in the classroom
- Opened the self-recording studio in Ryder
- 1.8 million minutes of Panopto video viewed & 138,025 Zoom meetings in fall 2021
- 20% of lecture courses are using Zoom and/or Teams meetings for outside of class activities like office hours
- Continued work to simplify classroom touch panels that make them more intuitive and easier to use. Rollout to classrooms over the Fall and Spring.
- Working to complete the Teams to Canvas integration

SAMPLE TABLET PILOT REACTIONS

- *Just finished grading all my quizzes from the iPad, with a TA also helping from her tablet. I won't be grading any paper quizzes / exams anymore (or at least not by my choice).*
- *Use of the Microsoft white board and the Microsoft Power point slides went well in the class. In addition, using Microsoft whiteboard during remote office hours was very helpful.*
- *After working in the Mobile Teacher app for Canvas, I can see how the students view my courses on tablets and/or while mobile. I would like to redesign my courses and enhance them for mobile/tablet access.*

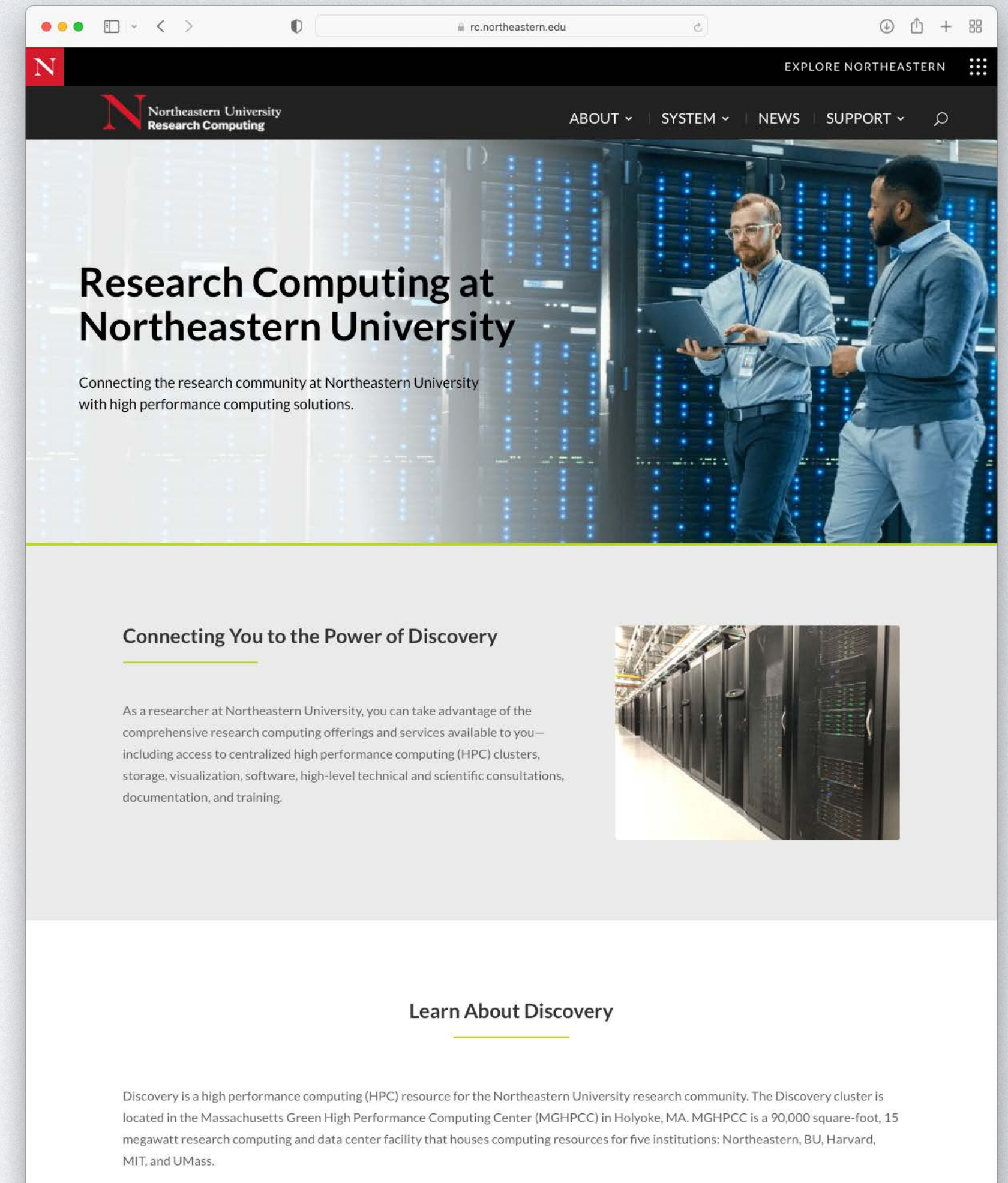


RESEARCH COMPUTING HIGHLIGHTS

- Discovery, NU's HPC cluster this fiscal year:
 - 538 active users, 322 new users onboarded, 1.1MM jobs completed
- Provided dedicated resources for high priority COVID-related research projects
- 13 classes used Discovery for teaching
- Delivered 12 training sessions
- RC team handled 1,000 support tickets
- 2 RC/NU co-authored papers:
 - Mariana Levi (Assoc. Comp. Scientist) – Gunther Zupanc group (Neurobiology) - published
 - Shobana Sekar (Assoc. Bioinformatician) – Katie Lotterhos group (Marine Biology) - in preparation

RC REACTIONS

- *“They have been very responsive for questions about software installation, documentation, performance considerations and hardware maintenance. This is a professional team!”*
- *“The Research Computing team is amazing. They have helped my lab set up data storage, set up Globus data transfer, set up conda environments and install software, figure out how to run big jobs within the limits on the cluster, and use the cluster more efficiently. They have also helped me set up teaching my courses on the cluster.”*
- *“[Using RC resources] allow us to conduct large experiments to compete with other large universities and research labs.”*
- *“They enabled me to increase the efficiency of my calculations by more than 10-fold.”*



The screenshot shows the website for Research Computing at Northeastern University. The page features a dark header with the university logo and navigation links. The main content area has a large image of two people in a server room, with the title "Research Computing at Northeastern University" and a subtitle "Connecting the research community at Northeastern University with high performance computing solutions." Below this is a section titled "Connecting You to the Power of Discovery" with a sub-image of server racks and text describing the comprehensive research computing offerings. At the bottom, there is a "Learn About Discovery" section with a brief description of the Discovery cluster.

<https://rc.northeastern.edu>

NETWORK INFRASTRUCTURE HIGHLIGHT

- A multi-year program focused on structurally improving campus communication infrastructure (CI) in support of enhancing research, instruction, and outreach outcomes. Year I infrastructure improvements focused on research centric locations:
 - Dana, ISEC, Egan Research, Snell Engineering, West Village H
- Decreasing time to science by 10x, through upgrading network infrastructure in order to support high-throughput intra-campus connectivity – from 10Gbps to 100Gbps structurally, as well as to allow for agile expansion of 10G edge ports as needs develop.
- Enhancing individual mobility through upgrading and augmenting wireless services to improve performance, coverage, and capacity – All existing wireless access points (WAP) will be replaced in the above buildings between refresh and service augmentation, 600 WAPS in total. 250 of those WAPS are net new to support enhancing services.
- Modernized infrastructure will utilize a standards based, modular architecture that will be robust while improving resiliency.

DISCUSSION