



Rutgers Newark Town Hall

Strategic IT Initiatives
Spring 2015

February 16, 2015

Topics to be Covered

❖ **Important Activities and Issues**

- Administrative ERPs
- Operating budgets
- Choosing the right Scale – Central vs Distributed

❖ **IT Initiatives: Strategic and Tactical**

Administrative ERPs

❖ **Developing Business Practices for the New Rutgers**

- Replace current processes with new effective processes
- Focus is on business practices, not IT systems
- Led by CFO
- In progress

❖ **Significant Areas of Focus**

- HCM, (HR, AP, Procurement)
- Student (Scheduling, Financial Aid, Advising)
- Business Intelligence (BI) tools

Operating Budget

❖ Rutgers has Underfunded Operating Budgets

- Service quality suffers
- Use of shadow systems increases
- Redundant, inconsistent systems take root

❖ NJ ELF Funding Example - \$ 6.3M to Expand Wireless Environment

- Operating budget needs to grow by at least \$2.1M
- Annual operating budget must be at least 30% of one-time capital cost
- RCM will play a key role

Choosing the Right Scale for a Service

❖ **Services Should be Deployed at the Proper Scale and Properly Funded**

- We need to
 - Understand the natural scale of a service
 - Set quality standards
 - Establish reliable funding

❖ **Email**

- Email environments are much more cost effective when they serve a large number of users
- Google Apps for education provides all student email - 80,000 accounts
- Roughly 200 email systems currently deployed at Rutgers
- Enterprise-wide outsourced faculty/staff email RFP is on the street

Improved Services, Security, Efficiencies, and Compliance

❖ Strategic

- University-wide plan for Data Centers
- Private Rutgers Cloud
- University-wide Email/Calendar

❖ Tactical

- Security
- Expand and unify Enterprise Device/Desktop Management
- Expand and improve Wireless Environment
- Upgrade bandwidth to key buildings

University-wide Data Center Plan

❖ **Strategy - provide appropriate infrastructure to support computing requirements**

- Research - Tier I
- Administration - Tier II
- Life Critical - Tier III

❖ **Current Environment**

- No Tier III resources
- Four Tier II OIT resources
- 1-2 other distributed Tier II resources
- Over 30, distributed Tier I resources

University-wide Data Center Plan

❖ Implementation

- Transition EHR and related life-critical services to an offsite Tier III Data Center
 - Tier III EHR recommendations provided to RBHS
 - Support Rutgers/RBHS faculty practice plan EHR initiative
 - Plan for, develop, and maintain a Clinical Data Repository

- Virtualize and Coalesce Administrative Environments into ASB, a Tier II DC
 - ASB, and Hill, are above average Tier II DCs ; 5-6 hours downtime vs an average of 22
 - At next equipment upgrade, evaluate transitioning to a Tier III DC

- Support research IT infrastructure in Hill (NB) and Engelhard (Newark)
 - Provide stable, maintainable environment for housing research computing
 - Support ACI initiatives
 - Realize energy and operational savings - 5 year old machines use 10 times more energy

- NM3, Rutgers University Newark's first HPCC is operational - Dr. Pavanello

Private Rutgers Cloud

Virtualize and Coalesce Administrative Environments

❖ Strategic

- Design and deploy Virtualized Environment
- Reduce security risks associated with distributed administrative environments
- Reduce energy usage and space footprint
- Plan for business continuity to manage Sandy-like events
 - Location specific emergency operation centers and procedures
 - Emergency work sites from which essential staff can work

❖ Current State

- Primarily dedicated hardware environments
- Resources distributed across institution
- Business continuity plans being developed

Private Rutgers Cloud

Virtualize and Coalesce Administrative Environments

❖ Implementation

- \$7M of ELF
- Equipment selected and ordered
- Next steps
 - Expected deployment: July 2015
- Transition Plan
 - Phase I: transition central administrative environments – Fall 2015
 - Phase II: coalesce distributed environments into virtualized environment
 - Phase III: at next equipment upgrade evaluate using an offsite Tier III DC

University-wide Email/Calendaring

❖ Strategic

- Included as one component of the University Strategic Plan
- Improve effectiveness of HCM/SIS messaging and workflow
- Simplify scheduling of meetings
- Free distributed IT staff to support mission oriented initiatives
- Improves compliance with legal, regulatory, and University policies

❖ Current State

- Numerous email systems
- Cumbersome, inconsistent record retention
- Compliance with legal, regulatory and University policies needs to be improved

University-wide Email/Calendaring

❖ Implementation

- University IT email committee
 - Composed of 17 members representing all campuses and several Decanal units
 - RFP has been released and respondents identified.
- Next Steps
 - Review responses and select a vendor
 - Identify funding and develop an RCM model
 - Begin transition

Tactical Initiatives

❖ Security

- Phishing is on the rise
 - Medical schools have been the focus of attacks
- Please do your part to maintain Rutgers security
- SSO fully deployed - don't leave an unattended machine logged in
 - Close the browser
 - Lock workstation (Ctrl-Alt-Del)

❖ Self Assessment Survey, Enterprise-wide scans, selected penetration Tests

- 150 self-assessment surveys go out today – due by Friday, February 27th
- Fishnet will perform scans and penetration tests
 - Broad-based scan of web-based resources – twice a year
 - Focused penetration tests, both with and without credentials – 25 a year

Tactical Initiatives

❖ **Expand and Unify Integrated Device/Desktop Management**

- University IT Device/Desktop committee
 - Composed of 16 members representing all campuses and several Decanal units
 - Their initial report
 - Recommended coalescing current environments into a single environment
 - Estimated the work and cost
 - Proposed a transition schedule

- Benefits
 - Usage monitoring enables informed strategic/tactical decisions
 - Flexible administration (e.g. by unit or centrally)
 - Enables effective hardware inventory and software licensing
 - Facilitates compliance with software vendor audits
 - Energy management can reduce energy costs

Tactical Initiatives

❖ **Expand and Improve Wireless Environment**

- \$6.3M ELF and HETI
 - Expand wireless coverage on all campuses, focusing on classrooms
 - Improve standardization, performance monitoring, and reporting
- Status
 - Equipment selected and ordered
 - RF surveys and deployment beginning
- Rutgers University Newark
 - Outdoors coverage will be part of the cities free wifi
 - Indoors coverage will be RUwireless
 - ✓ 20 buildings over next 10 months
 - ✓ First three: Dana Library, Robeson Student Center, Hill Hall

Tactical Initiatives

❖ Upgrade Bandwidth to key buildings

- \$4.5M of HETI
- Current Environment
 - RUNet Core: six routers connected at 10 and 40 Gb/s
 - Bandwidth between RUNet Core and buildings is 1 Gb/s
- Next Steps
 - Upgrade key buildings and feeder links from 1 Gb/s to 10 Gb/s
 - Upgrade RUNet Core to 100 Gb/s

Questions

OIT by the numbers

Rutgers students send and receive **three billion** email messages annually.

Students spend **seven million** person-hours annually on the my.rutgers.edu portal selecting classes, viewing grades, reading email and using other services.

Rutgers students spend **one million** person-hours annually in OIT's **twenty five** computer labs that house **fifteen hundred** computers.

OIT's PrintGreen initiative saved over **forty million** sheets of paper and **three thousand** trees during its first three years.

Faculty and Students spend **nine million** person-hours in Sakai annually.

OIT's paperless grade reporting system collects **500 thousand** student grades annually.

Over **two thousand** Rutgers students have created ePortfolios in Sakai.

The Rutgers computer network consists of **150 miles** of fiber optic cables.

Seven thousand devices support the Rutgers data network, enabling it to surpass speeds of ten Gb/s. RUNet carries over four thousand TB to and from the Internet annually

There are **100 thousand** data ports on the Rutgers network providing Internet TV and Video on demand.

TV viewers in **250** Rutgers dormitories & buildings receive **120** cable channels as their basic package.

The Computer Repair shop fixes **three thousand** staff and student computers annually.

Rutgers' computing Help Desks assists over **35 thousand** callers annually

The software.rutgers.edu portal offers over **three hundred** popular software products for free or at a discount.