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**
  o University-wide plan for Data Centers
  o Private Rutgers Cloud
  o University-wide Email/Calendaring

❖ **Tactical**
  o Security
  o Expand and unify Enterprise Device/Desktop Management
  o Expand and improve Wireless Environment
  o 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

  o $4.5M of HETI

  o Current Environment
    • RUNet Core: six routers connected at 10 and 40 Gb/s
    • Bandwidth between RUNet Core and buildings is 1 Gb/s

  o 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.