IT Strategic Directions
(and support of research)

Research Retreat
February 27th, 2012
Projected Mobile Internet Use in 2015

MOBILE PRODUCTIVITY

OUT OF THE OFFICE

According to a Cisco study on the international workplace, the mobile workforce is now business-as-usual for enterprises around the world.

3 of 5 workers say they don’t need to be in the office anymore to be productive.

MOBILE WORKING WORLDWIDE

Increasingly, work is something people do rather than a place people go.

32% of employees globally now rely on more than one mobile device during the typical workday.

Source: http://gist.com/
Historical View: Enterprise Client Evolution

**Yesterday**
- Unmanaged
- Fixed Client
  - Security Challenges
  - Unmanaged
  - Inefficient operations
  - Client-server

**Today**
- Device Managed
  - Fixed & Mobile Client
    - Focus on TCO efficiency
    - “One size fits all”
    - Monolithic image locked to device
    - Mainstream mobility
    - Internet Computing

**Evolving**
- Centrally Managed Virtual Client
  - CHV (DVC) & SHV (VDI)
  - Drive to centralized administration
  - Virtual workspaces
  - 1:many user/device
  - Compute, collaborate & communicate
  - Wireless broadband

**Emerging**
- Cloud Managed Client-aware
  - Cloud Computing
  - On demand computing
  - Elastic, ubiquitous
  - Virtual computing
  - Device independent mobility (device aware)
  - N-screens
  - 3D Internet

**Device Centric**

**User Centric**

*IT@Intel*
Industry Trends

• IT as strategic partner in the business
• Move to Cloud (External Services)
  o Reduces CapEx and possibly OpEx
  o e.g. Google, VCL (internal)
• Personally owned devices (BYOD)
• Move to mobile devices and anywhere/anytime access
• Shared services
  o Internet 2 & MCNC, other universities
    o NCSU may run telephony & VCL for other universities
    o May buy IT services from I2 or MCNC
  o Shared storage
  o Possible shared personnel
• Big data & analytics
• Very high speed networking (100 GB, OpenFlow)
IT Directions for the University

• Shift IT (OIT & campus) to focus of supporting the mission, vision and goals of the university (and units).
• Shift away from home built, resource intensive hardware and systems TO automated, shared, efficient, effective solutions
• OIT provides common (commodity), cost effective and robust services (messaging, storage, HCP, hosting …) – balance build, buy, outsource decision.
• Governance model to improve input and decision making
  – http://oit.ncsu.edu/it-governance-at-nc-state
• Next effort – Strategic Plan for IT
IT Partnering for NC State

- SAS - help with Data Marts, Strategic Plan, DHS Grant
- Cisco - Collaboration tools (Pilot for “Quad”)
- Google - Docs, collaboration, Google+
- EMC & NetApp - hosted storage
- GigU - community broadband
- Internet2 & MCNC - video, storage, people
  - 100 GB, custom lambdas – research focus
- IBM - VCL and large data analysis
- SURA – Library project (Data Management)
Interactions with Colleges

• Strong effort to balance central vs distributed
  • Active Directory (run in ECE, moving to OIT)
  • VM (virtual) - OIT runs for Engineering & DELTA
  • Wireless research - collaboration with CSC
  • DHS Grant - central VCL, CSC, iTng
  • Managed Desktop (Engineering building, we will run)
  • Google Apps to campus
  • HPC and VCI efforts
  • Library – Long term archiving
  • vCentennial – New effort to position Centennial as a virtual resource
Major OIT Projects

- **Gmail & Apps + Postini**
  - Next phase to make improvements (general calendars, more use of sites, integration with Moodle, etc)
  - eDiscovery Retention: ALL email retained for 10 Years

- **Managed Desktop Service**
  - Provide desktop support with tiered pricing (partner, basic, extended) (Mac – Casper, & PC – SCCM) – service available

- **Campus backbone moved to 40 GB**
  - Buildings need upgrades to provide Gig
  - MCNC custom waves available

- **Combined Pricing Initiative**
  - 7 Standard configurations (laptops, desktops) + options
  - 3 vendors (Dell, HP, Lenovo) + Apple
  - Exception process for special needs
Major OIT Projects (continued)

- **Web hosting**
  - On-campus version of Cpanel type service with branded templates ($20/month) (Drupal & Wordpress versions)

- **Classroom Capture Project**
  - Over 50 classroom capture units installed and open for use

- **Centralized Storage Project**
  - Expand & enhance the centralized data storage & backup services
  - Working on management plan to meet NSF & DoD requirement

- **Identity and Access Management**
  - Unified, authoritative, secure, efficient and cost-effective IAM environment that meets current and future needs & legal requirements

- **University Data Mart**
  - Developing a data mart, dashboard, and query tools to provide easily accessible, decision-support information for NC State
Summary

• Change in IT to be more integrated with student success, faculty excellence and university mission.
  – We are a strategic partner
• Governance helps balance nimble college and department IT with enterprise level, shared services, leveraging the deep expertise in OIT.
• IT is a strategic tool and multiplier for success in all our efforts.