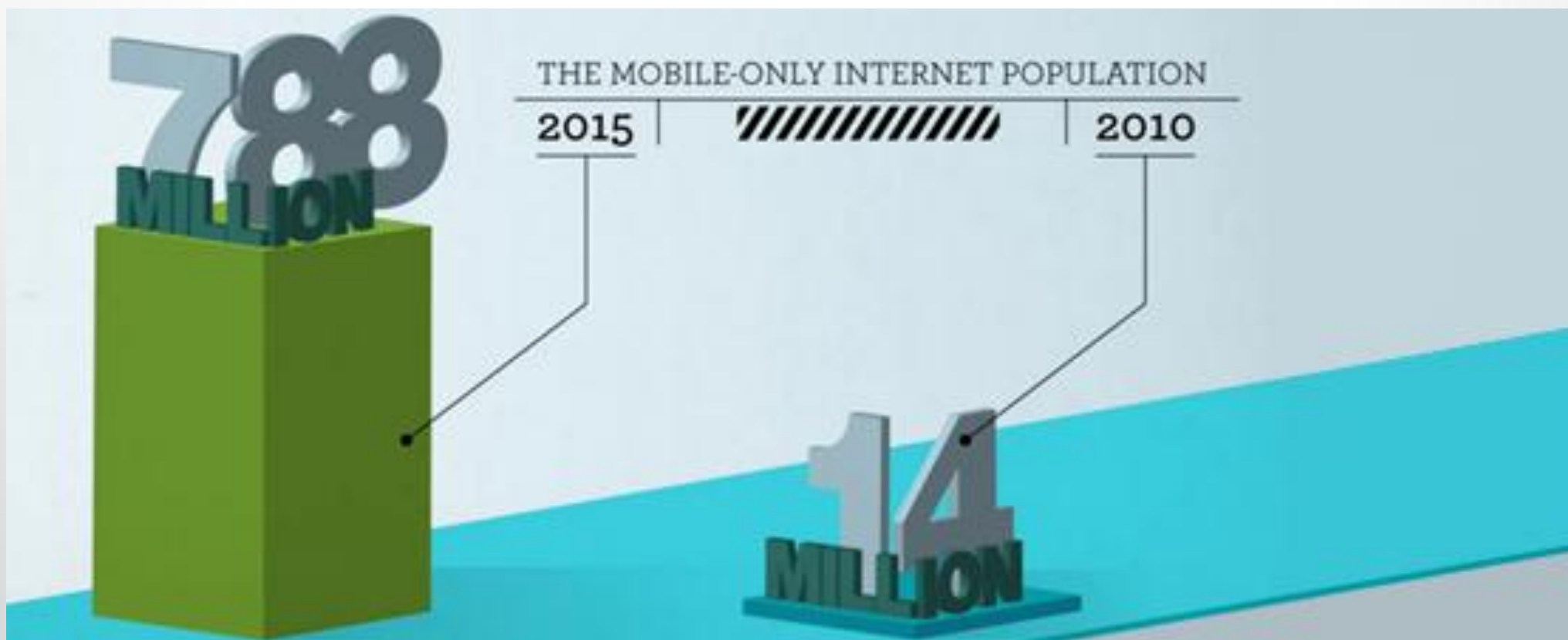


# IT Strategic Directions (and support of research)

Research Retreat  
February 27<sup>th</sup>, 2012

# Projected Mobile Internet Use in 2015

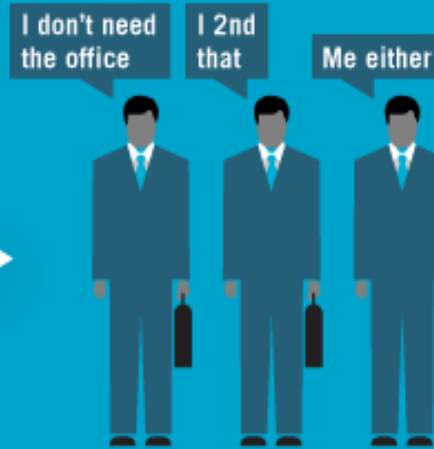


Source: <http://www.business2community.com/mobile-apps/video-infographic-mobile-trends-dominate-the-internet-in-2015-048554>

# 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

# 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



# Industry Trends

- IT as strategic partner in the business
- Move to Cloud (External Services)
  - Reduces CapEx and possibly OpEx
  - e.g. Google, VCL (internal)
- Personally owned devices (BYOD)
- Move to mobile devices and anywhere/anytime access
- Shared services
  - Internet 2 & MCNC, other universities
    - NCSU may run telephony & VCL for other universities
    - May buy IT services from I2 or MCNC
  - Shared storage
  - 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.