MCHENRY COUNTY VDI

Virtual Desktop Infrastructure

Why VDI?

- Lower Desktop support costs
- Lower Desktop Hardware costs
- Lower Electricity costs
  - Estimated $70K Annually
- Enhanced Security
- BYOD
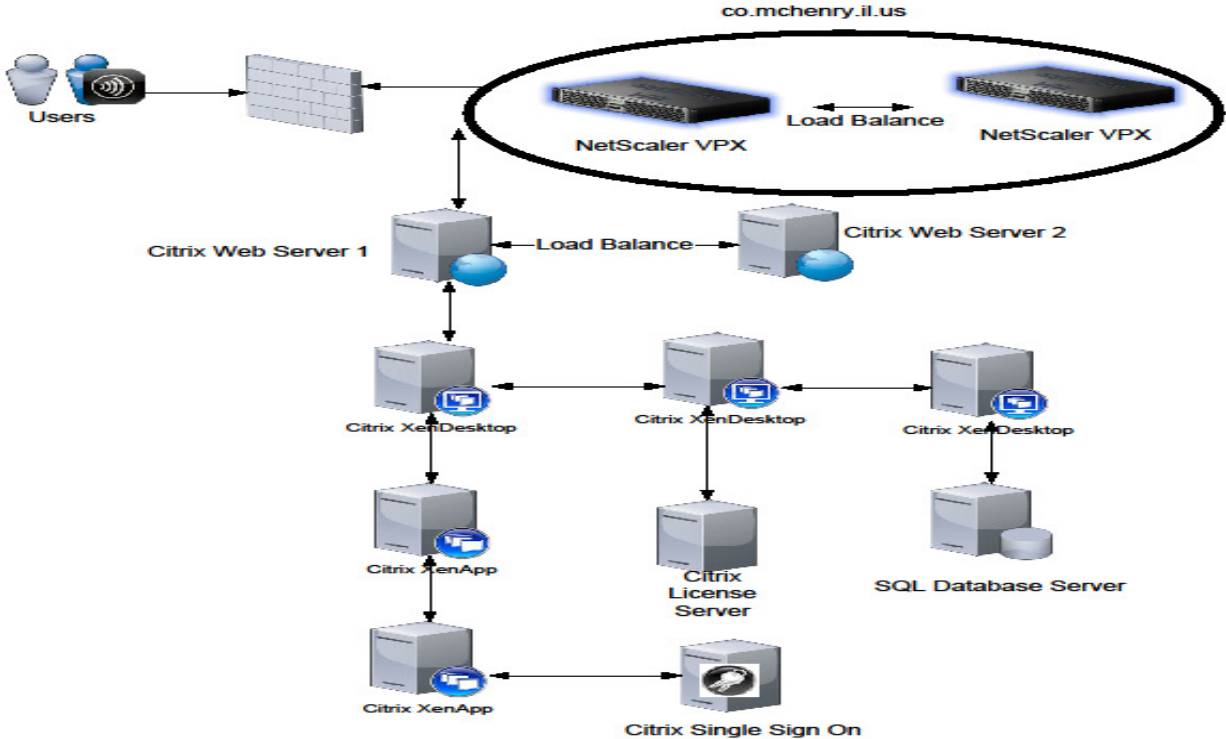- Business Continuity

VDI Architecture Goals

- Redundancy
  - Clustered Citrix Servers
  - Load Balancing with Redundant Netscalars
  - High Availability within VMWare
  - Remote Site
- Compartmentalize Departments
- Segment Remote Access & VDI
- Citrix Core Service Redundancy
  - Multiple Controllers
  - Multiple Web Interface Servers

Internal Access
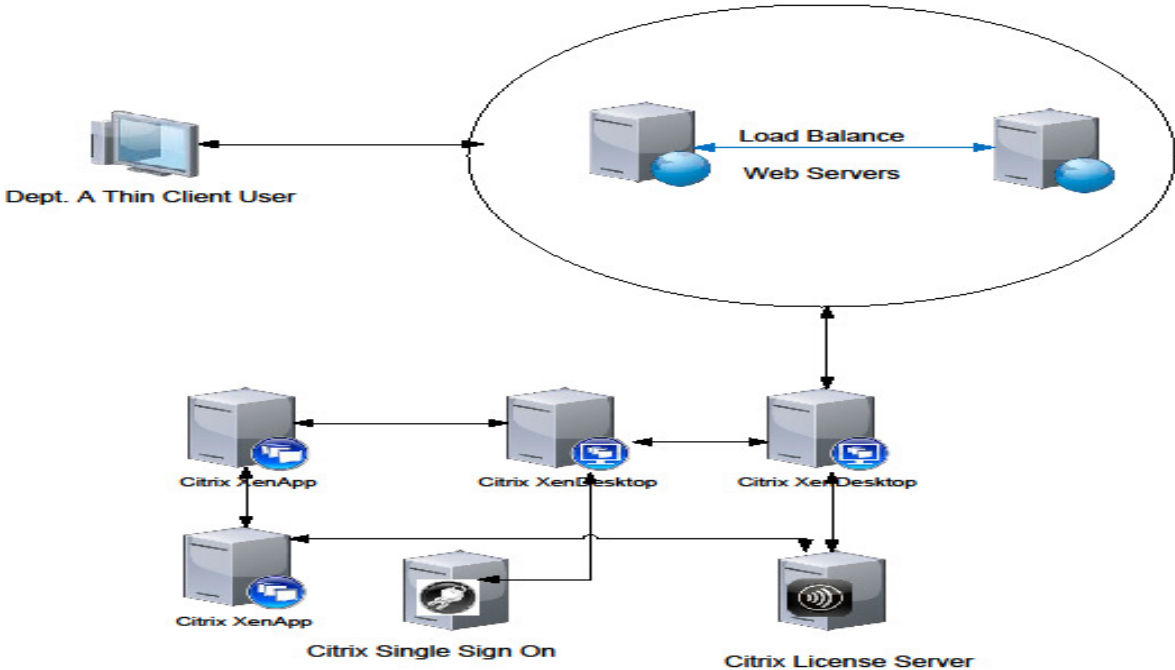
External Access

VDI Techology Considered

- AppV

- VMWare

- Citrix

Influencing Factors

- Utilizing Citrix Remote Access since 1995

- Metaframe/Presentation Server/XenApp
  - 300+ Applications
  - 300 of 600 logging in
  - 125 Logged in

- Vmware
  - 95%+ servers virtualized
  - High Availability

VDI Citrix Technology

- Citrix XenDesktop
  - Desktop is built on the fly
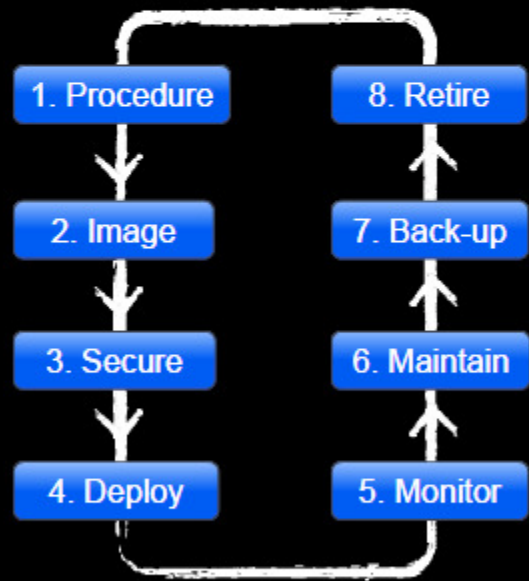 - Maintain one image per Department

- XenApp running in VM
  - Existing VM environment
  - VM more robust than XEN
  - Existing knowledgebase

VDI Pilot Project Goals
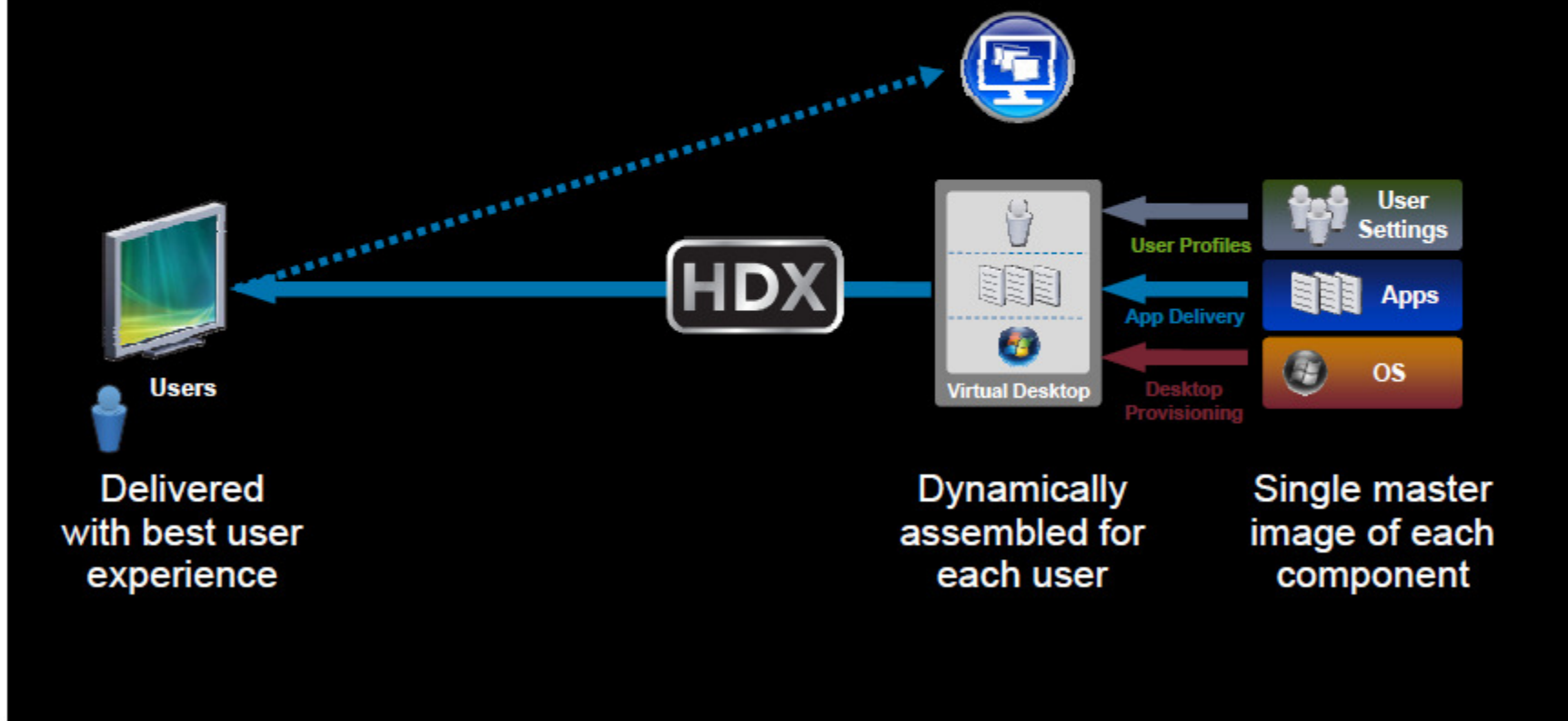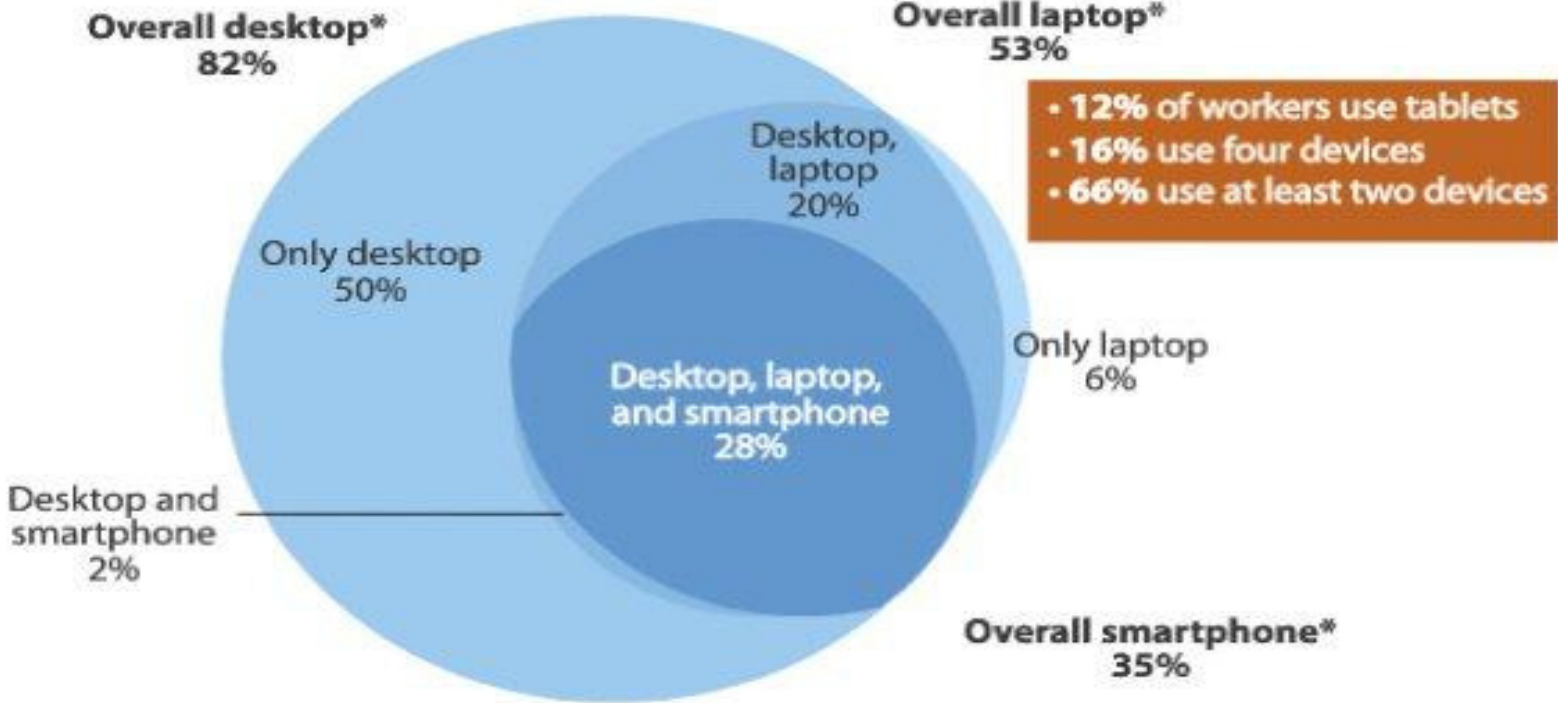## How to Measure Success?

- 26 Departments
- 140 Employees
- Win7 Desktop Experience
    - Enhanced Boot Times
    - Single Sign On
    - Offline Application
- 80% Virtualized Desktops
- BYOD

Forrester's [latest report](#) on mobile adoption in the enterprise

"During a typical day, how much time do you spend using the following devices for work?"
(Use ever)

Overall desktop*
82%

Overall laptop*
53%

- **12%** of workers use tablets
- **16%** use four devices
- **66%** use at least two devices

Desktop, laptop
20%

Only desktop
50%

Desktop, laptop, and smartphone
28%

Only laptop
6%

Desktop and smartphone
2%

Overall smartphone*
35%

*Base: 4,982 North American and European information workers
Base: 3,603 North American and European information workers
(percentages do not total 100 because of rounding)

VDI Challenges

- Cultural Change

- Packaging Applications

- Terminal Services to Citrix Profiles

- Application Issues Presented as VDI Issues

- Peripheral Devices
  - Scanners, Printers, DVD/CD, Speakers

VDI Project Keys

- Buy In
  - Network Engineers
  - Applications Group
  - Users
- Cooperative Effort
- Issue Tracking
- Quick Resolutions

VDI Benefits

- Reduced Support Thru Simplified Management
  - Easier to Maintain Desktop Images
  - Easier to Deploy New Devices
  - Easier to Deploy Software to Desktops
  - Easier to Patch, and Upgrade Devices

VDI Benefits

- Desktop Experience Enhanced
  - Enhanced Boot Times
    - 4o seconds or less
  - Enhanced Script/GP Deployment
  - Leverage Data Center Performance

VDI Benefits

- Security & Control
  - Control Where Users Store Data
  - Control Desktop Software
  - Control Connected Devices
  - Physical Theft Reduced
  - Data Loss Reduced
  - Single Pane of Glass for Management

VDI Benefits

- End Devices Longer Life

- End Users May Deploy Hardware

- Operating System & Application Migration Easier

- Enhanced Desktop DR

- Business Continuity

- BYOD
  - Any Device, Anytime, Anywhere
  - Platform & Device Independent
  - Segmented from Personal Applications

Environment overview

☐ XenDesktop deployment with:

- Web Interface 5.4

- XD 5.6

- SQL 2008

- VMWare 5.0

- Windows 2008 R2 Active Directory

- Virtual Desktop Agent OS – Win7 32-bit

- Citrix Receiver 3.1

Progress to Date

- 25 of 26 Departments

- 200 XenDesktop Users All Day Every Day
  - 500 XenDesktop Users

- 260 Regular XenApp Users

- iPad Users in Court Services, Court Admin, Judges, Sheriff, P&D, Veteran Admin, IT

Major Challenges to Date

- Login Scripts

- Profiles

- Printers

- Hardware Challenges

What's Next

- ☐ Continue to Deploy

- ☐ Single Sign On Rollout

- ☐ Pilot in Squads

- ☐ 2014 Funding Request

Questions

- Questions & Answers