

Presentation to the IT Directional Meeting

**July 23, 2014
Pioneer Room
State Capitol**



Agenda



1. Legislative IT Committee Bill Drafts (Mike)
2. Digital Archives Study (Dan)
3. Cloud Service Reminders (Dan)
4. Office 365 (Dan)
5. Annual Customer Survey (Dan)
6. Software Development Updates (Doran)
7. STAGEnet Procurement Update (Duane)
8. Additional IDS and IPS within the network (Duane)
9. Internet Filtering (Duane)
10. Lync 2013 (Duane)
11. Cloud Developments (Dean)
12. Database Roadmap Update (Dean)
13. 15-17 Projected Rates (Greg)
14. IT Planning Cycle (Jeff Quast)
15. Security Updates (Dan)
16. Windows XP Update (Art Bakke)
17. Multi-Factor Authentication Demo (Art Bakke)
18. Closing (Dan)



Mike Ressler
CIO





Legislative IT Committee Meeting June 18, 2014

Committee Passed 1 Bill Draft:

1) Implement the Recommendations of the Eide Bailly Desktop Support Study

Committee Proposed 2 Bill Drafts:

1) Implement the recommendations of the UmmelGroup Study (removes OMB's ability to give agencies a waiver from hosting with ITD)

2) Implement the recommendations of the UmmelGroup Study and remove the exemption of the Attorney General's Office from hosting in the ITD Data Center



4201 Normandy Street North
Move-In Date: August 1st





**Dan Sipes
Deputy CIO**





Digital Archive Study



- Cooperative effort with State Historical Society
- Tournesol Consulting
- Study Group is working to finalize the report and next steps
- Recommendations center around the creation of a Central Digital Preservation Repository and a Governance Framework
 - People Impact and Policy Development
 - Records Management and Archives Process Impact
 - Technology Impact
 - No immediate budget impact for agencies for 15-17
- Contact Becky Lingle with any questions



High Level Cloud Service Reminders

- IaaS - Infrastructure as a Service - (Amazon S3, Rackspace)
PaaS - Platform as a Service - (Microsoft Azure)
 - ITD provides these services. When external cloud services are necessary ITD will procure and manage.
- SaaS - Software as a Service
 - These solutions require a waiver from OMB/ITD since they include embedded hosting services. (NDCC 54-59-22)
 - ITD will be the Cloud Broker as part of any waivers that are granted.
 - ITD is currently looking to extend pieces of our core infrastructure to allow integration of SaaS offerings.
 - Active Directory



Office 365

- Up-to-date features
- Files available online/offline from any device
- Enterprise approach needed
 - Bundled with email, online conferencing, enterprise social, and file storage/sharing
 - Agencies should use desktop version of Office 2013 rather than the cloud based offering of Office 365
- ITD plans to pilot Office 365 this biennium



Annual Customer Survey



- Aligned with Mission
- Trusted Partner
- Positive Customer Experience
- Easy to do Business With
- Services Meet Needs
- Builds Strong Relationships
- Provides Technology Direction



Doran Eberle
Director

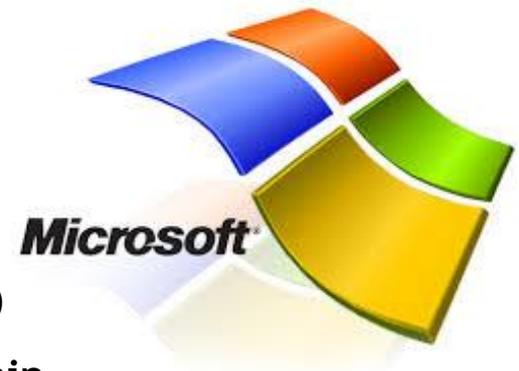
Software Development
Division





Team Foundation Server (TFS)

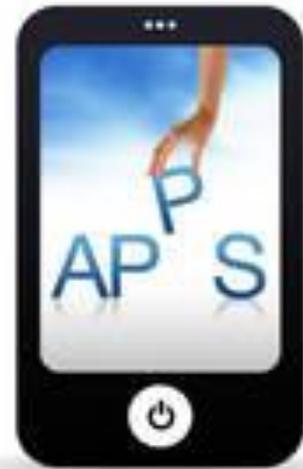
- Starting to utilize on new software development projects
- ALM - Application Lifecycle Management
 - Internally to capture and store development artifacts
 - Requirements
 - Use Cases
 - Design Specifications
 - Test Scenarios/Cases
 - Defect Management
- SCM - Source Control Management (Version Control)
- Will allow for an increased level of traceability within projects





Mobile Application Development

- **Responsive Web Design**
 - Continuing to research and align with industry best practices
 - Utilizing Bootstrap
 - Incorporating responsive web design best practices into all new web based development
- **Mobile Applications**
 - Meeting with agencies to discuss possible mobile application strategies and direction
 - Moving forward on an agency project that will utilize PhoneGap/Cordova to create a hybrid mobile application for App store distribution





AppScan Vulnerability Testing

- AppScan vulnerability scanning progress since July 2013 (Java Applications):
 - Vulnerability scans completed: 17 applications
 - Application remediation completed: 3 applications
 - Vulnerability scans remaining: 12 applications
- **Next steps:**
 - The Application Security IRB will be risk assessing .Net applications built by ITD
 - Determine vendor application assessment and remediation process
- Education of ITD development staff continues with implementing secure coding practices and remediating the exploits





Budget Cost Estimates

- **2015-2017 Budget Cost Estimates:**
 - Please submit service requests for next biennium cost estimates
 - We will use a blended rate of \$125/hr on the estimates to account for contract resources
 - Encourage completing a business analysis as a first step for larger initiatives





Duane Schell
Director

Network Services
Division





STAGEnet Procurement

- Procurement Completed
- Incumbent DCN awarded
- Improved pricing/Mb
- Well positioned for continued growth
- Improved redundancy
 - Backbone
 - ETS





IDS/IPS Augmentation

- Embedding devices within the core
 - Includes 4 network quadrants
 - Includes outer 4 metro networks
- Improved capabilities between sites
- Deployment Plan
 - Minot Completed
 - GF, Fargo, Bismarck





Internet Filtering

- iBoss product implemented
 - Configuration has not changed
- K12 initial focus
- State Government
 - Improved Reporting
 - Customer Filters Likely
- Core now fully IPv6 capable





Lync Migration

- Lync Server Ready
 - Changes:
 - Click to Call
 - Desktop Sharing
 - Client Licensing
 - Alternatives
 - Avaya plug-in
 - Enterprise Cal - pricing forthcoming
 - Avaya Conferencing
- Hope to be done by Sept 30





**Dean Glatt
Director**

**Computer Systems
Division**





ITD Production Database Statistics

- SQL Server
 - Applications: 975
 - Tables: 322,582
 - Size: 6.4 Terabytes
- Oracle
 - Applications: 465
 - Tables: 88,792
 - Size: 7 Terabytes



ITD Production Database Statistics (cont'd)

- Adabas
 - Applications: 92
 - Tables: 506
 - Size: 204 gigabtyes
- DB2
 - Applications: 499
 - Tables: 15,358
 - Size: 988 gigabytes



ITD Database Migration Steps

- Database migrations are usually done in 18-24 months cycles. High level migration steps.
 - Agency Notification
 - Grouping and scheduling of agencies
 - Vendor certification
 - Agency acceptance testing



ITD Database Migration Planning

- Migration planning for 2015
 - DB2 V10 (2Q '15)
 - June 30th 2014 is EOS for DB2 V9
 - SQL Server 2012/2014
 - EOS dates for Microsoft SQL Server 2008 & 2008R2
 - Oracle 12c
 - Support for leveraging of cloud resources



SQL Server Environment

- SQL Server 2005 (currently in final phase)
 - 19 Production Databases left to upgrade
 - Agencies: BND, DOT, DOH, ITD, DHS, SOS, and TAX
- SQL Server 2008/2008R2
 - Database Count: 497
 - Mainstream from Microsoft ended on July 8, 2014.
 - Extended Support ends on July 9, 2019
 - ITD will begin migrating databases off of SQL 2008 in 2016.



SQL Server Environment (cont'd)

- SQL Server 2012
 - Database Count: 215
 - For customer subscribing to Disaster Recovery we are utilizing a new feature called Availability Groups.
- SQL Server 2014
 - Released to public on April, 2014.
 - ITD is currently building test and production environments.
 - Includes query performance and memory utilization improvements.



Oracle Environment

- Shared version 11g
 - 38 databases
- Shared version 10g
 - 7 databases
- GIS version 11g
 - 7 databases
- MMIS version 11g
 - 32 databases



Oracle Environment(cont'd)

- ITD will be reviewing Oracle 12cR2. There are too many new features to list but one the most interesting ones is the cloud capability consisting of pluggable databases.



Greg Hoffman
Director

Administrative
Services





2015-2017 Service Rates

- 2015-2017 projected rates are published at www.nd.gov/itd/billing
 - Roughly a 4% increase in revenue for normal monthly services
- Software Development rates
 - Current rates range from \$69 to \$99
 - New rates range from \$73 to \$122
 - Budget instructions for ToolSet upgrades on website



2015-2017 Service Rates

- Mainframe rates increase 28% as major applications currently being upgraded are moved off the platform.
 - Current rate \$0.58/CPU
- AS/400 hosting rates - budget rate stays the same, currently billing at \$0.77/CPU.
- General hosting rates
 - Most rates will hold even with a couple minor increases
 - Rightfax included in phone charge for general use
 - Surcharge for legacy SQL, Oracle, Websphere applications (refer to Budget Guidelines for supported versions)



2015-2017 Service Rates

- Disk rates will be less than 13-15 Biennium budget, but more than current billings.
 - Keep OnDemand and Dedicated offerings
 - Keep 3 Tiers of Storage (Premium, Basic, File Share)
 - Agencies need to project usage to determine budget impact
 - Large scale storage is available upon request
- ConnectND hosting remains revenue neutral to ITD for State Agencies. Some agencies will see decreases or increases depending on how their 2013-2015 appropriation changed.



2015-2017 Service Rates

- Network rates
 - Technology Fee going from \$49.50 to \$59.00
 - Network Security enhancements already in place (Palo Altos)
 - Additional Security Initiatives
 - HW/SW maintenance costs
 - Somewhat offset by decrease in telephone rates
 - Endpoint Connectivity - plan for 10mb circuits
 - Agency Fiber - 11% increase
 - Political subdivision Fiber - 5% increase
 - Remember to budget for impact of any increased bandwidth requirements
 - Analyze your misc. billings for recurring monthly fees - vendor increases



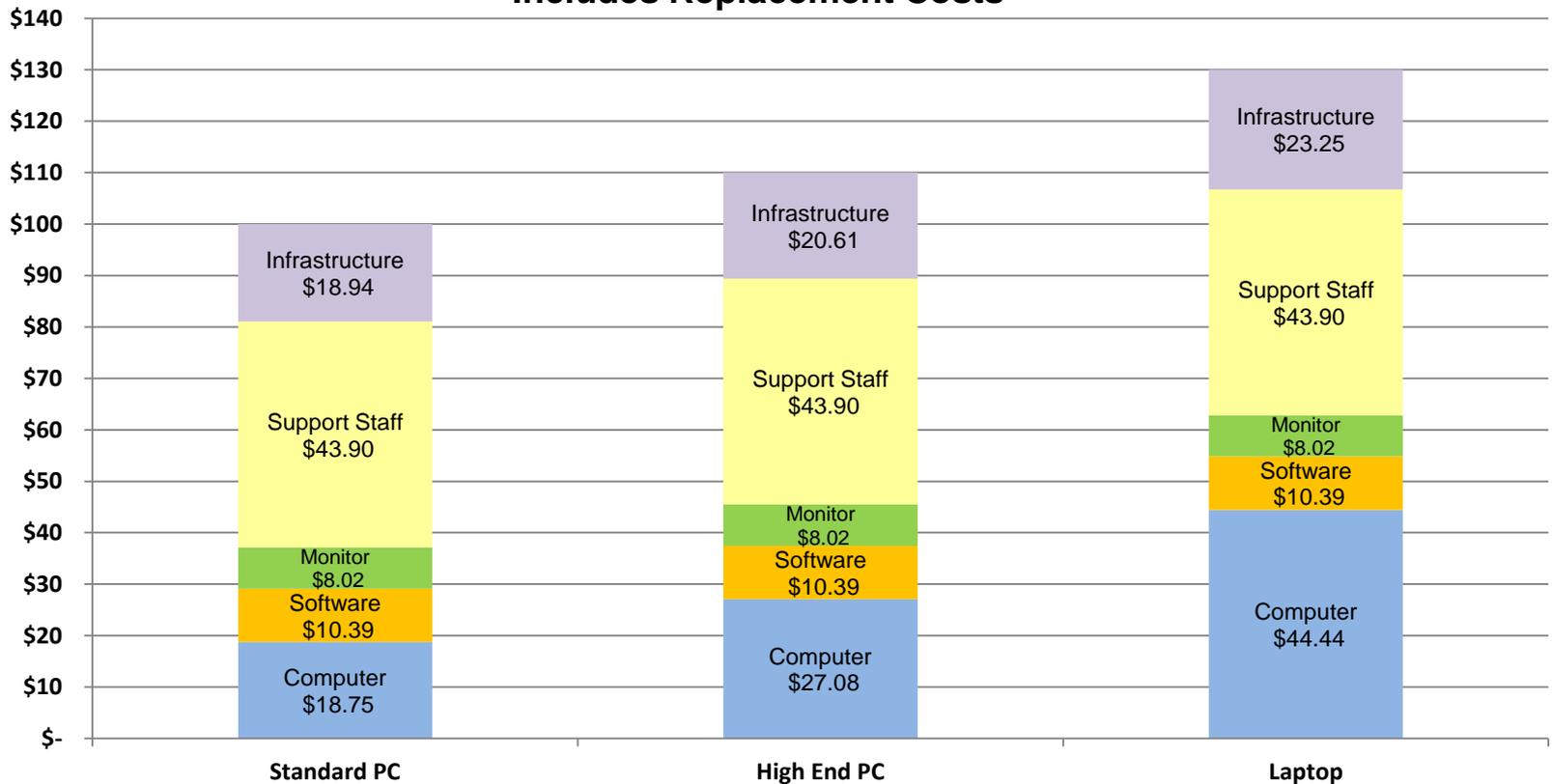
2015-2017 Service Rates

- (\$1.3M) in Telephone Rates
 - Basic Phone from \$24 to \$20
 - Analog from \$20 to \$15
 - Professional Phone from \$5 to \$3
 - Rate changes went into effect May 2014
- Micrographics rates
 - Will be on the Data Processing bill when new billing system is finished.



ITD 2015-17 Desktop Service Rates

Device with Standard Monitor
Includes Replacement Costs





**Jeff Quast
IT Program
Administrator**

**Enterprise Services
Division**





IT Planning Process 15-17

- <http://www.nd.gov/itd/service-info/it-planning-process>
- IT Planning meetings are behind schedule due to health/personal reasons
- If you have not been contacted about an IT Planning meeting, there is still time to meet if needed
- Agency Budgets were due July 15th, IT Plans are due August 15th
- SITAC ranking of large projects will be in the latter half of September
- Agencies can request an extension to the IT Planning submission deadline



IT Planning Process 15-17

What's Different for 15-17?

- Agency Operations Plan is the same as 13-15
- Large Projects are now greater than \$500,000
 - Still required to submit a Large Project Worksheet
- Projects greater than \$100,000
 - Required to submit a Project Worksheet
 - Same process/information as required for >\$100K Project Origination submissions in the interim
 - Not ranked by SITAC
 - Reviewed by ITD and results in a recommendation
 - No cost to agencies for ITD Architectural review



IT Planning Process 15-17



Trending Topics

- ITD Desktop Support
- Cloud Computing
- Security
- Mobile Devices and Applications



Dan Sipes
Deputy CIO





Security Updates



- ManTech Audit
 - Presented their report to the LAFRC on 7/16/14
 - September - Briefing for IT Coordinators
- MFA available (demo later)
- Cybersecurity Insurance
 - Risk Management is researching the cost and availability of cybersecurity insurance and agencies should coordinate with Risk Management before acquiring this on their own.



Art Bakke



Windows XP

- As of April 8, 2014 Microsoft no longer supports or issues security patches for Windows XP.
- As of the last count, there **198 computers** in **17 agencies** running the Windows XP operating system.



Windows XP

- Agencies running Windows XP are considered to be out of compliance with Enterprise Architecture standards DT003-06.2 (Desktop OS) and DT001-04.3 (OS Critical Updates).
 - Agencies should be aware that if security attacks are detected at-risk computers/subnets will be removed from the network.



Multi-factor Authentication

Option 1 Hard Token



(e-Token)

One-time Token: \$15
One-time License: \$15
Monthly: \$4.30

Option 2 Soft Token



MP-1 App



iOS



Android

One-time License: \$15
Monthly: \$4.30

Option 3 Soft Token



SafeNet Token
App



One-time License: \$15
Monthly: \$4.30



Multi-factor Authentication Demo



THANK YOU!!!