IT Optimization

INCREASE EFFICIENCY . IMPROVE SERVICE
REDUCE COMPLEXITY . REALIZE SAVINGS

IT Optimization

March 2014

Current State

- Federated, decentralized IT environment is not sustainable
  - 26 Cabinet Agencies and over 70 Boards and Commissions
  - FY13 IT spend of more than $930 million
- More than 5,000 servers in more than 30 data centers
- More than 1,600 applications
  - 20% more than 10 years old
  - 54% more than 5 years old
  - Aging legacy systems (10-20yrs) are more expensive to maintain
- 14 separate statewide networks, $54M annual contract spend
- 2,500 IT professionals supporting duplicative IT functions
  - 32% of IT workforce eligible for retirement
- Competing projects distracting Agency focus and resources supporting infrastructure

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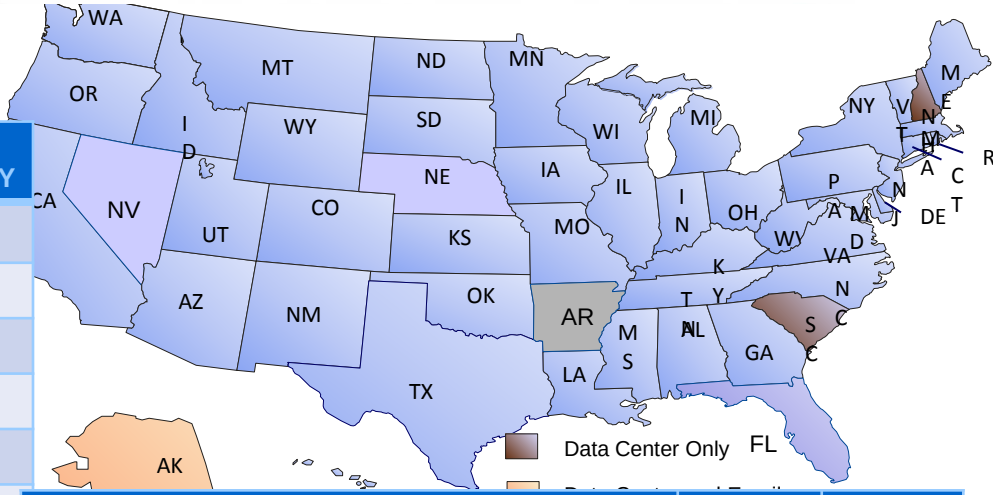
NASCIO

2014 STATE CIO TOP 10[3]

Priority Strategies, Management Processes and Solutions	NASCIO PRIORITY	OHIO PRIORITY
1) Security	✓	✓
2) Consolidation / Optimization	✓	✓
3) Cloud Services	✓	✓
4) Project and Portfolio Management	✓	✓
5) Strategic IT Planning	✓	✓
6) Budget and Cost Control	✓	✓
7) Mobile Services/Mobility	✓	✓
8) Shared Services	✓	✓
9) Interoperable Nationwide Public Safety Broadband Network (FirstNet)	✓	✓
10) Health Care	✓	✓



Priority Technologies, Applications and Tools	NASCIO PRIORITY	OHIO PRIORITY
1) Cloud computing: software as a service	✓	✓
2) Security enhancement tools: continuous diagnostic monitoring (CDM), digital forensics	✓	✓
3) Mobile Workforce: technologies and solutions	✓	✓
4) Enterprise Resource Planning (ERP)	✓	✓
5) Virtualization: servers, desktop, storage, applications, data center	✓	✓
6) Legacy application modernization/renovation	✓	✓
7) Business Intelligence (BI) and Business Analytics (BA): applications, big data	✓	✓
8) Disaster Recovery/Business Continuity	✓	✓
9) Identity and access management	✓	✓
10) Networking: voice and data communications, unified	✓	✓[3]

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Consolidated Plan - Bringing Value to Ohio

Key Ways IT Transformation will Bring Value to Ohio	
Cost Reduction/Cost Avoidance	• IT Cost Reductions - 15 to 25% • Workforce Reduction - approximately 400+ FTE through attrition/retirement • Cost Avoidance by leveraging existing resources, assets and past investments
Value Add Focus	• Focus on proprietary business applications that support employees & constituents
Quality & Process	• Adoption of standard policies, practices & procedures • Result - fewer disruptions in service, faster resolution times & better internal controls
Security	• Reduce # of devices, facilities, systems to patch & external access points • Build confidence that state is a trusted custodian of confidential & business data
Scalability	• Private cloud environment ensures scalability & flexibility through peaks & troughs of computing resource demand
Enterprise Automation Tools	• Leverage enterprise automation tools • Greater efficiency in IT operation, reduces manual error rates & enhances system availability
Skill Development	• Pulling IT expertise from across the state will result in cross training opportunities & skill development • Allow the state to replace long-term, high cost contractors with existing staff
Best Practices	• Adopt a standard set of industry best practices • Allows comprehensive market analysis & improves IT business decision making
Vendor Management	• Consolidation of contracts & technologies allows Ohio to leverage economies of scale

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Consolidated Plan - Targeted Cost Savings

Target areas for cost reduction through IT Optimization

Target Area	Annual Cost	Conservative Savings Estimate		Optimistic Savings Estimate	
		%	Amount	%	Amount
Internal Labor**	$277,800,000	15	$41,670,000	25	$69,450,000
Contract/Consultant	$178,700,000	20	$35,740,000	30	$53,610,000
OIT billed Excluding Labor	$74,600,000		$0		$0
Maintenance/Lease/Rent/repair	$70,500,000	15	$10,575,000	25	$17,625,000
Hardware/Software Cost Avoidance*	$70,400,000	15	$6,315,000	25	$10,525,000
Misclassified	$64,500,000		$0		$0
Network	$46,100,000	20	$9,220,000	30	$13,830,000
Exempt Agency Direct	$15,500,000		$0		$0
Desktop Related	$14,000,000		$0		$0
Mainframe Exp	$12,100,000		$0		$0
Telecommunications	$7,900,000		$0		$0
misc	$5,600,000		$0		$0
Total***	$837,700,000		$103,520,000		$165,040,000

* Assumes that 60 Percent of hardware and software can be optimized

** This would require a workforce reduction of between 380 and 650 respectively

*** Total does not include COPS

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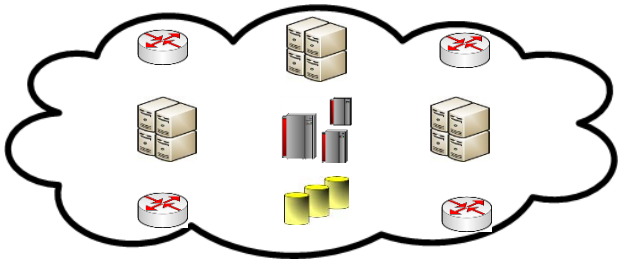
Consolidated Plan - Three Focus Areas

Ohio's Private Cloud



- Consolidate, standardize & integrate State's technical infrastructure
- Re-focus resources on applications that directly serve Ohio's citizens and businesses
- Work well underway…
  - SOCC Remediation
  - Ohio One Network
  - Storage & Server Virtualization
  - Storage & Server Consolidation
  - Mainframe Consolidation

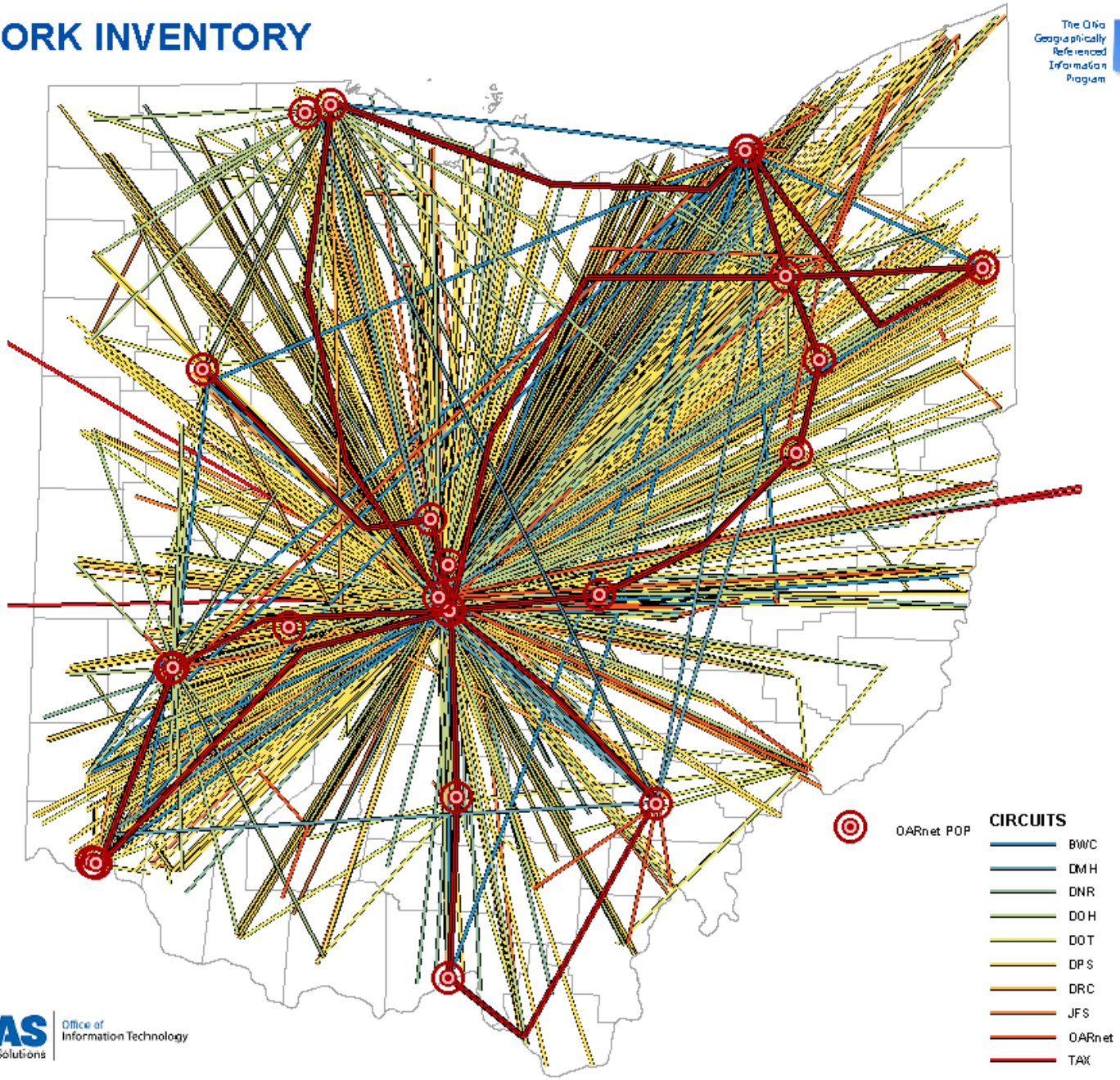
Enterprise IT Shared Solutions

- Address common technology needs
- Provide tools & application platforms for collaboration, communication & data analysis
- Provide a platform for consumer specific application development
- Work well underway…
  - OAKS
  - Ohio Shared Services
  - MARCS
  - E-mail Consolidation
  - VoIP
  - E-Licensing /E-Payment Platform
  - BI Platform
  - SharePoint /Mobile App Platform

Online Services

- Provide easy to use, accessible & secure online services
- Deliver reliable and cost effective solutions
- Expand the scope of online services
- Work well underway…
  - OBG
  - Ohio Benefits
  - MyOhio

NETWORK INVENTORY



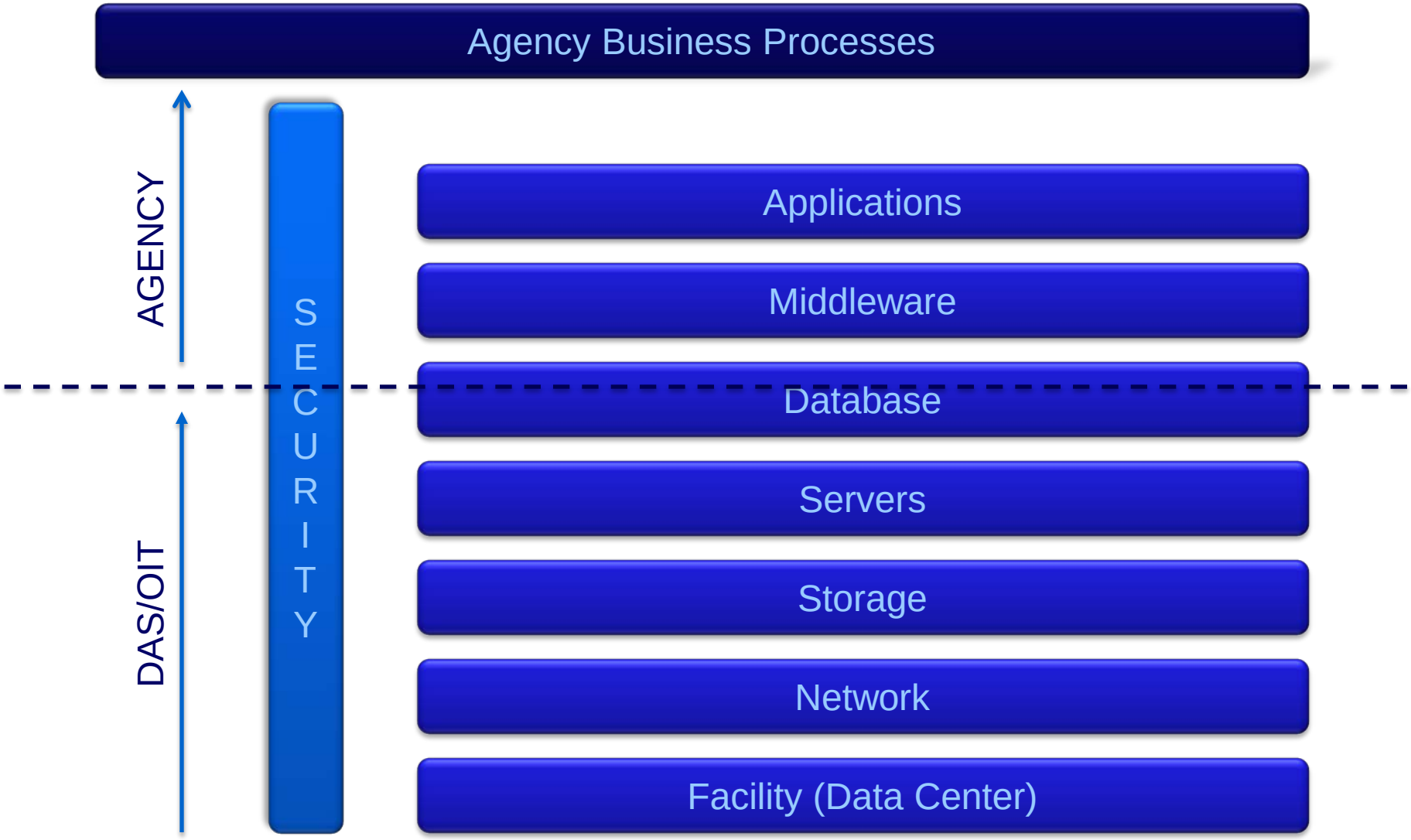
The Ohio Geographically Referenced Information Program

OhioDAS Service · Support · Solutions | Office of Information Technology

Data Center Operations – Spencer Wood

- Private Cloud
  - Server Administration
    - Providing Windows and Unix (AIX/Linux) Server Services
  - Storage Management
    - Providing Storage and Backup Service Management
  - Mainframe
    - Management of the Mainframe Environment
  - Network
    - IP Address Resolution
    - WAN Consolidation
- We will be managing the following services inside the Private Cloud:
  - Hardware Management
  - Operating Systems & Components
- We will NOT be managing agency applications running in the Private Cloud.

Private Cloud



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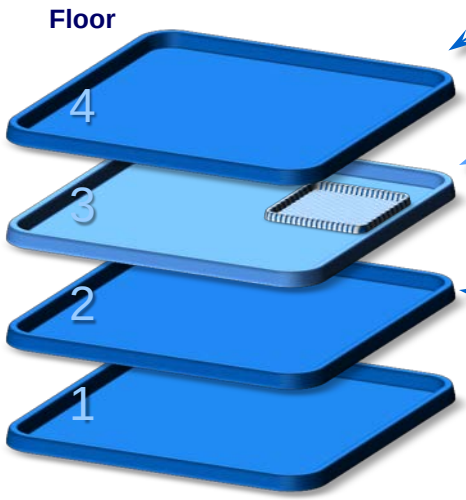
SOCC Remediation: End-State

End-state of SOCC remediation process will be a consolidated computing center on the 2nd Floor with requisite power, cooling and security features

End-State SOCC Configuration



4. Mixed Use

13,500+ sq ft Ohio Supercomputer Center
4,990+ sq ft MARCS
39,000+ sq ft Data Center *essential* personnel

3. Available Data Center Space

- 75,000+ sq ft Data Center (57,213 sq ft raised floor) – tenancy under evaluation
- 8,000+ sq ft Unified Network (State retained)

2. State Computing Center

Computing, Storage, Mainframes, Networking Devices
Network Operations Center

1. General and Mixed Use

Mechanical (UPS, Telecom, Controls)
Administrative (meeting space, building management)
Common (atrium, restrooms)

Foundational Concepts

- State use of the facility will move from current 70 ft2/computing image to less than 5 ft2 (industry standard is between 0.3 and 1 server/ft2)
- The 3rd FL of the building will be vacated and made available for potential sub-lease tenants
- The current market for fully conditioned and powered data center floor space is on the order of $24-32 ft2 per month
- Personnel who, in the course of normal job functions, do not physically interact with IT infrastructure devices will be relocated to Agency locations in early FY15

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Migration Sequence

Agency = DOH Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	Complete	Complete															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (213)	10/07/13	11/03/13															
Physical Migrations (94)	12/09/13	01/05/14															
Tools Implementation	02/10/14	03/16/14															

Agency = DMH Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	Complete	Complete															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (209)	12/09/13	01/05/14															
Physical Migrations (64)	01/20/14	02/02/14															
Tools Implementation	03/24/14	04/27/14															

Agency = DYS Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	Complete	Complete															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (141)	01/27/14	02/16/14															
Physical Migrations (48)	03/03/14	03/09/14															
Tools Implementation	03/17/14	04/27/14															

Agency = DOE Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (230)	01/27/14	03/02/14															
Physical Migrations (42)	03/24/14	03/30/14															
Tools Implementation	02/10/14	04/13/14															

Agency = ODOT Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (358)	06/16/14	08/10/14															
Physical Migrations (75)	04/14/14	06/01/14															
Tools Implementation	04/28/14	08/17/14															

Agency = ODRC Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	Complete	Complete															
Network Extension	TBD	TBD															
Physical - Virtual Migrations (95)	11/29/13	TBD															
Physical Migrations (46)	06/23/14	08/24/14															
Tools Implementation	07/07/14	09/07/14															

Agency = DPS Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (297)	07/07/14	08/24/14															
Physical Migrations (194)	09/08/14	12/21/14															
Tools Implementation	07/21/14	12/31/14															

Agency = BWC Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations	N/A	N/A															
Physical Migrations (52)	10/20/14	11/23/14															
Tools Implementation	11/03/14	12/07/14															

Leverage lessons from pilot activities to adjust and minimize business impact

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Migration Sequence

Agency = Pilot Project (Tentative)	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (121)	N/A	N/A															
Physical Migrations (9)	N/A	N/A															
Tools Implementation	01/23/14	02/09/14															

Agency = DAS/OIT Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (635)	N/A	N/A															
Physical Migrations (359)	N/A	N/A															
Tools Implementation	02/10/14	05/11/14															

Agency = EPA Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (113)	N/A	N/A															
Physical Migrations (20)	N/A	N/A															
Tools Implementation	05/05/14	06/01/14															

Agency = OOD Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations	N/A	N/A															
Physical Migrations (9)	N/A	N/A															
Tools Implementation	05/05/14	06/01/14															

Agency = ODJFS Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (634)	N/A	N/A															
Physical Migrations (388)	N/A	N/A															
Tools Implementation	06/02/14	09/01/14															

Agency = TAX Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (141)	N/A	N/A															
Physical Migrations (93)	N/A	N/A															
Tools Implementation	08/11/14	09/14/14															

Agency = OBM Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (108)	N/A	N/A															
Physical Migrations (0)	N/A	N/A															
Tools Implementation	09/08/14	10/05/14															

Agency = DODD Project	Start	End	O 13	N 13	D 13	J 14	F 14	M 14	A 14	M 14	J 14	J 14	A 14	S 14	O 14	N 14	D 14
Network																	
IP Addressing	TBD	TBD															
Network Extension	TBD	TBD															
Virtual - Virtual Migrations (311)	N/A	N/A															
Physical Migrations (2)	N/A	N/A															
Tools Implementation	09/29/14	11/02/14															

Deploy tools in collaboration with agencies under change control

IT Strategic Staffing Toolkit – Cathy Herron

- IT Optimization weekly newsletter- Staffing Corner
- Training resources available:
  - UET/EDF/LearnIT Ohio/OLPD
  - Careers.Ohio.Gov (OHMS) job aids
  - Workshop to Success advertised on Careers.Ohio.Gov
- Job Interest Card on Careers.Ohio.Gov (OHMS)
- Clearly worded language on DAS job postings for IT positions for current state employees only.
- In Development:
  - Potential enterprise training in specific technologies
  - New learning groups in LearnIT Ohio

Security Staffing and Support

Hiring To Date:

- Hired 5 people (Information Security Officers/ ITC3 and IT architect 1)
- 3 positions in the process of making offers (Information Security Officers – ITC3)
- One position posted- Security Monitoring Supervisor

- Future position estimates for FY15:
  - 16 positions – various security officers, interns, analysts, program administrator
- Agency's currently being supported by the central model
  - Security Officer: DPS, Edu, DSA, DoDD, Medicaid
  - Security Architects: EPA, DNR, Health
  - Other agencies will roll on based on current security personnel moving to DAS

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Server and Storage Staffing Projection Calendar

DAS Server/Storage Staffing Projection Calendar

Section	Activity	Type	Number Posted	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sept 14	Oct 14	Nov 14	Dec 14	Jan 15
Servers	Post	Exempt	2		X													
Servers	Post	BU	10		X													
Servers	Fill	Exempt					X											
Servers	Fill	BU						X										
Servers	Post	BU	33									X						
Servers	Fill	BU												X				
Servers	Post	Exempt	1									X						
Servers	Fill	Exempt												X				
Idenity	Post	BU	2		X													
Idenity	Fill	BU					X											
Storage	Post	Exempt	1			X												
Storage	Post	BU	2			X												
Storage	Fill	Exempt						X										
Storage	Fill	BU						X										
Storage	Post	BU	9							X	X							
Storage	Fill	BU										X	X					
Storage	Post	BU	2									X						
Storage	Fill	BU												X				
Storage	Post	BU	1													X		
Storage	Fill	BU																X
			63															

*NOTE: All Classifications Being Posted are Infrastructure 2 - 4's

To Date:

- Server Managers- 2 hired
- Server support positions hired /in process–8
- A Unix position posted now
- Storage – 3+ positions to be posted soon

Fact or Fiction Quiz

1. All infrastructure classifications will only be used by DAS/OIT in the future.
2. Desktop support and agency helpdesk functions will be moved to OIT.
3. Once an agency migrates DAS/OIT will take all the employees doing that work from the agency.
4. I should wait to apply until my agency migrates to OIT.
5. Agency HR should work with supervisors and managers to engage their employees early to discuss IT Optimization impacts to their jobs.
6. DAS posted positions are for current State of Ohio employees.
7. My agency can hire external candidates for IT jobs.
8. Cross agency bidding is available to all agencies not just DAS right now.

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Culture Shift – Technology Board

Restructure around Lines of Business (LoBs) – Agency CIOs report to LoB Lead and Directors
LoB Leads would report to the State CIO
Runs through Enterprise Architecture and Governance Process

Line of Business Lead	Line of Business Lead	Line of Business Lead	Line of Business Lead	Line of Business Lead
Health and Human Services	Business and Industry	Administration and Finance	Public Safety and Criminal Justice	Infrastructure and Environment
• Aging • DODD • MHAS • JFS • Health • MCD • OOD	• BWC • Commerce • DSA • PUCO • IC • Insurance • Taxation	• BOR • DAS • OBM • ODE • Lottery	• Adjutant General • DPS/EMA • DRC • DYS • DVS • Inspector General	• Agriculture • DNR • DOT • EPA • OFCC • Ohio Turnpike*
* Voluntary Participation	• Secretary of State*	• State Auditor* • HR/Senate/LIS* • Treasurer*	• Attorney Gen* • Public Defender* • Supreme Court*	

Goals of the Technology Board are to:

- Increase the level of adoption for enterprise shared solutions and services
- Identify new enterprise shared solution opportunities across common agencies that share business and technical components
- Manage enterprise shared solutions across LoB and work with the agency CIOs to leverage initiatives, resources, tools, infrastructure and solutions

Purpose and objectives of the Technology Board will be to:

- Ensure alignment with State strategies, enterprise architecture and major expenditures and purchases
- Provide guidance on the direction and development of strategies for future enterprise shared solutions
- Ensure adoption of current enterprise shared solutions
- Support prioritization of agency initiatives and projects
- Ensure budget controls are in place across agencies
- Facilitate resource alignment based upon business needs
- Create opportunities to share resources within/across LoB

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Progress to date

- Outreach
  - 17 agency IT Staff meetings to date
  - Union IT Committee
  - State Audit Committee
  - HR Administrator Meetings & CFO Meetings
- Ohio Integrated Eligibility launch
- Medicaid Elevation
- Email
  - 86 of 88 agencies migrated (57,000+ accounts)
  - DYS & JFS migrate early CY14
- SOCC Remediation
  - 2nd Floor remodel & exterior power house
  - OSC separate power
- Servers – DOH, DNR, MHAS migrations

Progress to date

- VoIP
  - Contract established for $13 for basic service – potential annual savings of $3.2M as users migrate from Centrex
  - 13,000+ lines migrated to date
- Software Licensing – Service Now negotiated from $104 to $45 per seat
- OAKS HCM upgrade
- Maintenance Agreement – Consolidated Cisco agreement will save $1.5M for participating agencies
- Security
  - Extended Enterprise Security Information Event Manager to AOS and Commerce. Additional capacity for IE & JFS
  - Established penetration testing service
  - Centralizing staffing approach to support consistent practices

Development and Future Work

- Next Steps:
  - Consolidated IT Transformation Implementation Approach published
  - Plan the Work … Work the Plan
    - Staffing & budget
  - Communications
    - Weekly emails & Agency Meetings
    - Agency CIO/HR/CFO Meetings
    - Business Partner briefings

Thanks for your time…

Questions?

Feel free to send any questions directly to the IT Transformation Office at: IT.Transformation@ohio.gov.

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IT Optimization webpage: http://das.ohio.gov/ittransformation