State of Ohio’s IT Optimization Update

Business Partner Briefing
September 2014
Agenda

• Welcome – Stu Davis
• IT Optimization Results – Stu Davis
• FY15 Focus Areas & Future Work
  – Ohio’s Private Cloud – Data Center Operations – Spencer Wood
  – Shared Solutions – Enterprise Applications – Deven Mehta
  – Online Services – Deven Mehta, Eric Frick and Derek Bridges
  – IT Security – John McCarty
  – Enterprise Contracts – Dan Orr
• Questions
The person who says it cannot be done
Should not interrupt the person doing it.
Chinese Proverb
• Increasing Efficiency
• Improving Service
• Reducing Complexity
• Realizing Savings
<table>
<thead>
<tr>
<th><strong>Key Metrics</strong></th>
<th><strong>Value</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Agency Applications</td>
<td>2,036</td>
<td></td>
</tr>
<tr>
<td>IT Program Spending Focused on Improving the Lives of Citizens and Business Growth in Ohio</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>Life, Safety or Mission Critical Applications</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>IT Vendors Supporting the State</td>
<td>3,445</td>
<td></td>
</tr>
<tr>
<td>Email Accounts Migrated from 87 Agencies - <strong>Goal 54,500</strong></td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>Users Migrated to VoIP from 57 Agencies - <strong>Goal 30,000</strong></td>
<td>19,260</td>
<td></td>
</tr>
<tr>
<td>Network Devices Managed to State Networks - <strong>Goal 75,000</strong></td>
<td>9,600</td>
<td></td>
</tr>
<tr>
<td>Mobile Devices Centrally Managed and Administered - <strong>Goal 13,000</strong></td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>Description</td>
<td>Goal</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>2,118</td>
<td>IT Professionals Statewide</td>
<td>2,100</td>
</tr>
<tr>
<td>63</td>
<td>State Networks Still in Operation</td>
<td>1</td>
</tr>
<tr>
<td>9,000</td>
<td>Servers Statewide</td>
<td>3,000</td>
</tr>
<tr>
<td>2,375</td>
<td>Virtual Images Migrated to the State’s Private Cloud in Fiscal Year 2014 - 2015 Goal 2,625</td>
<td>Goal 4.5</td>
</tr>
<tr>
<td>2.030</td>
<td>Petabytes of Storage Centrally Administered in the State’s Private Cloud</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mainframes Still in Active Use</td>
<td>1</td>
</tr>
<tr>
<td>32</td>
<td>Data Centers and Large Computing Sites - Goal - 1 Primary Site</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>Unscheduled Outages Affecting State Primary Data Center in Last 20+ Years</td>
<td>0</td>
</tr>
</tbody>
</table>
IT Optimization
2014 Accomplishments

• SOCC Remediation
• Ohio Benefits Integrated Eligibility
• Voice over IP (VoIP)
• OAKS
• Desktop/Productivity
• Enterprise e-mail
• Mobile Device Management
• MARCS
• Security
• Ohio Private Cloud

“It doesn’t matter where you are coming from. All that matters is where you are going.”
Refocusing IT Spending On:

- Medicaid Expansion: Integrated Eligibility
- Education, Race to the Top
- Public Safety Title Processing Systems
- Tax STARS Program
- SOCC Remediation
- Lottery

- Ohio Business Gateway
- Commerce Liquor Management System
- Bureau of Workers Compensation Core System
- Various ODJFS Public Assistance Programs
Driving Business Value through IT Investment

Total IT Spending on New Public Facing Systems and Services:
Fiscal Year 2010-2014

New Public / Business Facing Systems Investment, FY10 to FY14 ($M)

- FY10: $121.1M (14.6%)
- FY11: $160.2M (20%)
- FY12: $200.4M (19.8%)
- FY13: $288.7M (21%)
- FY14: $383.3M (27%)
## Reducing IT Complexity

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Megawatt increase in available power at the SOCC to support agency computing consolidation, a 15-fold increase in Fiscal Year 2014;</td>
</tr>
<tr>
<td>1</td>
<td>State agency computing location in the building, down from 17;</td>
</tr>
<tr>
<td>3</td>
<td>Agencies that will close data centers in Fiscal Year 2015 and move operations to the SOCC;</td>
</tr>
<tr>
<td>$19.4</td>
<td>Million dollar cost reduction in annual hardware purchases and maintenance statewide as a result of consolidation.</td>
</tr>
</tbody>
</table>

### Annual Direct Spend

<table>
<thead>
<tr>
<th></th>
<th>Pre-Optimization</th>
<th>FY14</th>
<th>Hardware Purchases</th>
<th>Pre-Optimization</th>
<th>FY14</th>
<th>Hardware Repairs &amp; Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Optimization</td>
<td>$27.8</td>
<td></td>
<td></td>
<td>$27.2</td>
<td></td>
<td>$16.4</td>
</tr>
<tr>
<td>FY14</td>
<td>$19.2</td>
<td></td>
<td>$27.8</td>
<td>$16.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5,120,900</td>
<td>Attempts by intruders detected and prevented by State security systems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Dedicated IT security staff responsible for monitoring, policies and oversight.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Virus and malware detection programs implemented in statewide agencies across 55,000 desktops and 9,000 servers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Fiscal Year 2015 target: number of threat identification and prevention solutions centrally administered and managed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Realizing Ohio’s IT Savings

Spending Reductions Over Pre-IT Optimization Levels

Core IT Direct Spending

- FY10: $258.3
- FY11: $329.4
- FY12: $353.5
- FY13: $363.6
- FY14: $327.1

IT Optimization Cost Savings
Fiscal Year 2010-2014

-44.8% Core IT Hardware Spend
-65.9% Hardware Repairs and Maintenance
-64.4% Mainframe Computing
-11.5% Distributed Computing Software
State of Ohio Private Cloud Usage Growth

367.3%

State of Ohio Cloud Adoption

86%
Cloud Staffing from DAS External Agencies

2.03
Petabytes of Storage
1 Petabyte holds approximately 20 million four drawer filing cabinet full of text.

0.870
Petabytes
(Backup Service)

20.7:1
Virtual to Physical Server Ratio
Increasing IT Efficiency

State of Ohio Cloud Adoption: Migrations

- Agency Managed Servers
- FY14 Agency
- Private Cloud Migrations
- FY15 Scheduled Migrations

Facility Construction Commission
Department of Health
Department of Natural Resources
Office of Budget Management
Mental Health and Addiction Services
Development Services Agency
Department of Transportation
Department of Education
Department of Youth Services
Department of Rehabilitation and Correction
EPA for Identity Consumption

Ohio Department of Job and Family Services
Department of Transportation
Department of Taxation
Department of Public Safety
Bureau of Workers Compensation

Public Utilities Commission
Department of Commerce
Department of Developmental Disabilities
Ohio Office of Development
Transforming Ohio’s IT Workforce

Ohio’s IT Workforce Statistics
End of Fiscal Year 2014

- Applications, 31%
- Infrastructure, 33%
- Operations, 17%
- Business Analysis and Project Management, 15%
- Geographic Information Systems, 1%
- Architecture, 1%
- IT Training, 1%
- Security, 0.4%
- IT Specialty and Procurement, 1%

Annual Attrition Rate: 14%
 Eligible for Retirement: 32%

Total IT Positions

2,496 April 2013 Baseline
2,118 July 2014
Non-Optimized State Networks (Fiscal Year 2014)

Source: OARnet

OARnet 100Gb/s Statewide Network

Driving Savings through Optimized Network Services

25%
IT Optimization Savings Target: Circuit Costs, Equipment, Repairs/Maintenance

9,600
Managed Network Devices

$54M+
FY14 Network Spend

3,700
Core Network Circuits

2,550
Locations Serviced
Consolidating Ohio’s IT Assets

Ohio One Network Key Milestones

- OARnet 100Gb/s Upgrade
- SOCC Network Consolidation (19 Agencies)
- Statewide Multi-Tenant Circuit Aggregation Analysis
- Migration to VoIP Services Commences
- Savings/Consolidation Targets Identified
- Metro Columbus Network Consolidation
- Statewide Migration to Ohio One Network Commences
Leveraging IT Assets for Public Good

- $90 million MARCS upgrade approved starting FY13
- First phase 1 year ahead of schedule
- $5 million allocated for MARCS-In-Schools initiative
- Broadband implemented in rural areas
Technology Board/IT Leadership

Dream Big

Get Stuff Done

Know How to Have Fun

People We Most Enjoy Working With
“Far and away the best prize that life offers is the chance to work hard at work worth doing”

Theodore Roosevelt
Ohio’s Private Cloud Data Center Operations
Ohio’s Private Cloud – Data Center Operations

• SOCC Remediation - Complete
  – Cleared out all “office” storage on 1st floor
  – Completed migration of State Staff and remediated 2nd floor
  – Increased the power capacity for the building
  – Removed walls and repositioned CRACs and PDUs
  – Migrated Ohio SuperComputer Center to separate power source (freeing up 25% of power)
  – Added an additional protected power system
  – Increased emergency power capacity
  – Added three new diesel generators to infrastructure support system
  – Constructed a new generator building to house up to five generators
  – Created a way to add fuel during an emergency situation without shutting down the generators
  – Repurposed 3rd floor to provide co-location services for higher ed and local government
Ohio’s Private Cloud – Data Center Operations

• Server Administration
  – Virtualization expansion
  – Providing Windows and Unix (AIX/Linux) Server Services

• Storage Management
  – Providing Storage and Backup Service Management
  – Virtualization expansion

• Mainframe
  – Management of the Mainframe Environment

• 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.

• External data center migrations
Ohio’s Private Cloud – Data Center Operations

• Server Migrations
  – added over 1,500 physical environments
    • Environmental Protection Agency (relocated all systems)
      – EPA for Identity Consumption (1,300 desktops)
    • Facility Construction Commission (33 servers)
    • Department of Health (273 servers)
    • Department of Natural Resources (103 servers)
    • Office of Budget and Management (88 servers)
    • Mental Health and Addiction Services (225 servers)
    • Development Services Agency (4 servers)
    • Department of Education (225 servers)
    • Department of Youth Services (102 servers)
    • Department of Transportation (389 servers)
    • Department of Rehabilitation and Corrections (94 servers)
    • Department of Job & Family Services (73 servers)
  – Quadrupled VM images from 579 to 2,908 images
Ohio’s Private Cloud – Data Center Operations

• Storage Migration and Management
  – Grown from 1 PB to 2 PB over last year
  – Anticipating growth to 4 PB over the next 3 years

• IT Service Management tools deployment
  – ServiceNow
  – Service Automation and Management tools

• Disaster Recovery Services
  – SOCC as a 2nd Site
  – Agency DR Requirements gathered
  – DR as a Service RFP on the street

• Network – Ohio One Network
  – IP Address Resolution
  – WAN Consolidation/Aggregation
  – Connectivity – blended learning, underserved/unserved
Shared Solutions
Enterprise Applications
Starting October 1, 2013, applications for Medicaid were accepted through the Ohio Integrated Eligibility system. As of today, these are the available numbers of cases that have been processed.

**Case Processing Statistics**

1.117 MILLION APPLICATIONS HAVE BEEN SUBMITTED THROUGH THE OHIO INTEGRATED ELIGIBILITY SYSTEM

592 THOUSAND OHIOANS HAVE BEEN CONNECTED TO MEDICAID

338 THOUSAND NEWLY ELIGIBLE MEDICAID RECIPIENTS AS A RESULT OF THE DECISION TO EXTEND MEDICAID

As of July 31, 2014
Ohio Benefits is key to Operationalize the Strategy

The Ohio Benefits Solution provides a platform for Ohio to achieve its transformation.

1. **Established the strategic vision backed by legislation and policy to:**
   - Modernize Medicaid
   - Streamline Health and Human Services
   - Improve Health System Performance

2. **Align technology, process and organizational components to enable the strategy**
   - **Technology:** Ohio Benefits Platform is a core component to achieve our strategy
   - **Process and Organization:** Simplification and Standardization of Citizen Services

3. **Enterprise wide data stores to enable predictive analysis and continuous improvement of citizen services and outcomes**
   - Ohio Benefits Analytics Foundation
   - Cross Agency Integration and Coordination through enhanced data insights
Ohio has identified its guiding principles to achieve key success outcomes that drive change and transformation in Ohio.

**Guiding Principles for Success**

- Achieve Common Taxonomy / Forms
- Focus on the Common Good
- Move Towards Support for Services
- Develop a Client Centered System
- Lesson s Learned from Legacy System Customizations

**Ohio Benefits Program Focus Future Considerations**

- Achieve Common Taxonomy / Forms
- Focus on the Common Good
- Move Towards Support for Services
- Develop a Client Centered System

**Key Success Outcomes**

- Improved scalability
- Decreased training time
- Shared case-processing across county lines
- Improved operational resilience and flexibility
- Established single citizen view across operations
- Increased collaborative and client-centric culture
- Improved operational visibility
- Decreased citizen wait times
- Built county options for shared services
- Increased resource management efficiency
- Reduced error rates
- Reduced cost to serve
- Increased citizen self-service access
- Achieved common forms and taxonomy
- Promoted common client experience
- Improved scalability

Ohio is working on several initiatives to drive integration across agencies to achieve key success outcomes.
Many of Ohio’s approximately 900,000 veterans continue to be unaware of the potential veterans health benefits that they may be eligible to receive given their service to their Country. As such, many veterans will apply for and receive Medicaid benefits not being aware of a more generous veterans benefits that they are potentially eligible to receive.

**The Challenge**

How to identify veterans that are applying for Medicaid, and Long Term Care Services and Supports and connect them with veterans health benefits that may offer a more generous set of benefits.

**The Method**

A Workgroup was formed at the beginning of the year to identify possible avenues for veteran identification and referral for veteran benefits. The Workgroup identified changes to the Ohio Benefits landing page to identify veterans at the front-end of Medicaid eligibility and refer them to the Ohio Department of Veterans Services to explore eligibility for veteran benefits. From go-live on July 30th to Sept 4th, over 500 veterans have identified themselves through the Ohio Benefits Landing Page.
Offenders tend to have higher rates of mental health and substance abuse issues than the general population. Connecting offenders with health benefits at release (a continuum of care) can create healthier communities and reduce recidivism rates. Furthermore, due to changes in Medicaid eligibility, many offenders who were previously ineligible for Medicaid at release, now are.

The Challenge

How to enroll eligible offenders into Medicaid and onto a self-selected Managed Care Plan prior to their release so that they leave the prison system with health care coverage.

The Method

A Workgroup was formed to develop a process to enroll eligible offenders in Medicaid and select a managed care plan to provide a continuum of care at release. The established long term goal is the creation of an automated batch process solution for enrollment of offenders in Medicaid.

However, in anticipation of the batch process solution, the Working Group has created an interim pilot process which will go-live in late September, 2014 at one State prison facility.
How we Integrate: Leveraging an Effective Change Network Across County End-Users

Having an active, engaged change network throughout all 88 counties helps to ensure an effective readiness initiative at each site, and to raise issues for the team’s resolution. County Readiness Managers are equipped to ensure their end-users are ready to use existing and future system releases, as well as policy and business process changes.

The Challenge

How to prepare approximately 9,000 end-users at 88 Job and Family Services (JFS) county offices to be prepared for:

• Major system releases bringing additional functionality, and business process and policy changes
• Monthly releases introducing system enhancements and fixes

The Method

Engage 1-2 County Readiness Managers across all 88 counties through weekly readiness calls and monthly readiness meetings. County readiness managers are responsible for:

• Being active advocates for the initiative
• Exemplifying leading practices
• Guiding end-users on system and policy updates
• Delivering crucial messages to end-users on a regular and ongoing basis
How we Integrate: Keeping County End-users Prepared to Use an Evolving System

Critical Information, tools and resources must be shared with county end-users on a continuous basis to ensure they are prepared to use current and future releases of the system. The Ohio Benefits Project Website serves as a central way to ensure available information is current, accurate and complete.

The Challenge

How to leverage user-friendly technology to make critical tools and resources easily accessible to approximately 9,000 end-users across 88 counties.

The Method

Developed the Ohio Benefits Project Website featuring:

- Robust, user-friendly search feature
- The Ohio Benefits County Roadmap tool, providing easy access to Job Aids, Workarounds, Known Issues and FAQs
- Updated Readiness Materials including presentations, summary sheets, information bulletins and relevant materials shared in a weekly call or monthly meeting
- Announcement Bar providing urgent real-time messages to end-users
# How we Integrate: Ohio Information Sharing through Enhanced BI and Advanced Analytics

Through a phased approach to expanding Ohio’s Business Intelligence capabilities, Ohio will be able to benefit from an enterprise wide view which will ultimately drive integrated service delivery across Ohio agencies.

## The Challenge
Ohio has previously not possessed one, integrated business intelligence and analytics platform that can be leveraged across agencies, leveraging a universally unique master client index.

## The Method

Through the roll-out of the Ohio Business Intelligence, Ohio Agencies and citizens will benefit from:

- An **integrated, enterprise approach for accessing and sharing information** across all of the State’s Health and Human Services operations.
- A **user-friendly approach** to accessing key Human services data.
- The ability to **strengthen decision support** for the services the State provides to citizens.

### Ohio BI Timeline

<table>
<thead>
<tr>
<th>Q3 2014</th>
<th>Q4 2014</th>
<th>Q1 2015</th>
<th>Q3 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>September 15, 2014</strong></td>
<td><strong>October 2014</strong></td>
<td><strong>January 2015</strong></td>
<td><strong>July 2015</strong></td>
</tr>
<tr>
<td>Expanded Reporting Launch</td>
<td>Phase 1 SAS Analytics Launch (OMI Budget &amp; Forecasting)</td>
<td>Medicaid claims data from MITS available in BI Portal</td>
<td>Comprehensive Assessment and Case Management (CACM) data available in BI Portal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SNAP, TANF data available in BI Portal</td>
</tr>
</tbody>
</table>
Enterprise Applications - Shared Solutions

• Ohio Benefits (Integrated Eligibility) launched
  – Supports almost 20,000 caseworkers in Ohio’s 88 counties;
  – Has received more than 1.117 million applications; and
  – Has processed approximately 60,000 applications without worker intervention as of June 1, 2014

• Ohio Business Intelligence Platform
  – Health & Human Services
  – Human Capital Management
  – Financials

• Enterprise Document Management

• Ohio Administrative Knowledge System (OAKS - ERP)
  – HCM upgrade completed
  – Financials – upgrading all existing modules & implementing new supplier self-service functions
  – Managed Service
  – Hardware platform refresh
Enterprise Applications - Shared Solutions

- Kronos Time and Labor Solution
- Ohio Enterprise Grants Management
- ePayment Platform Engine
  - Accepts electronic credit card and Automated Clearing House (ACH) payments from customers
  - FY13 over 2.3M transactions for nine state agencies and multiple municipal income tax administrators
- eLicensing Platform
  - Update current system to address licensing requirements for boards and commissions
    - includes licensee administration, enforcement management, examination tracking/scheduling, reporting, automated renewal process and enhanced security safeguards
Enterprise Applications - Shared Solutions

- **Hosted VoIP**
  - Contract established $13 for basic service – potential annual savings of $3.2M as users migrate from Centrex
  - 19,260 lines migrated to date from 66 agencies, boards & commissions with 24 agencies, boards & commissions in process

- **Email – single platform**
  - 87 of 88 agencies migrated (62,000+ accounts)
  - JFS migrate late CY14
  - Migrating to Office 365

- **Multi-Agency Radio Communications System (MARCS)**
  - IP Upgrade 10 months ahead of schedule, under budget
  - MARCS in Schools – 1324 schools contacted; 471 implemented
  - Partnering with local government
Online Services
• Ohio Benefits Portal – Citizen Focused
  – Integrated portal for citizens to apply for HHS related benefits

• Ohio Business Gateway – Business Focused
  – Over 300,000 business leverage OBG for paying tax liabilities
  – Collected nearly $9 Billion last year
  – Business One Stop (future)
    • Single registration to do business with the State
    • Start a business
    • Grow a business
    • Sustain a business

• MyOhio/OAKS Portal – State Employee Focused
  – Training
  – Evaluation/Performance
IT Security
• Enterprise Security and Compliance
  – Extended Enterprise Security Information Event Manager to AOS and Commerce. Additional capacity for IE & JFS
  – Established penetration testing service
  – McAfee Protection Services (servers to end device)
  – Qualys Vulnerability Management
  – QRadar Security Information and Event Management System
  – IBM Intrusion Prevention System
  – F5 Web Application Firewalls
  – Centralizing staffing approach to support consistent practices
Enterprise Contracts
• MBE Focus
• Leveraging Enterprise Contracts
  – VMware
  – ServiceNow
  – McAfee Security Suite
  – Airwatch
  – Telecom Contracts
  – State Term Schedules and Contracts
  – Master Cloud Service Agreements
  – Data Center rack space
  – DR services
• Leveraging Economy of Scale
  – Consolidating licenses, maintenance agreements
Thanks for your time…

Questions?

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

Office of Information Technology
Ohio Department of Administrative Services
30 East Broad Street, 39th Floor
Columbus, Ohio 43215

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