DOT IT Strategy FY 2019-2021

Destinations*DIGITAL*
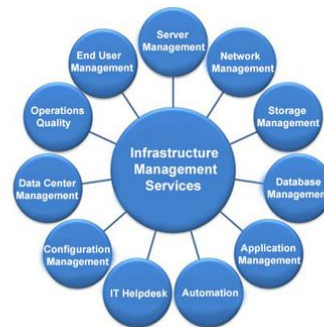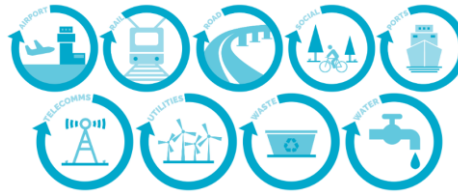
IT Alignment to DOT Mission

DESTINATIONS*DIGITAL*

MISSION.SECURITY.RESULTS.

Safety

Infrastructure

Technology & Innovation

History of DOT IT and the Case For Change

- Decentralized decision making for IT spend led to OA-specific solutions for IT despite commonality of underlying solutions, leading to:
  - Poor Cybersecurity posture
  - Duplicative network, infrastructure, and software assets;
  - Lack of architectural consistency and coherence;
  - Missed opportunities to invest in mission IT projects;
  - Over 2,000 existing IT contracts and 4,000 IT annual contract transactions; and
  - Incomplete enterprise view of IT spend and related activities.
- Journey towards IT shared services started in 2017 with:
  - The implementation of a consistent DOT-wide budget execution IT spend plan process;
  - Nation-wide network assessment of DOT and OA field sites; and
  - A baseline assessment of the current state of IT commodity across OAs.

Cybersecurity Challenges

DOT spends 2% of the IT Portfolio on Cybersecurity

11.87B

Cybersecurity Events on DOT Networks in one year

(Annual SOC Report, Jun 2013)

700+

Computers Compromised by Dyre Malware
(COE, Dec 2014 – Mar 2015)

36%

of DOT Websites are not secured with HTTPS/HSTS **(Feb 2019)**

85%+

of DOT Internet Traffic Encrypted and Essentially Hidden

24%

of Employees in 1 OA Susceptible to Phishing Attacks
(CISO, Sep 2018)

1,243

Malicious Exploits, Malware Objects, and Call Backs Discovered over 3 months
(COE, Jul 2015)

45+

Known Cloud Providers and Growing
(Feb 2019)

88 of 503

Expired System Authorizations

(CSAM, Feb 2019)

Vision

Be the best IT in government

DOT IT Core Values

We believe in the **big picture**

The best solutions to enable DOT's mission

We act with **courage**

Real change requires leadership, honest talk, and taking risks

We move **together**

The shared work of transformation requires a unified team

We make the journey **fun**

Joy in solving problems, celebrating wins, overcoming obstacles

The time is *now*!

Our Modern IT Destination

Challenge the status quo

Own your work

Be open to change

Be creative

Know the mission

Destinations*DIGITAL* Future State

IT Shared Services

Servers

Hardware

AWS
Azure

End User Support

Network

EITSS
SWES
CSIPS
Web
Agility
IPSS2
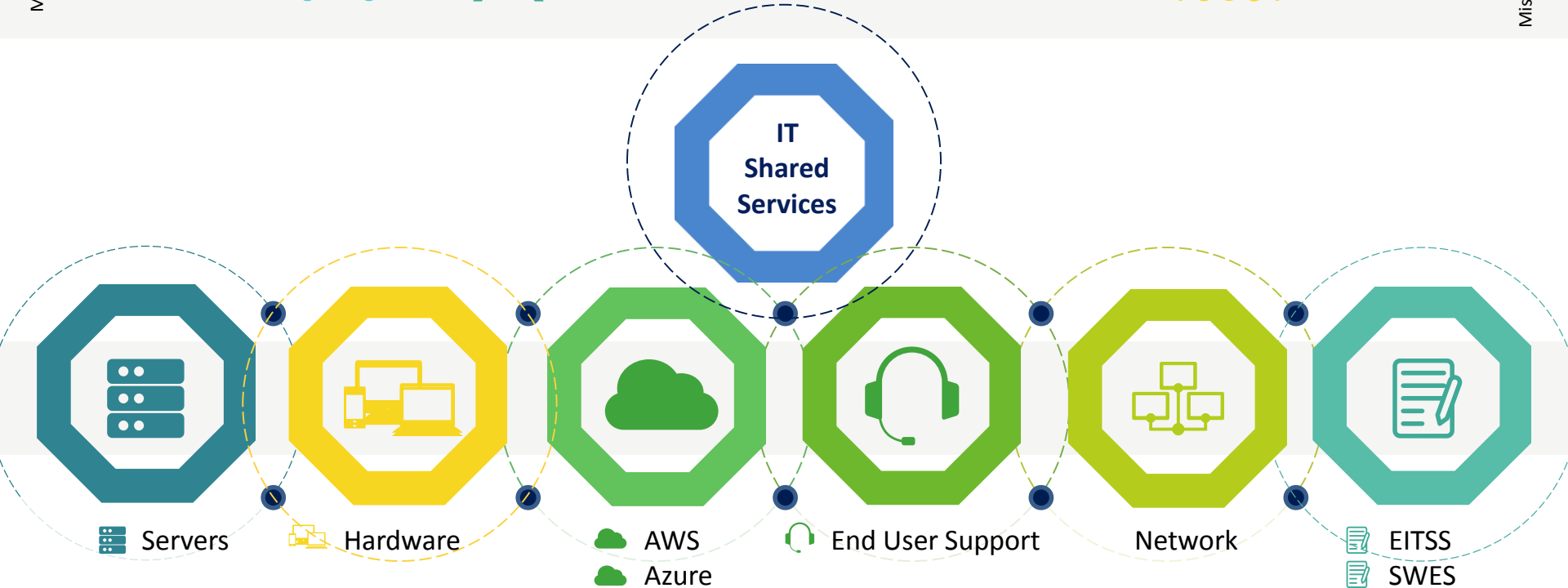
Acronyms
AWS – Amazon Web Services
CSIPS – Cyber Security Information and Program Services Contract
EITSS – Enterprise IT Shared Services Contract
IPSS2 – Integrated Program Support Services 2 Contract
SWES – Software Engineering Services Contract
OA – Operating Administration

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Big, Hairy, Audacious Goals (BHAGs)

MISSION. SECURITY. RESULTS.

Shift contractor to federal employee ratio from 3:1 to 1:1

Eliminate 1M hours of burden through innovation with modes

Modernize one multi-modal business area (i.e. R.I.C.E.)

Reduce malicious or anomalous events and risks by 98%

Shrink the IT footprint by 50%

Implement 10 intelligent software automation projects

Launch a cybersecurity campaign for the transportation sector

Fulfill 25% of public requests for assistance fulfilled via self-service

Retain all savings for mission & technology modernization

*Excludes FAA

Cybersecurity Progress

1

Consolidate IT Cybersecurity contracts into new Enterprise contract

2

Continue modernization of the DOT network for improved security (Network Assessment, and Risk Mitigation)

3

Identify and optimize deployment of Cybersecurity tools and tool spending

4

Do penetration testing against DOT High Value Asset (HVA) systems

5

Improve network and Cybersecurity visibility

6

Streamline and automate system security planning, authorization, and continuous monitoring

7

Evaluate and train employees on phishing and malware risks

Making Progress: Early Successes

|		
Infrastructure & End User Services		The DOT CIO worked with FHWA to consolidate a $12 million IT services contract to reduce duplication. The change will realize a projected annual cost avoidance of $900,000 for reinvestment.
Applications & Software Development		The DOT OCIO helped FMCSA bring the National Registry for Certified Medical Examiners (NRCME) system back online after a security incident using agile development.
Infrastructure & End User Services		Automated technology was used to eliminate over 500 man hours in the process that is used to ensure inactive accounts are decommissioned on a monthly basis.
Cybersecurity		Implemented pilot for crowd-sourced penetration testing as a cost-effective alternative for vulnerability assessment.
Enterprise Cloud Services		Implemented training to re-tool IT specialists and change the focus of cloud implementation activities.
Business Planning & IT Spend		Identified $1.2 million in contracts for immediate consolidation for department-wide software licenses and $2.0 million for IT Shared Services.
Infrastructure & End User Services		The main DOT phone number was moved to an automated function that cut the calls to the DOT operators in half.

Making Progress: Early Successes

Infrastructure & End User Services		OCIO consolidated multiple OA circuits and servers to a single operating system that can manage data for each service for all OA's in the same facility. Consolidation of the first seven sites is expected to result in the opportunity to reinvest $273k each year. OCIO expects further costs efficiencies as the remaining 22 sites are consolidated.
Data Management		The team identified an opportunity to consolidate approximately $500k in separate software purchases into an enterprise agreement. Recent updates to Tableau software licensing also offer the Department more capability at less cost. Negotiations allowed the Department to increase the use of Tableau from 250 users to 1,000, and product pricing is 30% lower than buying on the open market.
Business Planning & IT Spend		The team has identified $15.8M in opportunities for reinvestment over the next five years based on efficiencies across the modes in areas such as consolidation of field support and wireless services, licensing adjustments, and storage.
Applications & Software Development		Working with the Deputy Secretary and the DOT Economic Growth Council, OCIO has launched an effort to deploy a modernized discretionary grants system.

DOT IT Consolidation
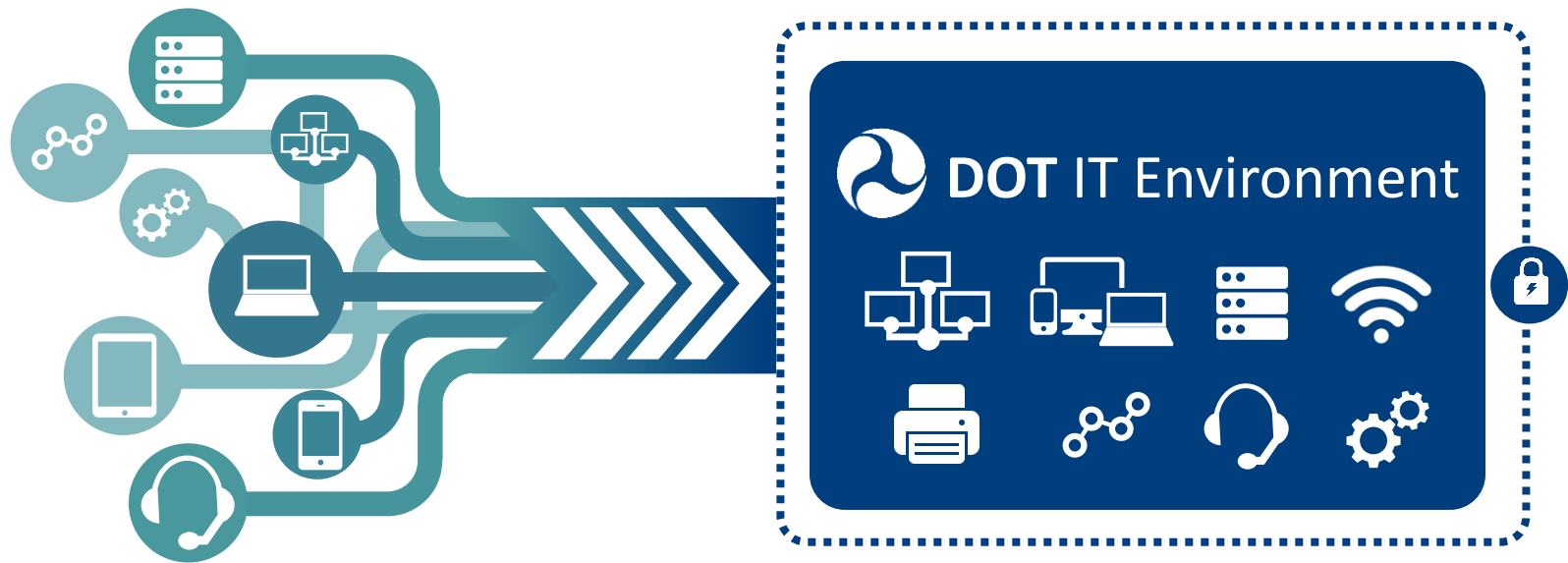
- Phase 1 (Year 1) – Commodity IT consolidation
- Phase 2 (Years 2-3) – Programmatic IT consolidation

New Capabilities/ 2019 priorities

Infrastructure & End User Services		Implement Commodity IT Consolidation in OCIO
Applications & Software Development		Launch grants management modernization pilot solution
Cybersecurity		Explore SOC modernization
Infrastructure & End User Services		Continue Network Modernization
Data Management		Complete grants dashboard for Department-wide view of grant awards
Business Planning & IT Spend		Award Department-wide contracts for Software Engineering, Cybersecurity, Infrastructure and End User Support, and Cloud Computing

Out-Year Priorities

Infrastructure & End User Services		Complete Commodity IT Shared Services Transfer to OCIO
Infrastructure & End User Services		Complete Network Modernization
Applications & Software Development		Initiate Programmatic IT Shared Services Transfer to OCIO
Applications & Software Development		Initiate deployment of grants management modernization solution
Cybersecurity		Initiate modernized SOC capabilities
Data Management		Identify and develop cutting-edge capabilities for data integration and data science