Data Center Services Forecast

Terrence Woods
State Chief Information Officer

James Foster
Data Center Services Director

Joint Legislative Committee on Information and Technology

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Agenda

- Data Center Services (DCS)
- Cloud Brokering
- Co-Location
- Managed Services
- Agency Managed Equipment Outside of the State Date Center
- Mainframe
- Resilient Site

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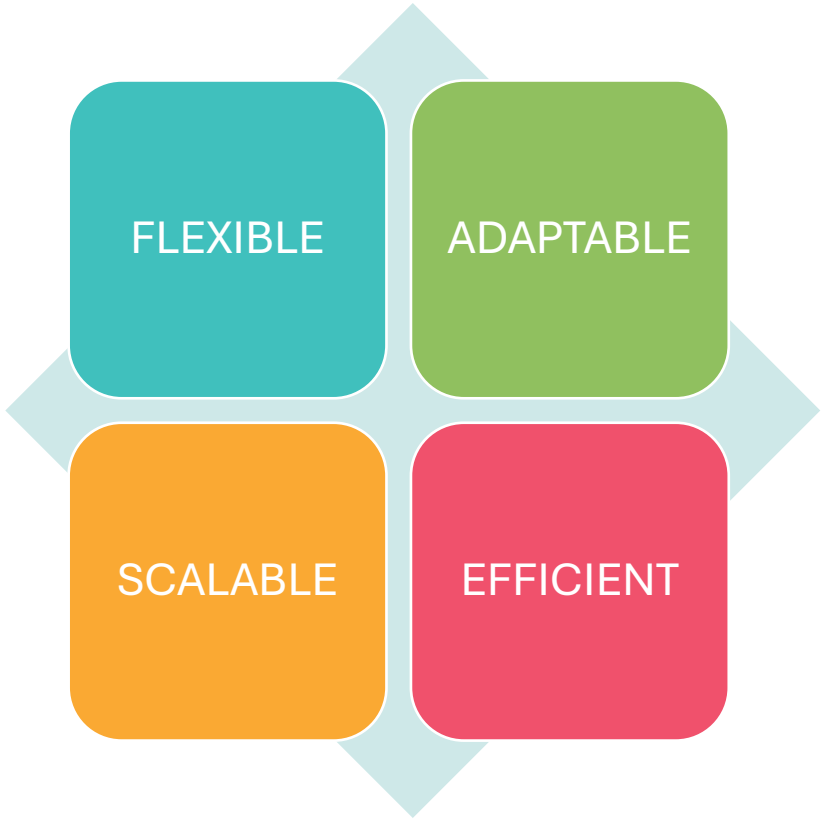
Data Center Services



We have committed our long-term future to ensuring that our customers' data and systems are:

- In a secure, stable and flexible data center
- Supported by a robust statewide network
- Reliable and ensure high performance
- Maintained in a cost-effective manner

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Data Center Services

- Disaster Recovery for Shared IT Infrastructure
- Network Services
- Data and Back-Up Services
- Cloud Brokering
- Co-Location Service
- Managed Services

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DCS Cloud Brokering

- Flexibility and choices to meet varying needs
- DCS is the service provider enabling agency IT divisions, developers, and agency IT professionals to quickly access and deploy cloud environments with minimal friction and IT overhead while maintaining effective guardrails in terms of centralized policies and procedures
- Tiered approach accommodates varying levels of support needs:
  - Prebuilt template
  - Network connectivity into and within the cloud
  - Security
  - Identity and access
  - Consulting
  - Managed services

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DCS Cloud Brokering Customers - Current

Dept of Administration Services	Dept of Human Services	Dept of State Lands	Dept of Revenue	Oregon State Police
Dept of Corrections	Dept of Environmental Quality	Oregon Youth Authority	Dept of Consumer & Business Services	Oregon Health Authority
Public Employees Retirement System	Employment Dept	Higher Education Coordinating Commission	Dept of Education	Dept of Forestry
	Dept of Transportation	State Board of Nursing	Public Utility Commission	

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DCS Cloud Brokering Customers – Planned

Dept of Justice

Dept of Agriculture

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DCS Co-Location

- Available to Oregon public sector organizations
- Opens the door for agencies to host their valuable IT equipment in a tier 3 data center without the additional costs of maintaining their own facility
- Co-Location Service includes:
  - 24/7 access to their equipment
  - Robust HVAC system for environmental controls
  - Flat-rate monthly billing inclusive of power consumption
  - Redundant and conditioned power

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DCS Co-Location Service Customers – Current

- Oregon Health Authority
- Public Employees Retirement System (moving to managed services)
- Dept of Education
- Oregon State Library
- Parks & Recreation Dept
- Oregon State Lottery
- Dept of Energy
- Oregon State University

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DCS Co-Location Service Customers – Planned

Dept of Energy

Dept Consumer & Business Services

Dept Environmental Quality

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DCS Managed Services

- X86 Server (Window Operating System / Linux Operating System), Midrange, Mainframe
- DCS provides performance and reliability to our customers
- Our capabilities can be compared to Cloud offerings known as Platform-as-a-Service (PaaS)
- Our platforms are designed in alignment with state security standards, built using industry best practices, and maintained and monitored to ensure a reliable computing experience
- Services include backup, storage, and network
- 24/7 monitoring

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Agency Managed Equipment Outside of the State Data Center

Bureau of Labor & Industries	Dept of Aviation	Dept of Land Conservation & Development	Oregon State Police	Dept of Agriculture
Dept of Fish & Wildlife	State Marine Board	Public Utility Commission	Columbia River Gorge Commission	Dept of Justice
Dept of Public Safety Standards & Training	Land Use Board of Appeals	Dept of Emergency Management	Medical Board	Parks & Recreation Dept
Real Estate Agency	State Board of Parole & Post Supervision	Dept of Consumer & Business Services	Commission for the Blind	Dept of Education
Liquor & Cannabis Commission	Long Term Care Ombudsman	Dept of State Lands	Dept of Transportation	Psychiatric Security Review Board

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Mainframe Current State

- Z15 Mainframes leased October 2021
- Replaced end of life Enterprise Class with Business Class – downsized based on reduced usage
- 60-month lease term ending September 2026
- Hardware purchase option at end of lease
- Lease extension option available
- End of useful life estimated 2030

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Mainframe Support Structure

Vendor

- Hardware

Data Center Services

- Operating System
- Software
- Utilities

Agencies

- Applications

Mainframe Usage

Agency	Mainframe usage
Oregon Department of Human Services	58.91%
Oregon Department of Transportation	29.91%
Department of Administrative Services	7.40%
Oregon Health Authority	1.39%
Oregon Employment Department	1.14%
Oregon Legislative Information System	0.66%
Other (40 agencies)	0.59%
	100.00%

Gartner Mainframe Benchmark Study

- Study concluded July 2020
- The objectives of the Mainframe Benchmark Study included:
  - An analysis of the current DCS Mainframe service
  - Mainframe Market Price Assessment
  - Market research of potential alternatives
  - Strategic roadmap for service evolution

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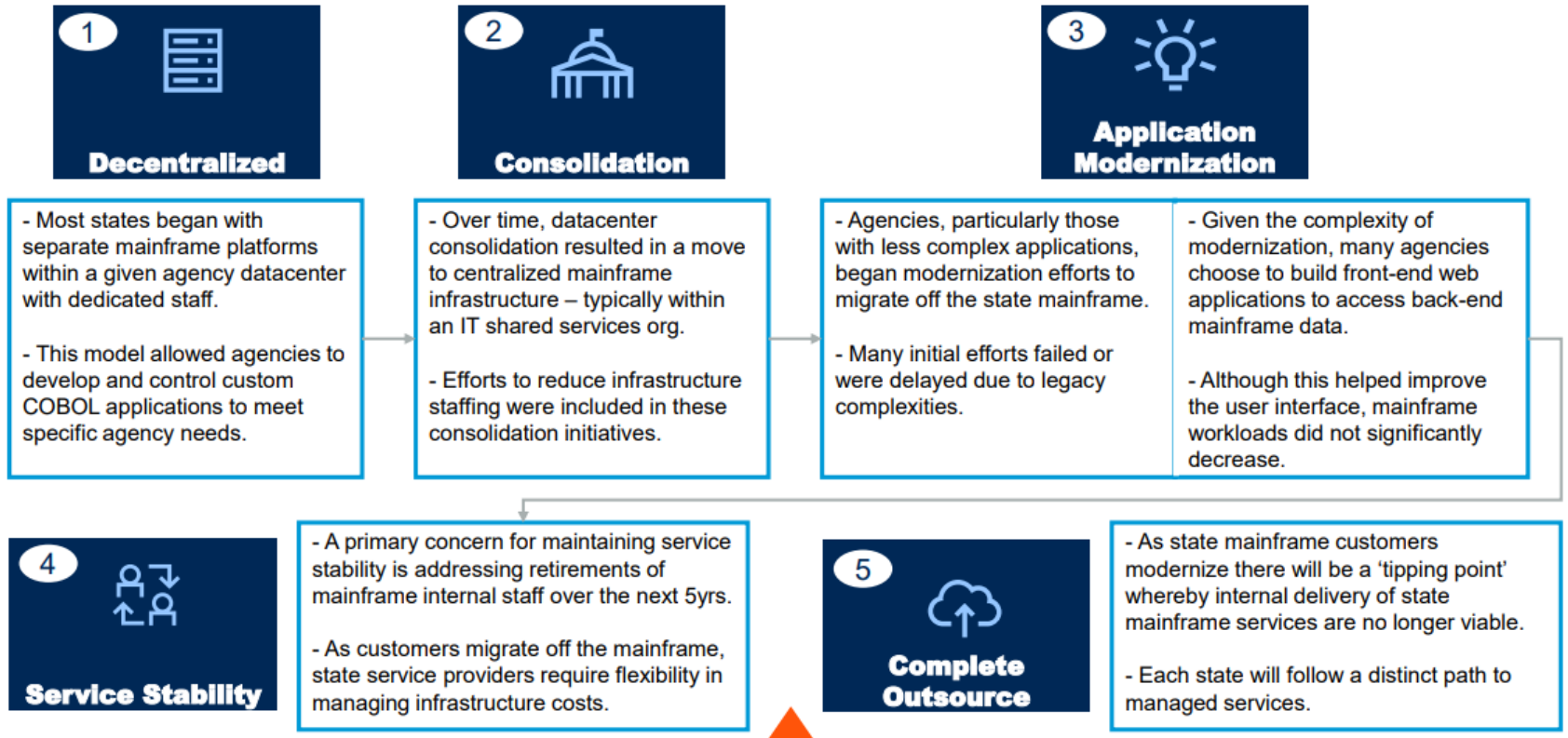
Mainframe Service Over time

Conceptual evolution of state mainframe service delivery



Gartner

Gartner Mainframe Benchmark Study

Market Research Highlights

Executive Summary

- Gartner's Market Research and Analysis consisted of the following components:
  - Market Assessment Benchmark
  - Mainframe Market Research
  - Peer State Interviews
- Market research validated current state findings and assumptions, as well as preliminary go-forward options for DCS service evolution given similar trends in the market and across peer states.
- Gartner validated the use of vendor managed services can offer states greater flexibility given the uncertainties in customer modernization initiatives and upcoming staff retirements.

Key Findings

1. The Gartner Market Assessment Benchmark concluded that outsourcing the current DCS Mainframe service would likely cost more than the current cost structure.
   - DCS 5yr cost: $62.1M (annual costs of $12.4M times five years)
   - Outsource 5yr cost: Market Low of $61.9M – Market High of $91.5M
2. Mainframe Market Research and Peer Interviews illustrated a transition to managed services given customer modernization efforts and an impending wave of retirements over the next 5yrs.
3. The transition to managed services for each state is driven by a specific 'tipping point' including significant customer workload transitions, staff related challenges or by executive mandate.

Gartner

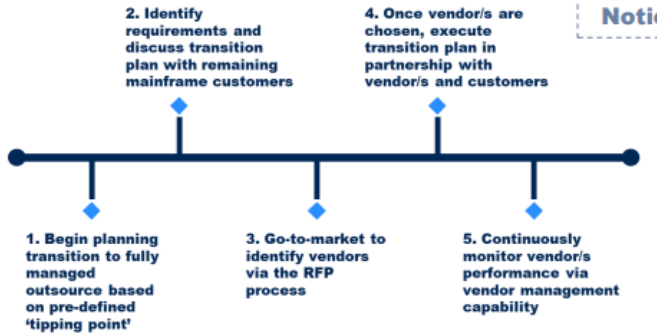
Fully Managed Service

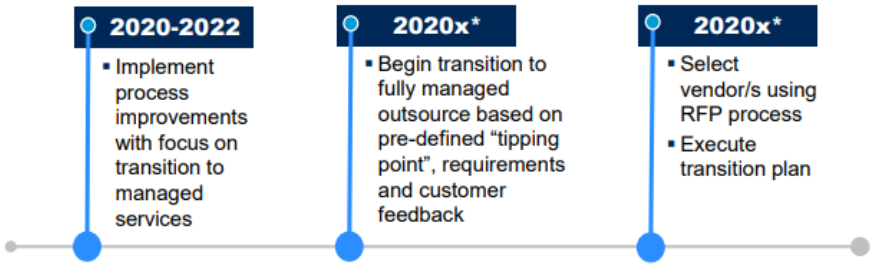
3 Fully Managed Outsource of Mainframe Service

Workforce Plan: Alternative #3

- DCS, in conjunction with state leadership, should define criteria for the 'tipping point' in transitioning the delivery of mainframe services to a fully managed outsource model.
- Given the significant transformation required to transition services, DCS will need to develop a comprehensive transition plan, including resourcing and customer relationship management, to ensure service stability.
- Once the transition to a fully managed outsource is complete DCS vendor management capabilities will be key to maintaining sustained mainframe service support.

Notional Timelines





* Likely post 2025

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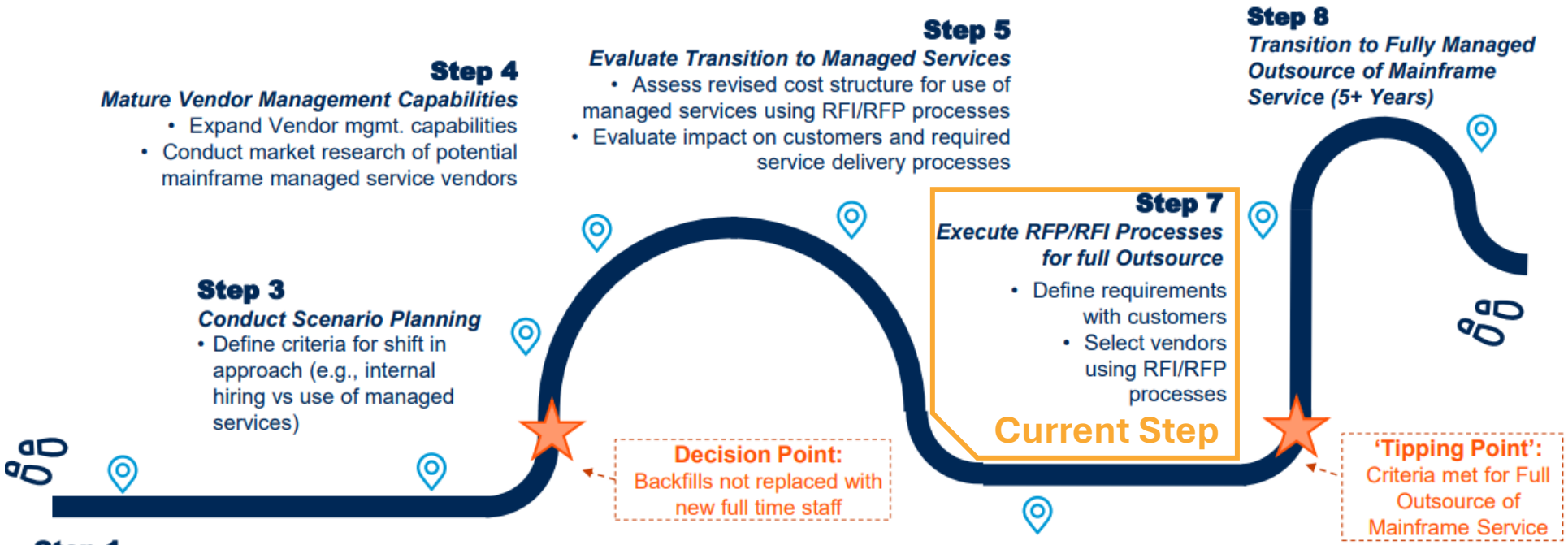
Approach Roadmap

Recommended Approach – Steps for transitioning to managed services



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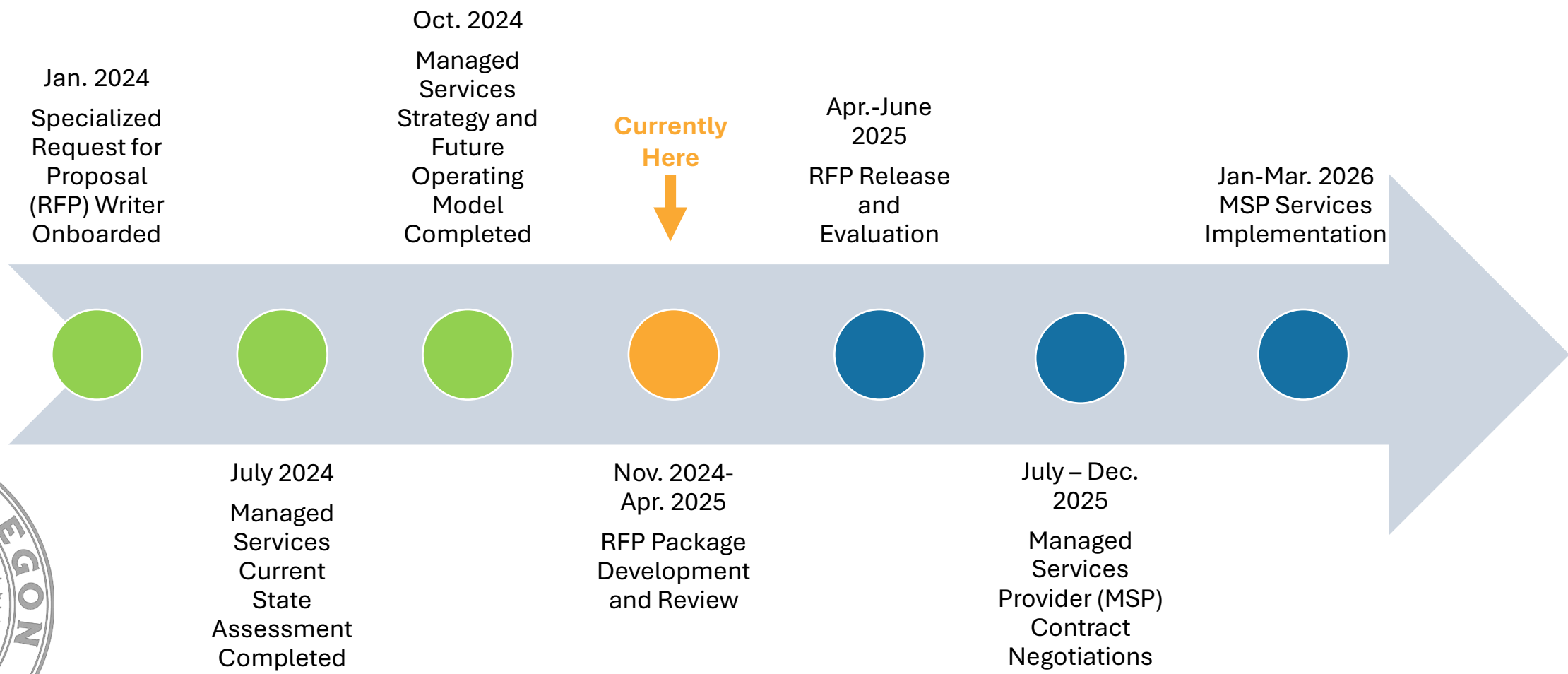
Managed Services Request for Proposal Status



Resilient Site: Key Benefits

- Companies often have two data centers to ensure business continuity and prevent data loss by providing redundancy; if one data center experiences an outage due to a disaster or technical failure, the other can seamlessly take over operations, minimizing downtime and maintaining access to critical data
- Disaster recovery
- Increased availability
- Scalability
- Load balancing

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Resilient Site: Estimated Timeframe

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Thank you

Shirlene A Gonzalez

Legislative Director

shirlene.a.gonzalez@das.oregon.gov