



Department of Labor and Employment Five-Year IT Roadmap

Aligning business goals with technology
forecasts
October 2015



COLORADO
Governor's Office of
Information Technology



COLORADO
Department of
Labor and Employment

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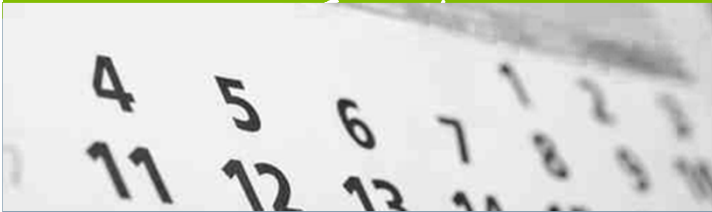
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Roadmap Goals

A strategic plan allows alignment of technology evolution with business requirements and programs. To this end, discrete goals for this strategic plan are to:

Define technology targets for equipment acquisition and



Regular refresh cycles aligned with OIT enterprise standards

Use vendor data to understand product lifecycle issues

Let technology goals drive vendor

Establish a five year planning horizon



Leverage the 18 month product horizon provided by vendors

Use technology trends to set directions beyond 18 months

Align technologies across departments



Understand dependencies between network, server, database, development, and desktop groups

Jointly plan technology changes and upgrades

Better understand funding needs



Provide a longer-term budget planning horizon

Reduce fragmented funding requests

Assumptions

- This roadmap functions as a living document which will be updated twice per year. This initial document serves as a baseline; timelines and costs estimates are subject to change.
- Decisions related to major agency initiatives or projects may alter this plan.
- Infrastructure needs to be maintained for FTI/PII compliance.
- Estimates based on past initiatives and subject to change.
- Four year refresh schedule for endpoint hardware.
- Infrastructure refresh will need funding regardless of physical location.
- Staffing remains constant.
- For Decision Items, cost allocation to customer is based on OIT's current Common Policy rates.

Aligning Technology with Business

Objectives

CDLE is made up of the following major divisions: Unemployment Insurance, Employment and Training, Labor Market Information, Labor, Oil and Public Safety, Workers' Compensation, Government Policy and Public Relations, and Internal Services.

Technology lifecycles are much shorter than the CDLE business cycle; therefore, planning technology changes to fit CDLE's business initiatives is one way to help improve business.

Supporting Business Objectives

- Improving quality and reliability of service
 - Replace aging systems with updated and more functional tools
 - Support new technical platforms such as mobile applications and customer self-service
- Reducing cost of service
 - Leverage best practices and standards to deliver consistent and cost effective solutions
 - Introduce new technologies to reduce ongoing support cost
 - Utilize enterprise solutions to reduce cost associated with redundant licensing and applications
- Minimizing downtime or disruption for maintenance or upgrades
 - Unify technology changes and maintenance
 - Coordinate deployments, moves and changes
- Driving technology-related statutory responsibility and institutional mandates
 - Secure state data and assets
 - Implement data management governance

Business Objectives

CDLE's mission is to "protect and promote the integrity and vitality of Colorado's employment environment." This page highlights the overarching objectives that CDLE identified in their annual performance plan that will have the biggest impact in achieving their mission.

#1- Improve Customer Satisfaction by 5% Annually

CDLE will be creating and implementing an ongoing customer survey, and striving to achieve a 5% increase in customer satisfaction annually by fostering an agency wide culture of service based on values, utilizing customer feedback and strategic initiatives to improve service delivery, and maintaining an effective Continuity of Operations Plan (COOP).

#2- Improve Employee Survey Results by 5% Annually

CDLE strives to establish a culture of engagement and accountability that affords employees the opportunity, structure, and tools to thrive and provide an exceptional customer experience. Because employee satisfaction has been shown to increase customer satisfaction, productivity, and performance, CDLE is striving to achieve a 5% increase in employee satisfaction annually. Strategies for reaching this goal include maintaining the Employee Quality and Excellence Plan (EQEP) as a tool, maintaining Covey as the foundation of the Leadership Development Program, continuing work with succession planning, improving the CDLE rewards and recognition program, and encouraging the practice of appropriate change management.

#3- Implement Process Improvement

CDLE will be implementing five key process improvements annually to maximize the value they bring to their customers and stakeholders through their work processes. This will be done by prioritizing, implementing, and reporting on process improvements, utilizing the Process Improvement Forum and Lean.

#4- Implement Optimal Technology Solutions

CDLE will be employing a multitude of strategies to implement optimal technology solutions that create an exceptional customer experience, including approaching technology projects with a focus on better serving the customer and actively engaging and partnering with OIT.

Top IT Initiatives

Below are a few of the highest priority CDLE technical initiatives that are being undertaken over the next five years. Timelines for these initiatives are represented on the IT Roadmap Overview.

Modernize Unemployment Insurance IT Systems

The Division of Unemployment Insurance (UI) is modernizing the current benefits and tax system and moving off the mainframe computer application. The modernized solution is intended to provide complex automated solutions for 1,000's of traditional Unemployment Insurance functions, features, and processes that fall into the following areas: 1) Benefits, 2) Taxes/Premiums, 3) Appeals, and 4) Federal/State Unemployment Insurance Interfaces & Reporting.

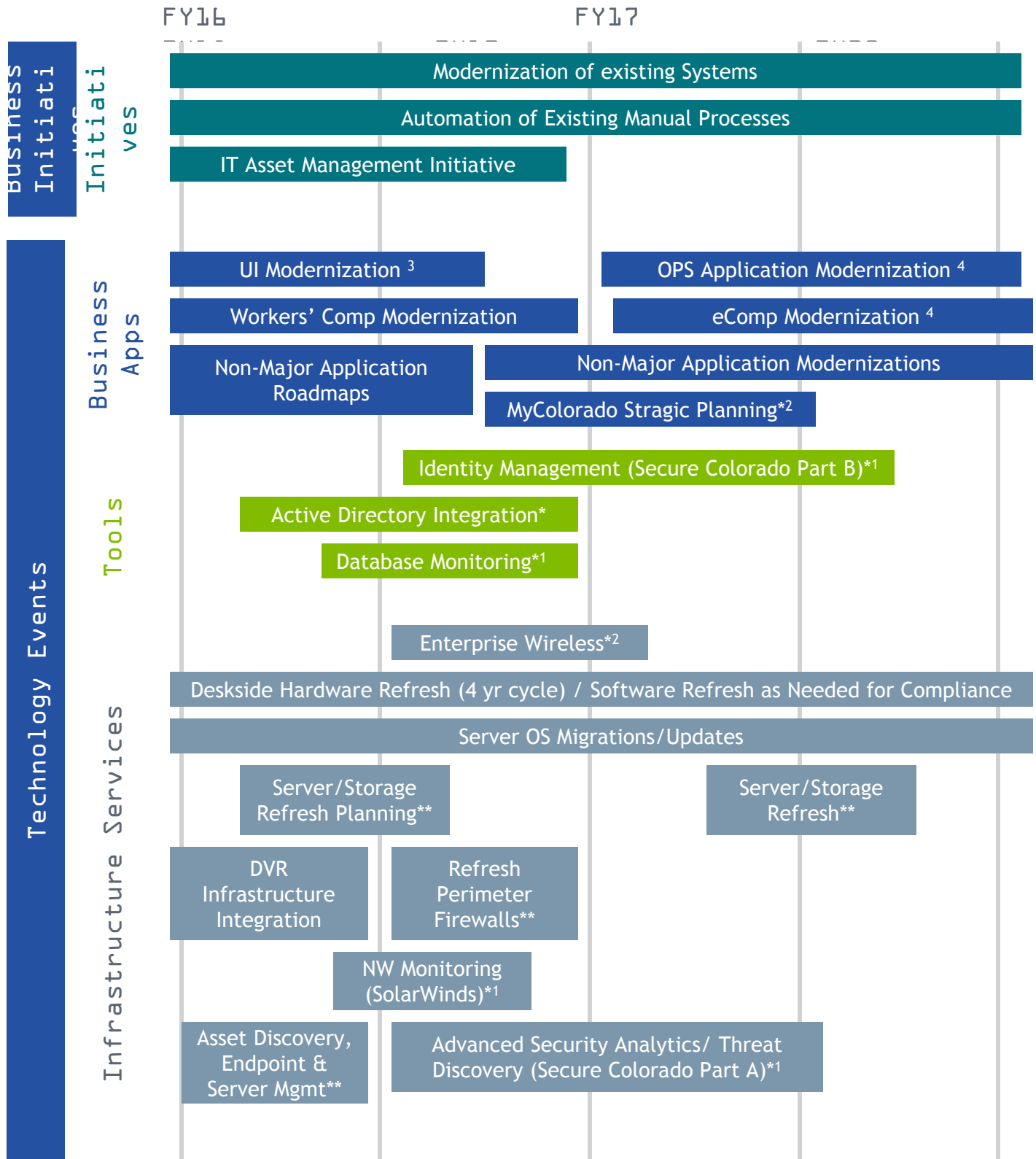
Modernize Workers' Compensation IT Systems

The Division of Workers' Compensation (DOWC) is migrating the current claims system off the 23-year old mainframe computer application and on to a modernized virtual platform based on Java and MS SQL. The implementation and delivery of the next generation DOWC system will require a multi-year, multi-phased effort. Each phase will be fully implemented in the production environment before the next modernization phase begins. The overall project is scheduled to complete June 30, 2017.

Modernize Oil and Public Safety IT Systems

The Division of Oil and Public Safety (OPS) is modernizing their current technology systems. The modernized solution(s) are intended to provide improved performance and sustainability.

IT Roadmap Overview



* Enterprise event/initiative; see *Appendix A: Statewide Initiative Roadmap*

**Joint Agency / Enterprise effort

¹ Unfunded: see *Appendix B* (Needs further discussion to determine if funding is available)

² OIT initiative that still needs to be planned with the agency

³ Solution is in design - dates subject to change

⁴ In early planning phases - dates subject to change

Financial Overview

Unfunded Technology Risk

- Technology debt and long-term cost
- Security vulnerabilities
- Maintenance
- Outdated technology
- Business goal impact
- Reactive issue resolution

CDOT's Unfunded Technology Outlook

Below is a summary of the estimated unfunded components of CDLE's technology roadmap. detailed breakdown can be found in Appendix B.

UNFUNDED	FY16	FY17	FY18	FY19	FY20
Applications	-	\$0	\$3-6M	\$7-10M	-
Tools	-	\$43,784	\$23,507	\$23,507	\$23,507
Infrastructure Services	-	-	-	\$700,000	-
OIT Pending FY17 Decision Items	-	\$75,764	\$75,519	-	-
Total Unfunded*	\$0	\$119,548	\$3,099,026-\$6,099,026	\$7,723,507-\$10,723,507	\$23,507

* For context, CDLE's FY14 total IT spend was \$15,313,723

Glossary & Acronyms

<p>2-Factor Authentication</p>	<p>Two-factor authentication adds a second level of authentication to an account log-in. The second level may be something you know (like a PIN), something you have (like an ATM card), or something you are (like a fingerprint). By choosing two different channels of authentication, you can protect user logins from remote attacks that may exploit stolen credentials.</p>
<p>Active Directory</p>	<p>This Identity Management solution will help streamline management of identity for creation, modification or deletion. Dell One Identity Manager has been selected as the solution of choice and is in the early project stages. This project was an OIT FY16 decision item that is billed back to the agencies based on server inventory.</p>
<p>Advanced Security Analytics/ Threat Discovery (Secure Colorado Part A)</p>	<p>Secure Colorado is OIT’s statewide strategic security plan. OIT has requested \$1,000,000 beginning in FY17 and every year thereafter to improve security incident preparedness and intelligence with the use of a visualization tool and two FTE. This would heighten OIT’s ability to detect and respond to a breach.</p>
<p>Asset Discovery, Endpoint Mgmt (SCCM)</p>	<p>The Systems Center Configuration Manager allows administrators to manage large groups of Windows-based computer systems. SCCM helps Deskside administrators to provide their users with operating systems, applications, and updates virtually. Currently there are implementation efforts moving across seven agencies.</p>
<p>Backup Colorado Phase II</p>	<p>Backup Colorado Phase II will identify and implement a single backup and recovery solution for all critical applications supported by OIT. This project was an OIT FY16 decision item that is billed back to the agencies based on CSN circuits and servers being hosted and housed by OIT.</p>
<p>Common Policy</p>	<p>Most of OIT’s services and functions are covered via Common Policy for a specific length of time. Common Policy bases costs on customers, services, and usage estimates at the start of a fiscal year. The actual usage and amount due are calculated during the fiscal year.</p> <p>Initiatives that are funded through Common Policy do not include agency level enhancements, support or maintenance after re-appropriated funds are depleted.</p>
<p>Endpoint Encryption</p>	<p>Encryption is the process of encoding messages or information in such a way that only authorized parties can read it. The most common form of encryption, called “symmetric key encryption” secures information in the transfer from one party to another; conversely, endpoint encryption secures data at rest. Data is unreadable to an attacker in the event that a device is lost or stolen.</p>

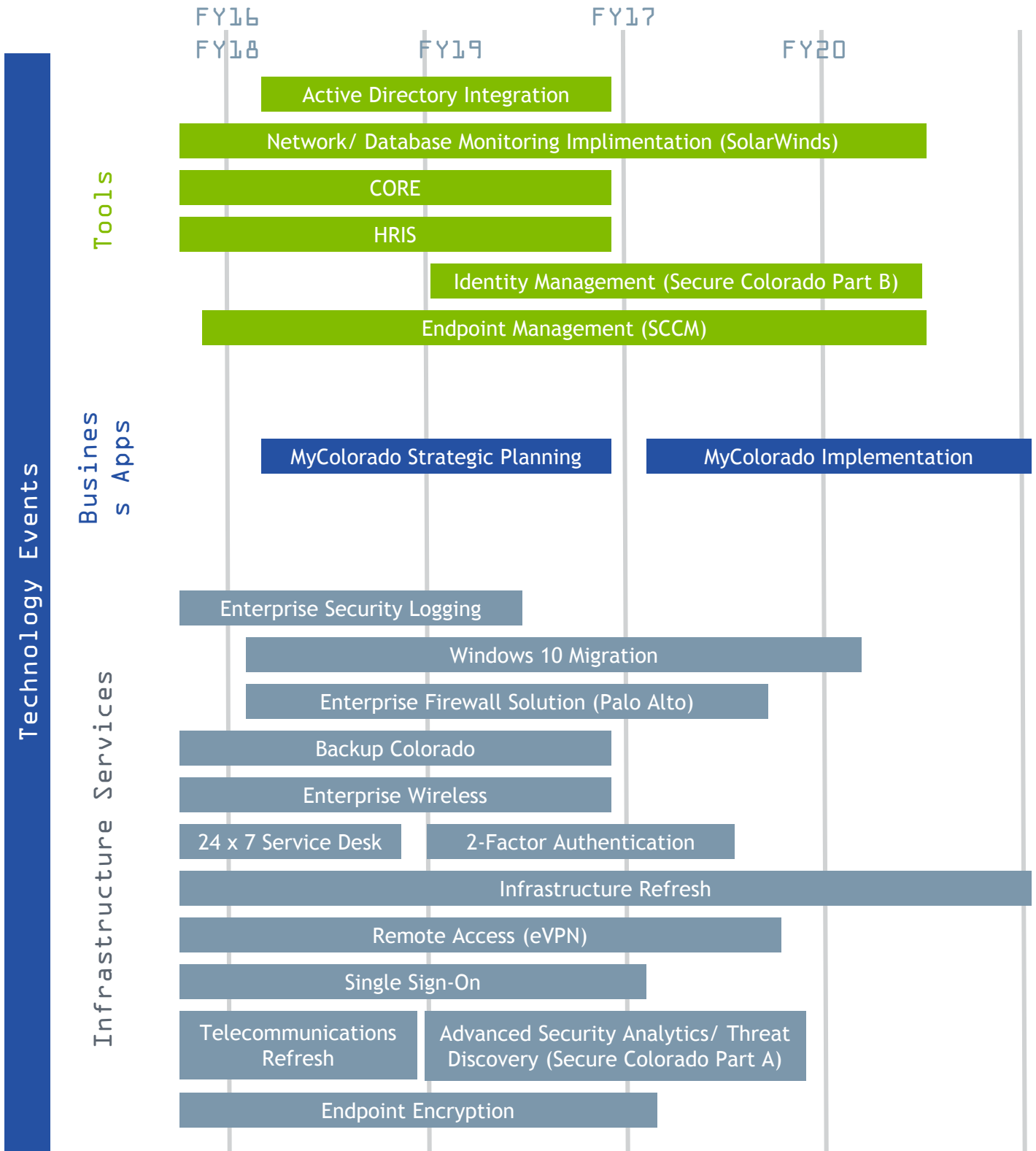
Glossary & Acronyms

Enterprise Wireless	The Enterprise Wireless project will make secure wireless internet accessible to all OIT customers. Implementing wireless internet accessibility responds to the needs of our customers for a basic and expected business service. This project was an OIT FY16 decision item that is billed back to the agencies based on FTE.
Funded	Funded items have a defined source of funding that has been approved and has a plan in place for completion.
FTI	Federal Tax Information, which the state is responsible for protecting.
HIPAA	Health Insurance Portability & Accountability Act of 1996; which requires the state to protect patients' medical information
HRIS	The Human Resources Information System (HRIS) project is well underway and will allow State of Colorado agencies to have a consistent approach for common HR processes and to create a single source of truth that can be accessed by HR state employees with proper credentials.
Identity Management (Secure Colorado Part B)	Secure Colorado is OIT's statewide strategic security plan. OIT has requested \$1,235,922 for FY17 and \$1,228,676 for FY18 to implement an identity management tool across the state that would allow OIT to detect and remove dangerous and costly orphaned accounts and expedite the new employee system provisioning process.
PII	Personally Identifiable Information, which the state is the responsible for protecting.
Network/ Database Monitoring Tool Implementation (SolarWinds)	SolarWinds is a system that monitors IT infrastructure such as networks and servers, and can identify performance problems that could affect user access to applications. SolarWinds can automatically respond in various ways, from simply notifying support staff via email or text message, to even initiating actions such as rebooting devices. OIT is currently deploying SolarWinds across all of our supported agencies. The initial deployment will monitor network segments and devices only, and eventually we will configure it to monitor servers and applications.
Unfunded	Unfunded items are considered essential to the business but are currently lacking defined funding and do not have an approved decision item.
Remote Access (eVPN)	Enterprise Virtual Private Network is a statewide, central remote access solution that provides enhanced security, standardization, and maintenance efficiency.

Appendix A

Statewide Initiative Roadmap

Below is a timeline which represents OIT's highest impact statewide initiatives. Some events may not coincide directly with every agency; this enterprise outlook is intended to provide context in comparing individual agency timelines with the overall state IT strategies.



Appendix B

Unfunded Event Breakdown

Below is an itemized summary of the estimated unfunded components of CDLE's technology outlook.

Event Type	FY16	FY17	FY18	FY19	FY20
Unfunded Applications					
OPS Modernization			\$1-2M		
Connecting Colorado Modernization				\$7-10M	
eComp Modernization			\$1-2M		
Non-Major Applications Modernizations			\$1-2M		
Total Unfunded Tools	\$0	\$0	\$3-6M	\$7-10M	\$0

Unfunded Tools					
Real-Time Reporting Tool (Xtraction)	-	\$16,455	\$16,455	\$16,455	\$16,455
Database Monitoring Tool (SolarWinds)	-	\$27,329	\$7,052	\$7,052	\$7,052
Total Unfunded Tools	\$0	\$43,784	\$23,507	\$23,507	\$23,507

¹ Equipment Refresh based on 384 devices. 80% Desktop device estimated at \$820 and 20% laptop device at \$1,031 with 1% increase per year.

Appendix B

Unfunded Event Breakdown

Below is an itemized summary of the estimated unfunded components of CDLE's technology outlook.

Event Type	FY16	FY17	FY18	FY19	FY20
Unfunded Infrastructure					
Server/Storage Refresh	-	-	-	\$700,000	-
Total Unfunded Infrastructure	\$0	\$0	\$0	\$700,000	\$0
Unfunded (Pending) Decision Items					
Advanced Security Analytics/ Threat Discovery (Secure CO Part A)	-	\$33,885	\$33,885	-.1	-.1
Identity Management (Secure CO Part B)	-	\$41,879	\$41,634	-.1	-.1
Total Unfunded (Pending) Decision Items	\$0	\$75,764	\$75,519	\$0	\$0
Total Unfunded Items	\$0	\$119,548	\$3,099,026-\$6,099,026	\$7,723,507-\$10,723,507	\$23,507

¹Decision Item cost allocation is absorbed into Common Policy after the first two years; once absorbed into Common Policy, different and pending rates may apply.



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