COLORADO
Chief Information Officer &
Executive Director
Governor's Office of Information Technology

TO: Joint Technology Committee Members
CC: Luisa Altmann, Jean Billingsley, Colin Schroeder
FROM: Anthony Neal-Graves, Chief Information Officer & Executive Director, Julia
              Richman, Deputy Executive Director, William Chumley, Interim Chief Information
              Security Officer
DATE: Feb. 14, 2021
RE: OIT Technical Debt - Additional Projects

Honorable Members of the Joint Technology Committee,

This memo is intended to offer further technical debt projects for the JTC to consider recommending for funding by the JBC in addition to the R-01 request for Modernizing Aging IT Systems.

These additional technical debt projects reflect committee members' interest in making critical investments in scaling and stabilizing enterprise platforms and consolidating redundancies. The state's tech debt list is continuing to evolve as OIT continues its discovery process. This is proving to be episodic and reveals new areas with their own levels of criticality. The additional projects provided were identified based on the following scope of focus:

- Projects that deliver savings and efficiencies and help reset the state's technology environment from one focused on disparate, unique systems and licenses to a more shared and scaled enterprise environment.
- Remediating critical security risks and establishing a more effective security posture in an environment with ever increasing cyber threats.
- Work OIT can take on without a significant dependency or operational impact on agencies.
- Creating parallel teams and programmatic management of tech debt so that work can be done without impacting OIT's day-to-day service delivery.
- Estimated costs reflect project costs to accomplish the task, they include the term limited and temporary administrative staff. No ongoing operating is included or expected.

Recommended Outcome
Make a motion to:
- Write a letter to the JBC indicating support for R-01 Modernizing Aging IT Systems as requested for the full general fund amount. OIT would also like to request roll-forward authority for any unspent funds into FY 2025-26.
- Have OIT provide the JTC monthly, quarterly and annual based reporting on technical debt projects including an annual joint JTC & JBC hearing.

The committee may also include in the letter that the JTC supports funding for additional technical debt projects up to $66,220,842.

Additional Technical Debt Projects

Security

This includes a number of items focused on making more robust the state security posture with enhanced monitoring & threat remediation to sustainably and efficiently keep the state up and running for Coloradans. This bolsters the security team tools and capabilities around:

➔ Security risk management, audit response and remediation and vendor risk management
➔ Security incident and event management
➔ Security engineering for known legacy code vulnerabilities
➔ Temporary staff augmentation will include technical administration resources, a parallel team that works with existing OIT staff to deliver on the actual work of turning off the legacy technology

License Rationalization and Consolidation

Consolidate disparate licenses for the same tools deployed across the state. Leverage one-time moneys to overcome up-front capital costs to establish new contracts and rates in order to achieve significant cost savings by leveraging enterprise scale. Remediate cases where the state is under licensed and needs to reconcile use with costs. Transition of licenses from multiple parties to a single party requires through an up-front reconciliation payment before reduced ongoing operational/licensing costs are realized. Address versioning challenges (ex. a consolidating agency is on a legacy version of software and needs to upgrade in order to consolidate into a shared/enterprise license for the standard tool. Examples of licenses and tools targeted for consolidation and rationalization include:

➔ API and integration
➔ Constituent and customer relationship management
➔ Active directory
➔ Desktop and end user suite
➔ Cloud and other platform as a service
➔ Database, server, storage and operating system
➔ Document or workflow management
➔ Omnichannel services, telephonics and remote connection software
➔ Temporary staff augmentation will include technical administration resources, a parallel team that works with existing OIT staff to deliver on the actual work of turning off the legacy technology

Enterprise Identity Migration

Initiatie implementation of modern identity platforms and reduce critical security vulnerabilities, operating costs and barriers to service excellence. This investment will help establish a future focused core for identity management. Additional investments will likely be required throughout Efforts included in this investment include:

➔ Further deploying identity management tools on agency line of business applications
➔ Designing and deploying statewide federated identity management
➔ Integrating MyColorado into the state's approach to identity management
➔ Consolidating disparate or redundant tools into a single holistic approach
➔ Temporary staff augmentation will include technical administration resources, a parallel team that works with existing OIT staff to deliver on the actual work of turning off the legacy technology

Additional Tech Debt Projects

Additional Tech Debt Projects:

Security Projects	Estimated Cost*	Priority to Address (Low - Medium - High)	Time to Implement	Improves Access	Saves Money	Secures Colorado
API & Web Services Security Monitoring and Protection	$0.5M	🔴🔴		✅	✅	✅
Identity Manager & Agency Biz App Integrations	$5.2M	🔴🔴🔴		✅	✅	✅
Security Risk Management, Audit Response and Remediation & Vendor Risk Management	$0.4M	🔴🔴		✅	✅	✅
Splunk Log Aggregation	$4.2M	🔴🔴🔴		✅		✅
Additional Security Vulnerabilities Refactoring	$24.0M	🔴🔴		✅		✅
Checkmarx Consolidation & Architecture Upgrade	$0.2M	🔴🔴🔴				✅
TOTAL	$34.5M					

Additional Tech Debt Projects

Additional Tech Debt Projects:

License Rationalization & Consolidation Projects

License Rationalization & Consolidation Projects	Estimated Cost*	Priority to Address (Low - Medium - High)	Time to Implement (0 1y 2y 3y 4y 5y)	Improves Access	Saves Money	Secures Colorado
Salesforce Consolidation	$1.2M	🔴🔴🔴			✅	✅
Salesforce Marketing Cloud	$0.7M	🔴🔴🔴		✅	✅	✅
License Rationalization & Consolidation Across Enterprise Pricing and Agreements	$17.6M	🔴🔴🔴			✅	✅
TOTAL	$19.6M					✅

Enterprise Identity Migration Projects

Enterprise Identity Migration Projects	Estimated Cost*	Priority to Address (Low - Medium - High)	Time to Implement (0 1y 2y 3y 4y 5y)	Improves Access	Saves Money	Secures Colorado
myColorado Accessibility Upgrades	$0.9M	🔴🔴		✅	✅	
myColorado Platform Refactoring	$0.6M	🔴🔴🔴		✅		✅
Enterprise Identity Migration	$10.6M	🔴🔴🔴		✅		✅
TOTAL	$12.1M					

R-01 Modernizing Aging IT Systems

The Governor's Office of Information Technology (OIT) is requesting a one-time amount of $66,000,000 General Fund in FY 2022-23 to update, modernize and decommission aging technology systems that are costly for the state to maintain. This request will provide resources to begin tackling the state's estimated $465.1 million in technical debt that will continue to accumulate if no action is taken.

R-01 Modernizing Aging IT Systems:

Mainframe Decommissioning Projects	Estimated Cost*	Priority to Address (Low - Medium - High)	Time to Implement	Improves Access	Saves Money	Secures Colorado
Colorado Personnel Payroll System (CPPS)	$20.5M	⊖⊖⊖			✓	✓
Electronic Benefit Transfer	$10.3M	⊖⊖⊖		✓	✓	✓
Automated Child Support Enforcement System (ACES)	$1.9M	⊖⊖⊖		✓	✓	✓
State Identification Module	$1.1M	⊖⊖⊖		✓	✓	✓
Managed File Transfer (MFT): Cyberfusion	$0.6M	⊖⊖⊖			✓	✓
TOTAL	$34.4m					

eFORT Exit & Cloud Migration Projects	Estimated Cost*	Priority to Address (Low - Medium - High)	Time to Implement	Improves Access	Saves Money	Secures Colorado
Core Network Refresh	$4.1M	⊖⊖				✓
Windows 2008 Retirement	$5.2M	⊖⊖⊖				✓
Storage Renewal	$5.2M	⊖⊖⊖			✓	✓
Infrastructure and Network Buildout	$4.1M	⊖⊖			✓	✓
Cloud Migration	$2.9M	⊖⊖⊖			✓	✓
SQL Server 2008 Upgrades	$2.1M	⊖⊖⊖				✓
TOTAL	$23.6					

R-01 Modernizing Aging IT Systems:

Other Tech Debt Projects Projects	Estimated Cost*	Priority to Address Low · Medium · High	Time to Implement 0 1y 2y 3y 4y 5y	Improves Access	Saves Money	Secures Colorado
Call Center Transformation	$0.5M	🔴🔴🔴		✅	✅	✅
MS Access Replatforming	$0.7M	🔴🔴🔴		✅	✅	✅
Enterprise Identity	$1.4M	🔴🔴🔴		✅	✅	✅
SharePoint Migration to OnBase	$0.1M	🔴🔴🔴			✅	✅
Salesforce Upgrade Classic to Lightning	$1.6M	🔴🔴🔴		✅	✅	✅
ITSM & ITAM	$2.4M	🔴🔴🔴		✅		✅
Salesforce Security Vulnerabilities Refactoring	$1.3M	🔴🔴🔴🔴		✅	✅	✅
TOTAL	$8.0m					