



COLORADO

**Governor's Office of
Information Technology**

Office of Information Technology Updates

January 2022

Chief Information Officer & Executive Director - Anthony Neal-Graves

Deputy Executive Director - Julia Richman

CCO & Interim Chief Information Security Officer - William Chumley

Legislative Liaison - Michael McReynolds



Agenda

- FY 2022-23 Budget Requests
 - Questions from JTC
- Legislative Update
- Cybersecurity Update
- Cybersecurity (Executive Session)



FY 2022-23 Budget Requests



FY 2022-2023 Budget Package

Priority	Title	FTE	FY23 Amount	Funding Type	Duration
R-01	Modernizing Aging IT Systems	0	\$66,000,000	General Fund	One-time
R-02	Testing Solutions Support	3.8	\$435,300	Reappropriated	Ongoing
R-03	Veterans Cybersecurity Apprenticeship Program	3	\$356,153	Reappropriated	Ongoing +
R-04	PEAK Call Center Staffing	10	\$0	Reappropriated	Ongoing
R-05	Technical Adjustment - Reappropriate IA Enterprise Services and Staff	28	\$14,793,497 (net zero overall)	Reappropriated	Ongoing
BA-01	IT Accessibility	5	\$1,818,648	General Fund	Ongoing
BA-02	CBMS - OIT Administration Allocation	0	\$4,725,002 (net zero overall)	Reappropriated	Ongoing



R-01 Modernizing Aging IT Systems

Requesting \$66M

- \$34.4M Decommission Mainframe
- \$23.6M Data Center Consolidation
- \$8M Application Modernization

Updated Amounts (JTC Q5)

- \$31.5M Decommission Mainframe
- \$23.0M Data Center Consolidation
- \$10.9M Application Modernization

IMPACTS OF REDUCING TECH DEBT



SAVE 
\$10M+
IN STATE DOLLARS
ANNUALLY

DECREASE IT
FOOTPRINT BY
12K 
SQUARE
FEET

REDUCE
CYBER
RISKS



IMPROVE TECH ACCESS FOR
1 in 5 
COLORADO
ADULTS







How can we make the **most impact** for agencies and Coloradans?

Tech Debt Reduction



Total Tech Debt Reduction



Project Categories	Total Est. Cost*	Key Outcomes
 Mainframe Decommissioning	\$34.4M	Continuity of state services for constituent benefits, state employee payroll, child support enforcement, data security & integration across systems
 eFORT Exit & Cloud Migration	\$40.8M	New technology adoption enablement with significant reductions in the state's physical IT footprint & operating costs
 Security	\$19.1M	Robust state security posture with enhanced monitoring & threat remediation to sustainably and efficiently keep the state up and running for Coloradans
 Accessibility	\$19.6M	Accessible state services for all Coloradans through high-quality, easy-to-use websites and applications
 Consolidation, Rationalization & Replatforming	\$153.0M	Modernized platforms and reductions in critical security vulnerabilities, operating costs and barriers to service excellence
 All Projects	\$266.9M	Advance Technology Deliver Service Excellence Improve Access Save Money Secure Colorado

*Costs above are estimates to address tech debt in its entirety and may not include updated JTC amounts for items in the original funding request totaling -66M.

Total Tech Debt Reduction



Mainframe Decommissioning Projects

	Estimated Cost*	Priority to Address Low - Medium - High	Time to Implement 0 1y 2y 3y 4y 5y	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	---	████████████████████		✓	✓



eFORT Exit & Cloud 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
Core Network Refresh	\$19.1M	--	████████████████████			✓
Windows 2008 Retirement	\$6.6M	---	████████████████████			✓
Storage Renewal	\$5.2M	---	████████████████████		✓	✓
Infrastructure and Network Buildout	\$5.0M	--	████████████████████		✓	✓
Cloud Migration	\$2.9M	---	████████████████████		✓	✓
SQL Server 2008 Upgrades	\$2.1M	---	████████████████████			✓

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Note: Advancing technology and delivering service excellence are components of all projects.

Total Tech Debt Reduction



Security Projects

	Estimated Cost*	Priority to Address	Time to Implement	Improves Access	Saves Money	Secures Colorado
		Low - Medium - High	0 1y 2y 3y 4y 5y			
State Cybersecurity Resource Group Investment	\$10.3M	— —			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Identity Manager & Agency Biz App Integrations	\$4.4M	— — —		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Splunk Log Aggregation	\$3.6M	— — —			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
API & Web Services Security Monitoring and Protection	\$0.4M	— — —				<input checked="" type="checkbox"/>
Security Risk Management, Audit Response and Remediation & Vendor Risk Management	\$0.3M	— —			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Accessibility Projects

	Estimated Cost*	Priority to Address	Time to Implement	Improves Access	Saves Money	Secures Colorado
		Low - Medium - High	0 1y 2y 3y 4y 5y			
State Website UX Improvements	\$10.0M	— —		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Kronos Accessibility Across All Versions	\$3.9M	— — —		<input checked="" type="checkbox"/>		
Futureproof Applications for Inclusivity	\$3.1M	— —		<input checked="" type="checkbox"/>		
State Website Accessibility Implementation	\$1.8M	— — —		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
myColorado Accessibility Implementation	\$0.8M	— —		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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Note: Advancing technology and delivering service excellence are components of all projects.

Total Tech Debt Reduction



Consolidation, Rationalization & Replatforming Projects

	Estimated Cost*	Priority to Address	Time to Implement	Improves Access	Saves Money	Secures Colorado
		Low - Medium - High	0 1y 2y 3y 4y 5y			
Application Refactoring	\$100.0M	High	0-5y		✓	
License Rationalization and Consolidation	\$15.0M	High	0-1y		✓	
Salesforce Security Vulnerabilities Refactoring	\$10.4M	High	0-1y		✓	✓
Tech Debt Remediation Program Administration	\$5.0M	High	0-4y		✓	
Enterprise Identity Migration	\$9.0M	High	0-4y		✓	✓
IT Hardware Asset Management	\$2.1M	High	0-4y	✓	✓	
Salesforce Classic to Lightning Upgrade	\$1.6M	High	0-1y		✓	✓
Salesforce Consolidation	\$1.0M	High	0-1y		✓	
Infrastructure Operational Transformation	\$0.8M	High	0-1y			
MS Access Replatforming	\$0.7M	High	0-4y	✓	✓	✓
Enterprise Load & Performance Testing Investment	\$0.6M	Medium	0-1y	✓	✓	
Salesforce Marketing Cloud Connect Consolidation	\$0.6M	Medium	0-1y	✓	✓	
Call Center Transformation	\$0.5M	High	0-1y	✓	✓	
myColorado Platform Migration	\$0.5M	High	0-1y	✓	✓	✓
Checkmarx Consolidation & Architecture Upgrade	\$0.2M	High	0-1y		✓	✓
SharePoint Replatforming to OnBase	\$0.1M	High	0-1y		✓	

*Costs above are estimates to address tech debt in its entirety and may not include updated JTC amounts for items in the original funding request totaling ~66M.

Note: Advancing technology and delivering service excellence are components of all projects.



R-02 Testing Solutions Support

- **Requesting \$435,300 and 3.8 FTE (FY23) ongoing**
 - Goal: Test critical applications before they go live
 - Current staffing ratio is 1 tester for every 23 developers; industry standard is 1 tester to 3 developers
 - 20% year over year increase in demand since 2017
- **Responses to JTC Questions**
 - CDHS R-03 is intended to specifically support the Trails program only. OIT's R-02 is not program specific.
 - While our request does not fully address the systemic lack of testing, it does assist our Office in building out a model that can scale across the enterprise.
 - This staff supports both a Red and Blue team. The Red Team supports exploitation of vulnerabilities and the Blue Team provides support for infrastructure protection.
 - LoadRunner is currently being utilized by the team; there are other tools available but we currently lack the staff with appropriate skills and training to leverage those tools.



R-03 Veterans Cybersecurity Apprenticeship Program

- **Requesting \$356,153 and 3.0 FTE (FY23) ongoing**
 - Goal: Strengthen and leverage existing Veterans Transition Program within the Office of Information Security; helps build a talent pipeline
 - Expand existing internship program while serving our veterans. This program monitors more than 8M security “events” daily
 - Ability to transition interns to full time vacant positions within the Office
- **Responses to JTC Questions**
 - OIT, CDPS and National Cybersecurity Center have begun the process of comparing other state models for providing “whole of state” cybersecurity services to members of a public-private Colorado cybersecurity consortium. The 3.0 FTE are primarily outreach oriented, thus would reside within CDPS and operate jointly across OIT and CDPS on statewide efforts.
 - Since the inception of the program in 2017, OIT has hosted 26 apprentices. The first VTP participant is now an OIT Cybersecurity Manager. An additional six past participants have been hired within OIT, four of whom now work in cybersecurity.



R-04 PEAK Call Center Staffing

- **Requesting \$0 and 10.0 FTE (FY23) ongoing**
 - Goal: Transition contract staff at PEAK Technical Call Center into state FTE
 - Maximize efficiency while improving the service delivery framework to best support the experience of millions of Coloradans who rely on the call center and its services
- **Responses to JTC Questions**

Call Center	FTE	Contractor	% Turnover-FTE	% Turnover-Contractor
SNAP	2.0	2.0	0%	75%
HCPF Medicaid Call Center	21.0 - 25.0	4.0 - 8.0	42%	100%

- 10 FTE are preferred due to an increase of new applications and renewals for SNAP, Medicaid and Colorado Works, and with the continued Public Health Emergency, the number of clients receiving benefits continues to grow. On average, the Chatbot has resolved over 63% of questions, but the overall volume of questions requiring a live agent continues to grow.



R-05 Interagency Agreement Spending Authority and FTE

- **Requesting \$14,793,497 and 28.0 FTE (FY23) ongoing (net-zero overall)**
 - Goal: Shift from budgeting and billing agencies for OIT Enterprise products and services via interagency agreements (IA) to reappropriated funds to OIT; Improves Long Bill transparency and work towards unified billing
 - Budgets will remain in agencies' Long Bill operating budgets while OIT receives the FTE and spending authority, resulting in a net zero impact to the state budget
 - This will eliminate the additional workload on finance teams at OIT and the agencies as IA's are time consuming
- **Responses to JTC Questions**
 - OIT has made significant progress in improving our technology billing through the Real-time Billing (RtB) IT Transformation project. OIT launched RtB on July 1, 2022, with the first real-time bill sent on Aug. 31. OIT has received positive feedback from customers on the information provided. OIT continues to improve the website, add details and information to help customers assess consumption, and make business decisions



BA-01 IT Accessibility

- **Requesting \$1,818,648 and 5.0 FTE (FY23) ongoing**
 - Goal: To address the deep technology accessibility needs of the state and expand OIT's Technology Accessibility Program (TAP)
 - This request represents what is needed at this time for OIT to adequately support the agencies as they work to test, assess, and remediate accessibility issues
 - IT Accessibility Adoption Plans (due to OIT by June 30, 2022)
- There are four primary areas of funding needed to assist with IT accessibility needs for the state:
 - 1) Testing and Remediation Software and Services
 - 2) Manual testing for websites and applications
 - 3) Accessibility Engineering and Consulting
 - 4) Remediation
- **Recent TAP accomplishments**
 - Continue to work closely with agencies; offer twice weekly TAP office hour and monthly newsletter; hold regular meetings with IT Directors and agency partners
 - Launched the [IT Accessibility Planning Guide](#) - includes planning templates, training and resources



BA-02 CBMS Administration Allocation

- **Requesting \$4,725,002 (FY23) ongoing (net-zero overall)**
 - Goal: More equitably allocate OIT's administrative/overhead costs to all customers and services
 - Benefits the state budget by reducing the net General Fund impact of OIT's Administration since federal funding comprises 68.8% of the CBMS funding
 - This solution will recalculate the allocation of OIT administrative expenses to include CBMS
- **Additional Details**
 - CBMS is funded primarily by the Department of Health Care Policy and Financing (HCPF) and the Department of Human Services (CDHS). CBMS currently does not pay for any OIT administrative/overhead costs.
 - Since HCPF gets a high percentage of federal funding (68.8%), moving allocations to HCPF would lead to reduced use of General Funds and cash funds.
 - Frees up an estimated \$803,250 in General Fund.
 - The net costs equal zero; only two agencies (HCPF and CDHS) will see an increase in costs.
 - This request aligns with a decision by the Rates & Services Board on May 12, 2021 to more equitably allocate OIT's administrative/overhead costs to all customers and services.



Legislative Update



Legislative Update

- Drafting Status
 - Relocating PSCN/DTRS program from OIT to CDPS
 - Sustainable IT Funding
 - Anticipate bringing these back for JTC consideration in February hearings
- Broadband Statutory Changes Identified
 - Current state law created by HB21-1289 requires the Broadband Deployment Board to apply more restrictive requirements than current U.S. Treasury rules.
 - Preventing the board from deploying the \$35M in federal ARPA funds with the correct intent.
 - U.S. Treasury rules and regulations are changing too often and have specific requirements prescribed by statute.



Cybersecurity



Log4j / Kronos Vulnerabilities

Log4j

- Zero indicators of compromise or security breaches
- Over the past several weeks, OIT and our vendor partners have:
 - Analyzed **3,111** servers and **221** critical or essential agency applications
 - Mitigated or patched **204/221** critical or essential agency applications
 - *(implementing follow up plans for the remaining 17)*
 - Begun assessment of an additional **993** applications across all agencies, as well as application of security patches. *Both will take additional time to complete*

Kronos

- Administrators received system access Jan. 20 with all data restored through Dec. 10; 10 agencies were affected with no data loss identified
- Managers will approve time cards and the system will bring all leave balances current as time is entered
- There will be a reconciliation process performed by the agency payroll teams to determine any required pay adjustments

Security Wins



88,453

Total protected identities



34,467

Systems with endpoint protection

In
2021...

9,099

Attacks blocked by endpoint protection

2,406

Attacks verified as true risks



Cybersecurity

- Solid Defensive Posture and Responsiveness to date
- Whole of State focus and initiative
- IIJA Federal dollars
- Systemic challenges with technical debt:
 - Dedicated resources
 - Priorities
 - Pace of change



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Questions?