



COLORADO

Department of Labor and Employment

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Governor

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Executive Director

FY 2021-22 Request Year-IT Capital Request | [11/2/2020]

Signature

Date

*FY – Department IT Capital Construction Priority: IT-01
Modernize Colorado Automated Tax System*

Summary of Request	Total Funds	CCF-IT	Cash Funds	Reappropriated Funds	Federal Funds
FY 2021-22	\$9,422,240	\$0	\$9,422,240	\$0	\$0
FY 2022-23	\$9,500,000	\$0	\$9,500,000	\$0	\$0
FY 2023-24	\$9,500,000	\$0	\$9,500,000	\$0	\$0
Total	\$28,422,240	\$0	\$28,422,240	\$0	\$0

Request Summary:

The Colorado Department of Labor and Employment (CDLE) requests \$28,422,240 cash funds from the Employment and Training Technology Fund in FY 2021-22 and spread over three years to modernize the Colorado Automated Tax System (CATS), a component of the Unemployment Insurance (UI) legacy system. This request would complete modernization of the UI legacy system, which includes the claimant benefits system (MyUI+) and the employer services system (CATS). These systems have deep dependency on one another and need to be fully integrated to provide a holistic UI program. The claimant benefit system, MyUI+, was successfully deployed, on time to the revised schedule and without critical issues.

The Department commits to approach the project iteratively, building in agile sprints with ongoing evaluation and feedback loops to determine early and often if there are gaps or needs not being met at each stage of the build. This would allow for early determination as to whether the build is meeting the needs of the mission, adjustment to approach and needed outcomes, and early extraction from the project if such circumstances arose. In plain English, our agile approach will allow for ongoing adjustments, corrections, and other calibration of the project as opposed to the legacy practice of requesting funds for large, one-time capital projects based on waterfall methodology.

Project Description:

CDLE plans to fully replace CATS with a new and modernized application. Given the need to fully integrate with MyUI+, CDLE anticipates purchasing a commercial off-the-shelf (COTS) product that lays out the basic underlying logic for a system of this mission, provides flexibility to customize in order to comply with State statutes and regulations, and allows for needed integrations to support a fully functioning, end-to-end Unemployment Insurance system. The modernized application will need to be cloud-hosted, web-based, accessible, and meet Colorado Information Security Office guidelines and mandates. The product will be modularly built, allowing for an Agile approach to updates, enhancements, and regulatory changes in a modern language. In order to maintain and continuously improve the new employer services system, CDLE anticipates submitting an operating budget request as this project nears completion.

Background of Problem or Opportunity:

The Colorado Automated Tax System (CATS) is the legacy system used to administer Employer Services. The original CATS application code was written in 1983 when it was launched on the mainframe, and has not seen significant upgrades since. In 2016 and in partnership with OIT, the system was successfully migrated off of the mainframe onto a web-based platform. While this significant milestone upgraded the underlying platform, the underlying code is dated, limiting the functionality, making it inflexible and difficult to maintain. Self-service options for the business community are also reduced by the limitations of the underlying legacy system code and a lack of full integration with the new UI Benefits system (MyUI+).

This technology does not include change history or audit logging capabilities, thus severely limiting transparency and understanding end-users, policymakers, and the general public. Challenges and limitations of the current system include, but are not limited to:

- Premium and wage reporting are siloed between CATS and the claimant benefits system respectively, with no comprehensive cross-system regulation which allows for the possibility of inaccuracies in the true overall unemployment rate for employers, and contributes to potential inaccurate experience rates for the employer community, driving inaccurate costs.
- It was not built to adhere to the most basic accounting principles and does not maintain an internal system ledger, which allows for the possibility of producing inaccuracies in employer billing. In addition, the need for a peripheral accounting system creates additional costs to the program and sustainability concerns.
- Potential inaccuracies with legacy system calculations can cause financial burdens to the employer community and lead to inaccurate Federal reporting standards.
- Extensive testing and staff resource time are required on an annual basis to review annual experience rate calculations, and an average of about eighty hours of staff time per week is spent on maintaining system calculations. This also introduces the potential for errors due to the manual nature of this work.
- The current online employer self-service options limit the ability of third-party administrators to participate in account management, reducing access to a large portion of the employer community.
- If an employer makes a mistake/error on a report or other correspondence submitted through the current self-service system, the mistake/error cannot be adjusted and the employer must submit additional documentation to have staff make corrections rather than having real-time functionality and employer control over their own data. This manual effort also has the potential to further introduce errors.
- Reimbursable employers have limited access to information regarding their account status and ability to participate online, which can lead to business decisions being made on inaccurate or out of date information.

The employer services system is essential to ensuring employers have full access to each area within the UI system. New employers should have an easy way to register their business through My Biz Colorado or individually with the UI Division. Established employers must be able to easily and accurately report wages and pay premiums. Most importantly, employers should have due process and be able to interact with the UI Division in all eligibility and adjudication determinations within a single system. This request would provide for a more adaptable, stable, and cost-effective system, with accessible and user friendly self-service options.

Justification:

For almost forty years CDLE has seen increased limitations in operations and customer service due to the premiums and benefits technologies operating in different systems. As the underlying code ages it becomes more expensive to maintain and increasingly detrimental to the Department’s customer service goals. For more than eight years, CDLE has worked to analyze and progressively modernize both components of the UI system, based on national best practices. In 2016, based on these best practices and in partnership with OIT, CDLE completed the first critical step of this modernization and transitioned the legacy code off the mainframe and onto a modern platform. However, given the limitations of the underlying code and its significant deficiencies in automation, CDLE needs to complete the next critical phase of modernization to solve the issues mentioned above by fully replacing its legacy systems. As noted above, CDLE successfully completed the modernization of the benefits system on January 10, 2021. After scoping out multiple options, CDLE has concluded that a COTS product that offers full system integration is the best path forward for a CATS replacement. The requested modernization of CATS will seek to integrate the employer system with MyUI+.

Business Process Analysis: CDLE has been considering this project for over eight years, and has narrowed in on this one for the past four years. At the beginning of the planning process, CDLE did a deep discovery phase to determine the best approach to this type of modernization. This included business process mapping and analysis. In addition, the business is gaining insights from the modernization of the benefits system which have helped to refine the goals related to the premiums system modernization.

Cost-Benefit Analysis and Project Alternatives (per H.B. 15-1266):

Alternative 1: Maintain current system

CATS causes a variety of problems for Colorado employers and prevents CDLE from operating efficiently and providing timely services to the employer community. Maintaining the current system would perpetuate the challenges described above, driving up costs for employers and limiting CDLE’s ability to adapt to current and future changes in UI policy, while leading to increased maintenance costs and risk of system failure.

Alternative 2: Move forward with CATS Upgrade

Modernizing CATS will enable CDLE to avoid potential added burdens and costs to employers. The need to modernize the current system and retrieve accurate and timely data is crucial in order to continue to correctly and efficiently serve Colorado’s employer community. Cost savings and/or cost avoidance were calculated using cost per employer as a base unit. The total estimated cost of completing the project is \$28,422,240.

Initial Investment		\$ (28,422,240.00)
Discount Rate		1.20%
Cost Savings (adjusted to 2020 dollars using 1.2% real discount rate, per OMB A-94, and rounded)	Year 1	\$1,450,000.00
	Year 2	\$1,450,000.00
	Year 3	\$1,450,000.00
	Year 4	\$1,450,000.00
	Year 5	\$1,450,000.00
	Year 6	\$1,450,000.00
	Year 7	\$1,450,000.00
	Year 8	\$1,450,000.00
	Year 9	\$1,450,000.00
	Year 10	\$1,450,000.00
	Year 11	\$1,450,000.00
	Year 12	\$1,450,000.00
	Year 13	\$1,450,000.00
	Year 14	\$1,450,000.00
	Year 15	\$1,450,000.00
	Year 16	\$1,450,000.00
	Year 17	\$1,450,000.00
	Year 18	\$1,450,000.00

	Year 19	\$1,450,000.00
	Year 20	\$1,450,000.00
Net Present Value		\$577,760.00

All costs were discounted to 2020 dollars using a real discount rate of 1.2 percent (per OMB A-94) in order to present a consistent view of data, projections, and the time value of money.

The above calculation of net present value (NPV) shows the benefit to CDLE from modernizing CATS. The \$1,450,000 in Year 1 is an estimate based on operational efficiencies. Twenty years is used as the time frame to parallel the state’s current replacement rate for large systems. There is an assumption that if the new system is maintained and updated to an adaptable platform, the system should be sustainable over this time frame.

Success Criteria and Improved Performance Outcomes:

A fully modernized and integrated system providing end-to-end (premium collection through benefit payment) service will provide better customer service, self-service ability, and more real time information and problem solving for both employers and unemployment claimants. Self-service not only creates efficiency for stakeholders and customers, but also for the program, reducing manual workloads, relieving the call center volume and staff time spent working on filling a technical gap. Adding expanded functionality and account maintenance options for Third Party Administrators (TPAs) increases options for employers to participate in all aspects of the unemployment insurance process. Increased confidence and visibility in experience rate calculations should decrease the amount of staff hours needed to maintain the system and increase billing accuracy for employers. Integrating this with the benefits site for adjudication and appeals processes will promote greater accuracy and visibility in benefit payments, rate calculations and provide due process for all parties.

An updated and modularized program will generate many technical efficiencies. Having a cloud-hosted system will allow for scalability at the infrastructure layer with the ability to scale up and down to the fluctuations of the economy, a need which has become even more pronounced and urgent during the COVID-19 Pandemic. Most importantly, building a system with a modular approach allows for more agile changes as they are mandated through legislation or regulation, and should allow for a healthy life of the product until such time as it is no longer viable as dictated by changes in technology.

To demonstrate project success, we will look at the accessibility of the Employer Self Service options and the fully automated accurate accounting of employer reported wages, premiums, and charging statements. Currently, extensive testing and staff resource time is required on an annual basis to review annual experience rate calculations and eighty hours of staff time per week is spent on maintaining system calculations. We would anticipate a savings of at least 40 hours per week in staff time required to maintain the system.

Assumptions for Calculations:

Assumptions:

1. CDLE and OIT will partner on this effort through this entire project end to end to ensure compliance and success.

2. CDLE will seek a COTS product with customizable features to ensure alignment with Colorado's unique statutory and business environment.
3. CDLE will implement this project using an Agile approach, building in sprints with ongoing evaluation and feedback loops to determine early and often if there are gaps or needs not being met at each stage of the build. This feedback mechanism will be run in partnership with the Governor's Office of State Planning and Budgeting and the Office of the State Controller.
4. As part of the state's ongoing effort to reimagine large technology projects, CDLE will utilize its internal Procurement and Contract Services (PCS) unit to complete the procurement and contracting processes supporting this project. PCS is currently conducting the Request for Information (RFI) process to obtain budgetary estimates, technical requirements, and application identification to support the requested solution. PCS managing the full acquisition process and maintaining contract ownership will create an improved timeline and enable the efficient processing of contract and/or amendment documents resulting in the elimination of approximately 50% of the total transactions required if completed via interagency agreements with OIT. Additionally, required contract actions and ownership will be contained within the agency allowing for strong communication, accountability, and compliance to State and federal fiscal rules and code.
5. CDLE will engage and comply with OIT standards and will seek OIT support, guidance, and agreement related to the technology and security related requirements in the state contract(s) if any deviations from standard template language are negotiated. Finally, PCS will ensure that the final agreement(s) will be routed and approved by the required divisions within OIT prior to execution.
6. Necessary System Functions include:
 - a. Administer and maintain employer premiums accounts and serve as the official CDLE system of truth for such records and associated data.
 - b. Perform complex employer annual experience rate calculations and implement incremental rate changes due to a range of causal factors including ownership changes, leasing company changes, seasonality, mergers and acquisitions, etc.
 - c. Provide online self-service functions for rated and reimbursable employers to manage their premiums accounts, including wage and premiums reporting, demographic changes, third party administrator associations, and other communications and correspondence as required by law
 - d. Provide employers the option to send and receive required notices, reports, or other correspondence electronically.
 - e. Provide employers and TPAs with a portal to interact with and provide requested information related to unemployment claims filed by existing and former workers, including wage dispute information, separation information, and appeals participation.

- f. Fully integrate with the UI Benefits system, MYUI+, to provide wage, separation, appeals, and other data as required to administer the UI program. This integration is critical to connect the information on employer benefit payments on UI claims to rate calculations.
- g. Fully integrate with other UI Division platforms, including the document management, field audit, and appeals system.
- h. Provide federal, state, and agency-specific reporting.
- i. Provide robust data audit logging and security functions.
- j. Allow for the creation and maintenance of Employer Services forms and other correspondence.
- k. Provide real-time processing to avoid the need for extensive batching of functions wherever possible.
- l. Utilize existing CDLE infrastructure components and application software to reduce the need for licensing and maintaining separate platforms.
- m. The user interface will be shared by UI staff, TPAs and employers alike, allowing for more self-service options and better communication between CDLE and its customers.
- n. The solution should utilize modernized technology to ensure data integrity and adhere to general accounting standards including a dual entry ledger system, as well as modern fraud detection and prevention measures.
- o. CDLE intends this to be the final large IT Capital request for the Unemployment Insurance system for the foreseeable future. The Department has intentionally designed MYUI+ and intends to design the employer services system in a modular approach, which will allow us to ask for smaller and more targeted ongoing appropriations for upkeep and upgrades, rather than one large lump sum for redesign in the future, until such time the platform can no longer be supported.

Estimated Project Costs:

- Data Conversion and Modernization Vendor - \$20,000,000
- Independent Verification and Validation (IV&V) - \$1,500,000
- Disaster Recovery (DR) - \$500,000
- Data Storage - \$600,000
- IT Professional Services - \$4,322,240
- Project and Contract Management - \$1,500,000
- Total Project Estimated Cost (excludes on-going maintenance) - \$28,422,240

It is estimated that this project will be no longer than 36 months.

Vendor Costs: \$20,000,000

Migrate and upgrade the CATS System and Data from the current to a modern technology platform. The estimated cost is based on the benefits system upgrade at 65% of the vendor costs. It is assumed the premiums system will have some efficiencies built into it from the upgraded benefits system. It is also estimated that the premiums system is a clearly defined IT build since it has fewer unique requirements than the benefits system. The estimated vendor cost is \$20,000,000.

Independent Verification and Validation (IV&V)

House Bill 1288 requires independent verification and validation (IV&V) done by a third party organization not involved in the development of the project. The verification is to determine whether user requirements are met along with ensuring that the project is structurally sound and built to required specifications. It is estimated the cost will be \$1,500,000 and is included in estimated project total.

Disaster Recovery.

In line with House Bill 1288, Disaster Recovery is mandated for all major IT projects. It is estimated the cost will be \$500,000.

Data Storage.

The initial estimate from OIT Network Infrastructure teams based upon a premium system that would require 12 virtual servers for the new environment servers to house the system at an estimated cost of \$50,000 each for a total cost of \$600,000.

IT Professional Services – based upon the FY 2020 Fiscal Note Common Policies

- One OIT Project Manager 2,080 hours per year x 3 years @ \$148.00/hr. = \$923,520
- 8 OIT employees for computer programming to Architect, Build, and for Security of new system = 2,080 hours per year x 3 years @ \$112.00/hr = \$1,863,680
- 2 IT Business Analysts for 2,080 hours per year x 3 years @ \$123.00/hr = \$1,535,040

Project and Contracts Management: Identify, assess, and provide options and information to mitigate or eliminate risks and issues. Estimated cost is \$1,500,000.

Consequences if not Funded:

Not funding this project will require CDLE to expend more resources trying to maintain a system with outdated code, while simultaneously spending resources to manually do many things that could otherwise be automated. Simply put, keeping the system as is would mean less access to UI for employers, less

accuracy for employer charging, and less accuracy for claimant wage information. And it will become increasingly difficult to find resources to support the outdated code, creating system vulnerabilities.

Implementation Plan:

CDLE will implement this project using a fully agile approach. The Department has already scoped out the details of the project through an original exploration phase four years ago, prior to modernizing the system platform off the mainframe and, subsequently the claimant benefits system. CDLE will first revisit the scope and identify necessary changes based on lessons learned since then, including during the COVID-19 pandemic. CDLE will then issue a comprehensive request to negotiate to find a vendor who can deliver the desired product.

CDLE commits to approach the project iteratively, building in agile sprints with ongoing evaluation and feedback loops to determine early and often if there are gaps or needs not being met at each stage of the build. This approach will allow for early determination as to whether the build is meeting the needs of the mission, adjustment to approach and needed outcomes, and early extraction from the project if such circumstances arose. In plain English, the agile approach will allow for ongoing adjustments, corrections, and other calibration of the project as opposed to the legacy practice of one-time, large capital projects based on waterfall methodology.

This project will fully align with the IT Transformation work within OIT. CDLE will, for the first time, be the contract owner. While CDLE will continue to fully partner with OIT on technology and security needs, which will further reduce potential for fraud, the Department will be negotiating directly with vendors and be able to quickly adapt to on the ground changes without having to go through all levels of OIT procurement approval.

Change Management:

The change management strategy includes training, process evaluation, communication, and testing as applicable. The Division will utilize ADKAR (Awareness, Desire, Knowledge, Ability, Reinforcement), Lean and Agile methodologies to assess staff, leadership and operations in order to understand organizational readiness and implement an Organizational Change Management (OCM) strategy. OCM also includes evaluating and preparing customers for the technology changes. The OCM plan will evaluate current state business processes against the proposed system changes to identify process changes to be incorporated into the training. Staff and leadership readiness will be continually assessed against ADKAR principles and mitigation strategies will be implemented to assist with change readiness. And tailored communications will be sent to customers and stakeholders at appropriate milestones. This mirrors the approach taken with the modernization of the benefits system which proved highly successful from an organizational change perspective.

Alignment with OIT Best Practices and Standards:

All efforts outlined in this proposal would follow standard OIT policies and standards. This includes all Cyber Security Policies and all IT standards. CDLE has and will continue to partner fully with OIT throughout this effort.

Procurement:

CDLE will run the full procurement of this project, and involve OIT as necessary to ensure consistent technology and security protocols.

Disaster Recovery and Business Continuity:

This project will comply with OIT's Enterprise Portfolio and Project Management (EPPM) Process which includes completing project process compliance gates to review and authorize a System Security Plan, as well as conduct extensive security and vulnerability testing and remediation of any potential issues prior to Go-live of the new system. CDLE will engage IV&V to review project health and address any potential risks on the project, which is also a requirement of OITs EPPM Process. The department is requesting funds to build a redundant backup/DR system as part of the overall project plan which will provide failover and recovery options in the event of a system disaster or COOP adverse event.

Accessibility Compliance:

Within the project scope is ensuring that all state and federal statutory requirements are met for accessibility and ADA compliance. These requirements will be met for both external Employers accessing the web-based system, as well as internal staff accessing the back-end system. These accessibility compliance elements will be requirements that must be met by the vendor in design and implementation for the purposes on project completion and payment.

ADDITIONAL REQUEST INFORMATION	
Please indicate if three-year roll forward spending authority is required.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is this a continuation of a project appropriated in a prior year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If this is a continuation project, what is the State Controller Project Number?	N/A
Please attach letter from OIT indicating review and approval of this project	

ESTIMATED PROJECT TIME TABLE		
Steps to be completed	Start Date	Completion Date
Begin Developing Business Requirement	July 2021	
Begin Data Conversion	September 2021	
Construct Application	October 2021	October 2023
Test application	November 2023	January 2024
End user training and Final Acceptance of Project	February 2024	June 2024

CASH FUND PROJECTIONS (DELETE IF NOT APPLICABLE)			
Cash Fund name and number:		Employment and Training Technology Fund 24M0	
Statutory reference to Cash Fund:		8-77-109(2)(a.9), C.R.S.	
Describe how revenue accrues to the fund:		The fund receives 0.0004 assessed against each employer's premium of the Unemployment Insurance Premium Surcharge	
Describe any changes in revenue collections that will be necessary to fund this project:		A statutory change will be necessary in order to collect revenue for this project.	
FY 2019-20 Actual Ending Fund Balance	FY 2020-21 Projected Ending Fund Balance	FY 2020-21 Projected Ending Fund Balance with Project Approval	FY 2021-22 Projected Ending Fund Balance with Project Approval
\$463,249	\$0	\$0	\$0

