



COLORADO
Office of State Planning
& Budgeting
111 State Capitol
Denver, Colorado 80203

November 2, 2020

The Honorable Representative Jonathan Singer
Chair, Joint Technology Committee
Colorado General Assembly
State Capitol Building, Room 029
Denver, CO 80203

RE: OSPB Submission of FY 2021-22 Prioritized IT Capital Requests

Dear Chair Singer:

As required by 24-37-304 (1) (c.5) (I)(B), C.R.S., the Governor's Office of State Planning and Budgeting is providing the prioritized FY 2021-22 IT capital request list for the Executive Branch to the Joint Technology Committee (JTC). The package includes the following:

- An updated assessment of General Fund transfers to the Capital Construction Fund;
- A prioritized list of IT capital projects utilizing Capital Construction Funds.

The four recommended IT capital projects cost a total of \$36M.

Thank you for your consideration of the attached request. Please contact me with any questions or concerns.

Sincerely,

A handwritten signature in blue ink that reads "Lauren Larson".

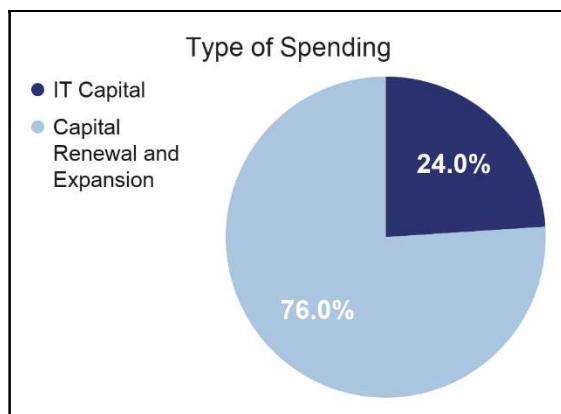
Lauren Larson,
OSPB Director

CC: Senator Nancy Todd, Vice Chair, JTC
Senator Jeff Bridges, JTC
Senator Jack Tate, JTC
Representative Mark Baisley, JTC
Representative Brianna Titone, JTC
Ms. Luisa Altman, Legislative Council Staff
Ms. Carolyn Kampman, Joint Budget Committee Staff Director
Mr. Anthony Neal-Graves, Chief Information Officer
Mr. Seth Cohn, Office of State Planning and Budgeting



General Fund Transfer Assessment

The total capital construction budget in the FY 2021-2022 recommendation totals \$138 million, which includes \$41 million for projects funded solely by cash funds, and another \$97 million for projects that include some General Fund amount. That \$97 million includes \$7 million from federal funds, as well as a transfer of \$90 million from the General Fund. This \$90 General Fund investment can be detailed as follows:



General Request by Type of Spending		
Description	\$	%
Controlled Maintenance	\$ -	0%
IT Capital	\$ 21,561,817	24%
Capital Renewal and Expansion	\$ 68,397,147	76%
Total	\$ 89,958,964	100%

There were no 1331 approved Capital Projects in FY 2020-21. OSPB recommends a total transfer of \$90 million, as shown in the table below. A complete list of projects in the request can be found in our budget submission documents to the Capital Development Committee and Joint Technology Committee, located on the OSPB website.

General Fund Transfer to the Capital Construction Fund			
Description	FY 2020-2021	FY 2021-2022	
1331 Approved Capital Projects	\$ -	\$ -	\$ -
New Capital Requests	\$ 20,000,000	\$ 70,000,000	
Total Transfer by Fiscal Year	\$ 20,000,000	\$ 70,000,000	
Total Transfer			\$ 90,000,000

OSPB IT Capital Overview GF/CCF Prioritized Project List

FY 2021-2022 IT Capital Requests - Funded with General Fund Transfer to Capital Construction Fund													
Ranking				FY 2020-21 Prior Year Appropriations				FY 2021-22 Governor's Recommendation					
Rec	OSPB	CCHE	Agency	Project Name	Type	TF	CCF (GF)	CF	FF	TF	CCF (GF)	CF	FF
Yes	1	CDPHE	Integrated Reportable Disease Data Management System	N/A	\$	-	\$	-	\$	-	\$ 10,000,000.00	\$ 10,000,000.00	\$ -
Yes	2	OeHI	Rural Connectivity	N/A	\$	-	\$	-	\$	-	\$ 6,498,000.00	\$ 1,081,800.00	\$ -
Yes	3	CDE	Modernize Colorado Automated Tax System	N/A	\$	-	\$	-	\$	-	\$ 9,422,240.00	\$ -	\$ 9,422,240.00
Yes	4	CDHS	Behavioral Health - Infrastructure Investments	N/A	\$	-	\$	-	\$	-	\$ 10,480,017.00	\$ 10,480,017.00	\$ -
No	5	DHE	CSU Fort Collins - Upgrade Network Hardware	N/A	\$	-	\$	-	\$	-	\$ 760,000.00	\$ 541,000.00	\$ 219,000.00
No	6	DHE	Colorado Northwestern CC - Network and Security Upgrades	N/A	\$	-	\$	-	\$	-	\$ 1,921,053.00	\$ 1,746,412.00	\$ 174,641.00
No	7	DHE	Adams State, Fort Lewis, Western - Digital Transformation Initiative for Rural Higher Education	N/A	\$	-	\$	-	\$	-	\$ 9,291,975.00	\$ 9,199,055.00	\$ 92,920.00
No	8	DHE	UNC - Next Generation Cyber Secure Network	N/A	\$	-	\$	-	\$	-	\$ 1,202,987.00	\$ 1,191,077.00	\$ 11,910.00
No	9	DHE	Colorado Mesa - Network Security and Resiliency Project	N/A	\$	-	\$	-	\$	-	\$ 2,472,417.00	\$ 2,249,898.00	\$ 222,519.00
No	10	DHE	CC of Denver - Classroom and Conference Room Technology	N/A	\$	-	\$	-	\$	-	\$ 1,697,743.00	\$ 1,595,878.00	\$ 101,865.00
No	11	DHE	School of Mines - Re-envisioning Mines ERP and SIS	N/A	\$	-	\$	-	\$	-	\$ 911,000.00	\$ 789,000.00	\$ 122,000.00
No	12	DHE	MSU Denver - Reimagining the Campus Digital Experience	N/A	\$	-	\$	-	\$	-	\$ 1,500,000.00	\$ 1,300,000.00	\$ 200,000.00
No	13	DHE	MSU Denver - Network Infrastructure Modernization	N/A	\$	-	\$	-	\$	-	\$ 1,500,000.00	\$ 1,250,000.00	\$ 250,000.00
No	14	DHE	Otero JC - Technology and Equipment Upgrade	N/A	\$	-	\$	-	\$	-	\$ 722,750.00	\$ 597,750.00	\$ 125,000.00
No	15	DHE	Lamar CC - LCC Technology and Equipment Upgrades	N/A	\$	-	\$	-	\$	-	\$ 588,300.00	\$ 553,002.00	\$ 35,298.00
				Subtotal, Recommended IT Capital - CCF	\$	-	\$	-	\$	-	\$ 36,400,257.00	\$ 21,561,817.00	\$ 9,422,240.00
				Subtotal, Not Recommended IT Capital - CCF	\$	-	\$	-	\$	-	\$ 22,568,225.00	\$ 21,013,072.00	\$ 1,555,153.00
				Total IT Capital - CCF	\$	-	\$	-	\$	-	\$ 58,968,482.00	\$ 42,574,889.00	\$ 10,977,393.00
													\$ 5,416,200.00



COLORADO

Department of Public Health & Environment

Jared Polis
Governor

FY 2021-22 Request Year-IT Capital Request / November 2, 2020

Jill Hunsaker Ryan
Executive Director

RY – Department IT Capital Construction Priority: IT-01 **Integrated Reportable Disease Data Management System**

Summary of Request	Total Funds	CCF-IT	Cash Funds	Reappropriated Funds	Federal Funds
FY 2020-21	\$10,000,000	\$10,000,000	\$	\$	\$
FY 2021-22	\$	\$	\$	\$	\$
FY 2022-23	\$	\$	\$	\$	\$

System Replacement (costs escalating, failing technology, software or vendor support ended, or new technology, e.g., DRIVES, CHATS)	System Enhancement Regulatory Compliance (new functionality, improved process or functionality, new demand from citizens, regulatory compliance, e.g., CBMS)	Tangible Savings Process Improvement (conscious effort to reduce or avoid costs, improve efficiency, e.g., LEAN, back office automation)	Citizen Demand “The Ways Things Are” (transformative nature of technology, meet the citizens where they are, e.g., pay online, mobile access)
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Select One: Categories of IT Capital Projects (most are driven by one category with components of all)

Request Summary:

The Department requests a total of \$10,000,000 to use over FY 2021-2022 and FY 2022-2023 in capital construction funds for IT in order to implement and validate automated disease reporting processes and data management systems, as a replacement for the Colorado Electronic Disease Reporting System (CEDRS) and other data management systems utilized by the Division of Disease Control and Public Health Response (DCPHR). This request represents a “System Replacement” category of IT project.

With this project, we endeavor to avoid issues encountered by other system replacement projects by using \$10,000,000 to build a solid technology foundation and project management framework upon which new feature development and systems integration can then be delivered incrementally, perhaps using multiple vendors (and thereby avoiding vendor lock-in, which can increase project risk and ongoing support costs). The Department estimates that the requested funds will cover product planning (including the creation of an initial, prioritized backlog for future feature development); system architecture and design; infrastructure provisioning and validation; quality assurance surveillance planning processes and tools procurement; systems integration processes and tools provisioning; and initial data conversion and interface and development deliverables. Future investments in additional user-facing features and functionality will be considered as part of the annual budget process. With this solid foundation established, the Department would then be in a position to work with OIT or Department data visualization experts to leverage off-the-shelf tools or identify additional system improvements.

Comparable IT system replacement projects in the State of Colorado have cost \$25,000,000 to \$35,000,000, which have included the costs of infrastructure (hardware, storage, authentication and authorization, disaster recovery, licenses, and associated personnel), feature development and validation, systems integration (interface development and validation, workflow integration), change management, release management, project management, data conversion and governance, as well as technology design, planning, and oversight. Comparable system replacement projects that sought a single-vendor solution with predefined scope have also suffered from notable overruns in both schedule and budget. The lessons learned across many high-risk and/or failed IT projects in both government and private industry have revealed that *more* up-front analysis and *more* detailed requirements do *not* lead to greater project predictability and success. The Agile approach to product development was created to avoid these pitfalls with a framework that accepts that unknowns are a given in complex domains and success lies in a project's ability to quickly respond to new information and feedback. However, Agile requires a solid foundation of modern technology, software development and project management practices, and data health.

Expenditures within the scope of the budget include the following:

- Software purchase
- Servers (non-production, production, and disaster recovery)
- Database licenses
- Systems integration plan, processes, and tools
- Quality assurance plan, processes, and tools
- Data conversion, migration, and integration for the prioritized datasets
- Project management
- Independent validation and verification

Expenditures outside the scope of the project include the following:

- User licenses
- Data warehouse
- User-facing functionality and features
- Reports and dashboards

CEDRS has approximately 1,200 users, and normally processes approximately 1,000 lab tests per day and reports 10,000 to 20,000 cases per year to the CDC for *all* conditions. However, due to COVID-19, CEDRS handles on average 18,500 lab tests per day and has reported 80,000 cases since March 2020 alone. CEDRS and the systems that feed data into it have not been able to keep up with this amount of data. A significant amount of maintenance and workarounds have been developed to address these issues. The COVID-19 pandemic has called attention to our fractured and siloed data management system and the risks associated with embedded technical debt. Additionally, our local public health agency partners have expressed concerns about the underlying data systems and their limited functionality.

If this request is approved, the Department will conduct a stakeholder analysis and product planning to learn more about these concerns and integrate this information into the analysis. (See "Phase I", below.) The stakeholders would be both internal department staff and external stakeholders and system users. Internal stakeholders would include DCPHR staff, such as state epidemiologists, programmatic staff for reportable conditions (communicable disease, vaccine preventable disease, zoonotic, sexually transmitted infections, healthcare associated infections, hepatitis, tuberculosis, etc.), informatics staff, business technology staff, and division leadership. External stakeholders would include users of the current CEDRS and other data

management systems that includes local public health department staff, healthcare providers, and infection control practitioners and laboratorians.

Project Description:

The Department requests a total of \$10,000,000 to use over FY 2021-2022 and FY 2022-2023 in capital construction funds for IT to replace the Colorado Electronic Disease Reporting System (CEDRS). CEDRS is the statewide reportable disease reporting system for the state of Colorado. It is a web-based system available to healthcare and laboratory providers, including local health departments, to enter and view information on over 75 reportable disease conditions, including COVID. CEDRS provides an essential central repository for an extensive array of program functions, including management of disease reports, data entry, storage of surveillance data and laboratory reports, and case investigation.

The requested funds will be used to establish the technology, infrastructure, system integration, and project management framework and data standardization that will enable the Department to more quickly and reliably integrate data sets from other systems, improve security and performance, leverage off-the-shelf data visualization tools, and leverage future increments of funding. These upgrades will allow the Department to deliver customized functionality in a manner that is responsive to rapid user feedback without triggering prohibitive dependencies across multiple systems or multiple product areas. In addition, this foundation will allow the Department to incrementally implement and validate functionality that will provide parity with existing systems (such as CEDRS) as well as provide additional case investigation, contact tracing, and outbreak management workflows long-term, for a lower cost than the systems we have recently procured to address the immediate pandemic needs.

If the funds are granted, the Department will begin the project with a request for information to assess vendor interest and/or a stakeholder process to determine the off the shelf products available for the replacement of CEDRS and other automated disease reporting processes and data management systems.

The development of IT systems is inherently complex; and the traditional project management approach of forcing design commitments at project outset (during the time of greatest unknowns) has often resulted in poor visibility into tradeoffs, underestimated dependencies, constant over-commitment, and late delivery. By contrast, the Department plans for this project to take place in phases, using an Agile approach, expected to span across multiple fiscal years. Agile is a set of principles and practices that optimize project planning, software design and development, architecture, and program management to identify and prioritize the highest value work, to promote incremental delivery and rapid feedback, and to be responsive to change (and lessons learned). Therefore, future funding requests (e.g., for development of features and functionality) will be informed by the lessons learned during this funding investment and can be soundly justified based on this project's demonstrated ability to incrementally deliver on the overall system replacement vision. The Department will process payments to the vendor(s) according to completed milestones, which will span the length of the project. The Department requests multi-year spending authority to ensure the success of the new system(s), including implementation and any necessary rework to ensure the system(s) is working adequately.

System Integration Opportunities:

It is anticipated that this new automated disease reporting processes and data management framework will allow for expanded integration opportunities that will help break down existing data silos. There are currently at least 10 systems that collect communicable disease surveillance data, including the Patient Reporting Investigating Surveillance Manager (PRISM), the tuberculosis database (TBDB), the lead

database (PBDB), CD4/VL laboratory database, zoonotics, stand-alone REDCap outbreak database, and others. Each of these systems use different data standards and are not always connected to one another, making integrated data analysis cumbersome and inefficient. New technologies, like Tableau, allow for greater integration of our data systems but more work can be done in this area. The new system(s) would also include, but not be limited to, outbreak integration, case management, electronic lab reporting, contact tracing and utilize automated data collection tools that work more efficiently to support data integration.

By linking outbreak and case data in a single system, outbreak response and data will be improved statewide and, ultimately, will allow the department to provide better disease control services to the public.

Risks and Constraints:

The Department relies almost exclusively on grant approved funds for any type of informatics project or development of data systems. The influx of funds from the legislature to allow the Department to finance this enhanced system will allow the Department to maximize its existing federal grant funds on direct programming for the communities of Colorado.

Operating Budget Impact:

After the requested \$10,000,000 in funding is expended, depending on the system, there may be ongoing licensing and change request fees that would be estimated at 20% of the system cost. These costs will be partially addressed through existing operational funding, considered in the annual budget process, and/or supported through federal grant funds.

Background of Problem or Opportunity:

The Division for Disease Control and Public Health Response (DCPHR) is housed within the Colorado Department of Public Health and Environment. CEDRS is a “home built” system utilized by the communicable disease program of DCPHR and, to a lesser extent, by the Sexually Transmitted Infection, HIV and Viral Hepatitis Branch. The most recent iteration of CEDRS was released in 2017. At that time, a robust internal and external stakeholder and user process was conducted and several “off the shelf” systems were considered as a replacement for CEDRS. Ultimately, it was determined that having a system built by the Office of Information Technology (OIT) and informatics staff was the best option because it allowed for the most flexibility in the creation and ongoing maintenance of the system.

With the onset of COVID-19 in early 2020, another internal and external stakeholder process took place around the need for a case investigation and contact tracing (CI/CT) database. It was decided not to build this system within CEDRS but to procure a system designed by Dimagi, Inc that is called Dr. Justina. There are ongoing efforts to allow CEDRS and Dr. Justina to interface with consistency and accuracy. This process is ongoing as local public health agency users to Dr. Justina are still being onboarded and the interface is being tested. It is anticipated that the current system purchased from Dimagi may not be sustainable after 1-2 years.

The COVID-19 pandemic has highlighted the fractured infrastructure of CDPHE’s systems. This meant that the Department could not make critical updates and enhancements, and respond as rapidly as needed during the early months of the pandemic. Additional data management systems needed to be built which made it more challenging to respond to the rapidly changing environment. These additional data management systems were needed because CEDRS was built as a long term repository of reportable conditions and it does not include contact investigation or tracing as part of its system. CEDRS would also not allow for local configuration for the CI/CT functions that the broad base of users needed. This has

resulted in the Department needing to use several fragmented systems to piece together complete data to support our response.

As one user expressed *CDPHE needs a disease surveillance system that is robust enough to meet every day needs of the state, flexible enough to tackle emerging public health issues (e.g., COVID), easy enough to use so CDPHE and local public health staff don't need advanced software capabilities to manage/maintain, and user friendly enough to allow those who need to monitor and evaluate disease surveillance data to be able to pull out any data entered into the system in any way they want to look at it.* The modernization of our disease reporting processes and data management systems will prepare the Department for future pandemics and outbreaks as well as daily disease control and prevention efforts. This will ultimately allow the Department to provide better disease control services to the public and ensure the state is prepared to respond in an emergency.

Justification:

Business Process Analysis:

At this time, no business process analysis has been completed. The impetus for this request came from the knowledge that we have a fragmented data management system that hindered the Department's ability to use timely, accurate and complete data to inform our response to the COVID-19 pandemic.

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

At this time, no cost benefit or project analysis has been completed, including any requests for information (RFIs). This project will take an Agile approach to planning, procurement, implementation, delivery, and validation, which will include requirements analysis and prioritization based on business value metrics (such as ROI).

Success Criteria and Improved Performance Outcomes:

A fully developed product roadmap will be developed in Phase I of this project. Each deliverable will specify measurable outcomes, and success criteria will be defined within the work plan. One example of an expected outcome would be a user authentication portal that has a current technical support plan with the system provider, allows for self-service password management, and integrates with multi-factor authentication to improve data privacy. (The current user authentication portal is running on software that went off of the market seven years ago and is no longer supported, requires manual account provisioning through OIT's overburdened IAM team, and does not integrate with multi-factor authentication tools. When this portal goes down, CEDRS 1200 users have no other means of getting data into/out of the system.)

Assumptions for Calculations:

Expense	Cost Estimate
Total Professional Services (Including contractors, quality assurance, validation, training)	2,065,000
Total Software costs	7,000,000

Total Equipment and Miscellaneous costs (Including servers, network enhancement)	435,000
Subtotal	9,500,000
5% Project Contingency	500,000
Total Request	10,000,000

Consequences if not Funded:

The consequences of not being funded for this project include not being able to rapidly respond to unforeseen demands to our public health system, including future pandemics or novel outbreak situations. Currently, we are relying on data systems that we can't plan on and have an unpredictable delivery of services. With enhanced and improved systems, staff would not have to spend valuable time doing manual work that should be done by the system. Thereby allowing those staff to focus on higher value needs and tasks. The Department did not want to further delay or miss out on this opportunity to improve the current data management systems.

Implementation Plan:

This project will take an Agile approach to planning, procurement, implementation, delivery, and validation.

- Phase I: Product Planning - This project represents multiple opportunities to improve the current automated processes and data management systems for disease reporting, such as increased efficiency of workflows, enhanced user functionality (e.g., contact tracing, outbreak management), enhanced configurability (e.g., web-based interface for access management and system customization), expanded integrations (e.g., ELR) and API access, and standardization of database schema (which would enable CDPHE to quickly leverage newer technologies and avoid vendor lock-in). In this phase of the project, CDPHE would engage a vendor to work with internal and external stakeholders to develop the product roadmap, prioritize deliverables, and define future procurement cycles and each one's objectives, statement of work, and quality assurance surveillance plan.
- Phase II: Agreement on High-Level System Architecture and Application Design - Rather than seek to replace CEDRS with a like-for-like, monolithic system (e.g., tied to a single vendor), this phase of the project will solicit and review proposals for a system design that enables incremental implementation of deliverables (e.g., components, features, data conversions) by multiple vendors using a common architecture and design framework and integration using a systems integrator vendor.
- Phase III: Award Systems Integrator Contract - In this phase of the project, CDPHE will partner with OIT to establish final contract language for the responsibilities and objectives for the systems integrator role of the project. OIT may also submit a proposal to serve in this role for the project. The systems integrator will implement interfaces with partner systems; provide interfaces stubs for testing purposes; establish the procedures and roles necessary to accept a functionally validated component from one of the project component contractors and integrate it into the production system (including validation of end-to-end workflows, interfaces, and compliance with OIT Technology Standards and Security Policies); and oversee integration and deployment activities.
- Phase IV: Establishment of IT Infrastructure - In this phase, the project will identify, provision, and configure the IT infrastructure needed for the project. For example, if it is determined that OIT could best meet the infrastructure needs of the proposed solution, then the project would work with OIT to create the infrastructure plan (e.g., server type and number, load balancing, networking, access

control) and tickets would be opened for OIT to create new servers at a state resource such as eFORT. If it is determined that a vendor could best meet the infrastructure needs of the proposed solution, OIT will be engaged to review and approve that the vendor meets the state IT rules. This infrastructure will include fully operational Functional Test, Integration Test, Staging (and Performance testing), Training, and Production environments as well as other environments as needs arise.

- Phase V (multiple cycles): Component Development & Delivery Cycles - In this phase, CDPHE will work with OIT--where possible, leveraging OIT's pre-approved vendor pool--to identify and award contracts for deliverables, as prioritized on the product backlog (as a result of the work in the Product Planning phase). The following activities will be included in the Statement of Work for each deliverable: requirements refinement, acceptance criteria definition, implementation, unit testing, functional testing, systems integration activities (including accessibility testing, security scans, OIT Technology Standards and Security Policy compliance reviews, workflow validation, and interface validation), user acceptance testing, and end-user and administrator training.

Throughout this project, the following will be addressed:

- **Change Management** – This project will establish and adhere to a change management plan, including stakeholder identification, communication plans contextualized for stakeholder roles, a user acceptance testing plan, and a training plan. The training plan will address changes to manual and automated business processes, navigation of the user interface, and the technical knowledge transfer necessary for those administering and/or customizing the system. This project will ensure that non-production environments exist for user acceptance testing and training. Where possible, these environments will integrate with partner systems' test environments and otherwise will provide stubs to mimic other interface activity.
- **Alignment with OIT Best Practices and Standards** – The management of this project will follow OIT's gating process for Agile projects and will ensure that deliverables comply with OIT's [Technology Standards](#) and [Security Policies](#).
- **Procurement** – The procurement path will meet the Colorado Procurement Code requirements for competitive, equitable, and fair purchasing. To ensure the best value possible for taxpayers, the procurement may be divided into multiple cycles or types. The committee charged with reviewing proposals and selecting the winning proposal for a procurement cycle will include individuals with a range of expertise--in particular, subject matter experts from DCPHR as well as representatives from the CDPHE business technology steering committee (BTSC), and OIT.

Funding for this project includes support for the following for the full life of the project: a PMP-Certified Project manager (to be hired); Independent Validation and Verification (IV&V); a technical lead to ensure the deliverables' sustainability, quality, security, recoverability, and compliance with OIT Technology Standards and Security Policies; and work to remediate or mitigate any findings of non-compliance.

- **Disaster Recovery and Business Continuity** – The automated processes and data management systems for disease reporting are business critical for CDPHE. In particular in times of epidemics and outbreaks, it is critical that these systems are fully operational and performant in order to collect and share data and to provide current analysis on trends that can inform public policy and public health emergency responses. This project will include an assessment of system vulnerabilities, establish

disaster avoidance and prevention procedures, stand up disaster recovery infrastructure, establish a disaster response and business continuity plan, and validate these through table top exercises.

- **Accessibility Compliance** – This project will include requirements for compliance with OIT accessibility standards as well as metrics and methods for validation of compliance.
- **Impact to IT Common Policy (For Statewide OIT Projects Only)** – The impact on this project will depend on the architecture of the selected system, which will be determined during the proposal selection process. If the system architecture is to be OIT-supported, the Common Policy impact will be the support by OIT database administrators, application developers, and server support specialists. The program currently has an Interagency Agreement with OIT to offset most of these services. If the system is supported by the vendor (i.e. Cloud-hosted), the Common Policy impact would be minimized, but may be affected based on the network bandwidth requirements of the selected system.

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
Phase I: Product Planning	7/2021	12/2021
Phase II: Agreement on High-Level System Architecture and Application Design	12/2021	2/2022
Phase III: Award Systems Integrator Contract	2/2022	4/2022
Phase IV: Establishment of IT Infrastructure	4/2022	10/2022
Phase V (multiple cycles): Component Development & Delivery Cycles	10/2022	6/2023



COLORADO

Office of eHealth Innovation

Jared Polis
Governor

FY 2021-22 Request Year-IT Capital Request / 11/02/2020

Carrie Paykoc
Director of OeHI

11/2/2020

Signature

Date

RY – Department IT Capital Construction Priority: CC-IT-01 (GOV) Colorado Rural Connectivity Program

Summary of Request	Total Funds	CCF-IT	Cash Funds	Reappropriated Funds	Federal Funds
FY 2020-21	\$0	\$0	\$0	\$0	\$0
FY 2021-22	\$6,498,000	\$1,081,800	\$0	\$0	\$5,416,200
FY 2022-23	\$0	\$0	\$0	\$0	\$0

Select One: Categories of IT Capital Projects (most are driven by one category with components of all)

System Replacement (costs escalating, failing technology, software or vendor support ended, or new technology, e.g., DRIVES, CHATS)	System Enhancement Regulatory Compliance (new functionality, improved process or functionality, new demand from citizens, regulatory compliance, e.g., CBMS)	Tangible Savings Process Improvement (conscious effort to reduce or avoid costs, improve efficiency, e.g., LEAN, back office automation)	Citizen Demand “The Ways Things Are” (transformative nature of technology, meet the citizens where they are, e.g., pay online, mobile access)
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Request Summary:

The Office of eHealth Innovation (OeHI), in partnership with the Governor and Lt. Governor's Offices and the Department of Health Care Policy and Financing (HCPF), is requesting a capital information technology (IT) investment of \$6,498,000 total funds, including \$1,081,800 Capital Construction Fund in FY 2021-22 to develop a model for affordable health information exchange and technology infrastructure, shared analytics, and technical support for rural safety-net health facilities to improve coordination of care- to ultimately *save people money on health care through improved health outcomes and better coordinated services and systems*. This request contains contract funding only and no additional FTE. This project qualifies for a federal match through the Centers for Medicare and Medicaid (CMS) and OeHI would work with HCPF to submit an advanced planning document (APD) to secure appropriate federal approvals.

In support of the Polis-Primavera administration priorities to *save people money on health care*, OeHI is focused on leveraging health information exchange (HIE), data sharing, technology, innovation, and policy to reduce health care inefficiencies, improve health outcomes, and lower costs over time. The State Legislature funded this strategy, outlined in Colorado's Health IT Roadmap¹ in FY 2018-19 to advance many, but not all, of the key initiatives. Affordable and accessible health information and analytics Roadmap Initiatives were not requested and not funded in the multi-year appropriation in FY 2018-19. A total of nine Roadmap initiatives were funded in FY 2018-19.²

With the bold health care priorities of the Polis-Primavera administration, steering of the eHealth Commission, and onset of the COVID-19 pandemic, OeHI recognized the immediate need for affordable access to HIE and analytics - in particular for rural safety-net providers who simply cannot afford to access and use HIEs, data, and analytics. Without access to timely and affordable information, rural safety-net providers, and the patients they serve, are more likely to have worse health outcomes, greater exposure to public health threats such as COVID-19 and increased social and economic inequities. Due to market share, individual rural safety-net providers often pay more to access health information, to update and maintain Electronic Health Record (EHR), and to access analytic platforms than many larger health systems. In 2019, a survey conducted by OeHI with rural safety-net providers validated this trend. With the high costs, rural safety-net providers are faced with either closing their businesses or merging with larger health systems.

This Rural Connectivity Program will provide funding and support to safety-net providers to access HIE and technology infrastructure, shared analytics, and technical support to improve health (mental and physical) and safety of rural communities. This request advances the Wildly Important Goals of the Office of Saving People Money on Health Care, Behavioral Health Task Force, and OeHI.

The Rural Connectivity Program and funding request sets up these providers for improved outcomes and sustainability. Not funding these programs now further delays the opportunity for these safety-net providers to leverage HIE infrastructure and resources that are available and used by urban providers and large health systems to manage their patient populations. Providers who connect to Colorado's HIEs have improved health and safety of their patients³. Use of HIEs prevents medical errors and saves Coloradans dollars by reducing hospitalizations and duplicate tests. OeHI recognized during the creation of Colorado's Health IT Roadmap that affordability and access to HIE and analytics is a barrier that many providers face.

With a new opportunity for ongoing sustainable funding through CMS, OeHI is requesting funding to invest in a rural connectivity model that would be sustained over time. To kick start this opportunity, OeHI has started planning efforts and is actively helping the rural safety-net providers with their COVID-19 response. This emergency response does not include direct HIE connections but uses information from other providers to highlight patients who tested positive for COVID-19 or who were recently admitted to the emergency room. However, this is a short-term solution. For more actionable, accurate, and sustainable information, rural safety-net providers need to be connected to the HIE network. To implement this rural connectivity work and set the state up for ongoing funding, OeHI is requesting new funds as outlined in this request.

As part of the COVID-19 pandemic response and a renewed focus on rural infrastructure, a total of \$3,300,000 of Colorado's Health IT Roadmap funds were shifted from the electronic clinical quality measure

¹ Colorado's Health IT Roadmap (Colorado: State of Colorado, 2019), 1-118.

https://www.colorado.gov/pacific/sites/default/files/atoms/files/Colorado%20Health%20IT%20Roadmap-19_Web%20%281%29.pdf

² Refer to Colorado's Health IT Roadmap FY18/19 Capital IT Appropriation

³ Refer to Appendix B and C for literature and market research

initiative to the Rural Connectivity Program. This agile approach addressed the state's immediate needs and priorities while concurrently advancing the strategic vision and objectives of Colorado's Health IT Roadmap. To date, OeHI has invested over \$1,000,000 to support rural safety-net providers in their emergency COVID-19 response and is investing an additional \$2,000,000 in FY 2020-21 to further plan and design the Rural Connectivity Program. As the COVID-19 pandemic continues, OeHI is committed to funding dashboard access and providing technical assistance for rural safety-net providers in FY21. Connecting providers to the HIEs is the first step to automate the electronic clinical quality measure (eCQM) process. Using the HIE infrastructure reduces provider burden by simplifying the reporting process. OeHI successfully transitioned the State Innovation Model eCQM concept into a trusted product that providers use to simplify and satisfy payer quality measure reporting requirements including HCPF's alternative payment model and other federal reporting programs such as the Quality Payment Program (QPP). Technical assistance will be provided to the rural safety-net providers through this request to educate and enable automated reporting once connected to the HIE.

The Rural Connectivity Program will better enable rural safety-net providers to connect to the HIEs by providing technical assistance to, empowering them with analytics, and creating a path for financial sustainability. Currently, 50 out of the 84 rural safety-net providers are not connected to the HIEs primarily because of ongoing financial connection and EHR costs. These providers are located in Archuleta, Baca, Chaffee, Cheyenne, Conejos, Custer, Fremont, Grand, Huerfano, Jackson, Kiowa, Kit Carson, Lake, Lincoln, Logan, Montezuma, Morgan, Otero, Phillips, Rio Grande, Sedgwick, Saguache, Washington, and Yuma counties.

Project Description:

This funding would continue current implementation efforts to enable rural safety-net providers with access to health information, analytics, and technical support to ensure patients are safe, care is coordinated, and health providers are able to meet quality standards without unnecessary technical and financial burden. This model is focused on connecting rural safety-net providers with Colorado's HIEs through a group purchase rather than individual connections and fees from both the HIEs and EHR vendors; OeHI anticipates this model could provide services at a more affordable rate. Key considerations were made in the design of this model to ensure adoption, scalability, and sustainability of the system enhancements including 1) leveraging existing infrastructure such as the HIEs; 2) providing immediate value with analytics; 3) planning and design decisions are based on direct input from rural safety-net providers; 4) reducing the number of individual EHR rural safety-net providers need to interface to access patient data; and 5) ensuring the only integration required by the rural safety-net providers is the integration between the EHR and the HIE.

Many rural safety-net facilities, that include health clinics and critical access hospitals, operate on smaller budgets and are unable to pay for individual connections through Colorado's HIEs-Colorado Regional Health Information Organization (CORHIO) and Quality Health Network (QHN). In Colorado, 18 rural hospitals currently operate at a loss and many of those hospitals own and operate the majority of the state's federally certified rural health clinics. Given the current COVID-19 crisis, it is anticipated that many more rural hospitals and federally certified rural health clinics will be operating at a loss and are unable to afford the costs associated with connectivity including HIE connection fees, EHR vendor connection fees, ongoing monthly connection fees, and other fees associated with creating reports.

OeHI recognizes this financial barrier and is moving forward with supporting rural safety-net providers during the emergency response by beginning to build a flexible and affordable infrastructure that can be used to support Colorado's rural safety-net providers, patients, and communities. To start the project in FY 2019-20 with limited General Fund, OeHI redirected existing Health IT Roadmap capital construction funds to

contract with Colorado Community Managed Care Network (CCMNC) and Colorado Rural Health Center (CRHC) to implement COVID-19 Surveillance Dashboards for rural safety-net facilities that include Federally Qualified Health Centers, Critical Access Hospitals, and Rural Health Clinics- 84 total facilities. To date, 45 of the 84 rural safety-net facilities have access to the COVID-19 surveillance dashboard. It is also important to note that 51 of the 84 rural safety-net facilities are not connected to any state HIE. OeHI is working with CRHC, the state designated office for rural health clinic coordination and funding, to ensure rural safety-net facilities have access to these dashboards, technical assistance, and expedited onboarding to our HIEs.

The next phase of the project is to be kicked off in November 2020, pending contract execution, and will onboard remaining rural safety-net providers to COVID-19 surveillance dashboards, provide rural safety-net providers technical assistance, and assess provider readiness to connect to the HIEs and other technical infrastructure such as broadband and telemedicine. OeHI is also working with Colorado's HIEs to prioritize and expedite the onboarding of rural safety-net providers to the HIEs and with Colorado's Office of Broadband to expand access to broadband in these communities.

This health information and analytics work would reduce the cost and challenges associated with accessing and submitting quality data, improving patient safety around transitions of care, and improving sustainability of rural facilities by minimizing provider financial and technical burden that includes costs of establishing reporting platforms and resources for quality improvement and reporting. The Center for Medicare and Medicaid Innovation (CMMI) released a new funding opportunity to support value-based payment - this request would be complementary to the awarded rural organization by better enabling value-based payment through enhanced HIE. In addition to this CMMI opportunity, this request would position Colorado to receive more federal funding for rural provider interoperability by better enabling rural safety-net providers to use health information for enhanced care coordination and quality measure reporting which is needed for value-based payment.

This request would leverage the first phase of rural connectivity efforts described above and expand the model for rural safety-net facilities in Colorado. To execute the project and mitigate project risks, OeHI will work with established partners such as the Office of Information Technology (OIT) CRHC, CCMCN and Colorado's HIEs

If this request is not funded, rural safety-net providers and the patients they serve could experience worse health outcomes, greater exposure to public health threats such as COVID-19, and social and economic inequities. Individual rural safety-net providers often pay more to access health information, to update and maintain EHRs, and to access analytic platforms than many larger health system systems due to market share. With the high costs, rural safety-net providers are faced with either closing their businesses or merging with larger health systems.

Leverage Current Capabilities

It is the intent of OeHI to leverage and enhance infrastructure already available in Colorado, rather than build new HIEs or technologies. In all cases, the current capabilities will be assessed for enhancements rather than "build from scratch." The existing HIEs and stakeholders across Colorado (e.g., health systems, providers) have made significant investments that will be leveraged. Stakeholders, across Colorado in both urban and rural settings, have expressed the need to leverage and enhance this infrastructure to meet the evolving value-based payment and care delivery needs.

Operating Budget Impact

At this time, OeHI is not requesting any new FTE or operational funding. This project sets up rural safety-net providers for sustainability. This sustainability planning and transition will begin in FY22 and future operational support costs may be incorporated in a future budget request.

Background of Problem or Opportunity:

Access and connection to HIEs in Colorado is cost prohibitive for many rural health clinics and hospitals. These costs include connection, data transmission, and analytics costs from the HIEs, analytic vendors, and EHR vendors. The Rural Connectivity Program will provide technical assistance and support implementation.

OeHI recognized this cost barrier as a limiting factor to access to quality and affordable care. By providing affordable and accessible health information, rural facilities can better serve communities and families during public health emergencies such as COVID-19, improve patient safety around transitions of care, and reduce prescription drug costs through improved access to health and medication information. They can also improve sustainability of their practices by minimizing provider burden, reduce facility costs by establishing shared systems and approaches, and improve health outcomes for patients, families, and communities.

Justification:

OeHI and the eHealth Commission Rural Connectivity Workgroup completed extensive analysis to develop this project including business process analysis, cost-benefit analysis, defining criteria for improved performance metrics, assumptions for calculation, consequences if not funded, implementation plans, change management plans, and alignment with OIT best practice and standards. Details of each are described below.

Business Process Analysis

Colorado's Health IT Roadmap Initiatives "Affordability and Accessibility of Analytics" and "Affordability and Accessibility of Health Information Technology" were defined through extensive stakeholder input to define initiative and business analysis in partnership with OIT, HCPF and the eHealth Commission to define the requirements. OeHI is committed to refining business requirements and defining processes throughout the lifecycle of the project.

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

OeHI conducted research to determine the value of implemented enhancements and improved coordination of statewide health IT infrastructure prior to submitting this request. Attached is the initial literature research conducted in 2018 titled Appendix C and recent research on state investments of ARRA HITECH ACT funds for HIE and health information technology infrastructure titled Appendix B⁴. OeHI reviewed, and continues to review, how other states leverage federal funds to invest in state infrastructure. See attached for a summary and analysis for other state investments. Additionally, as OeHI implements projects, each project will have specific metrics and outcomes to track and measure the impact of the investment to the state. Initial planning for financial models is underway.

To satisfy SB17-304, OeHI conducted surveys and research, and convenes monthly public eHealth Commission meetings and Roadmap stakeholder meetings to ensure infrastructure meets end-user needs and statutory requirements. Prior requests for information and stakeholder sessions informed this funding request.

⁴ Refer to Appendix B and C for literature and market research

Success Criteria and Improved Performance Outcomes – All projects that receive federal funding match through CMS require outcome-based measures. For this project, specific outcome-based metrics will be developed in FY 2020-21 to demonstrate and measure improved health outcomes and reduced costs. These measures will be reviewed and approved by CMS prior to the start date of this project. All projects launched by OeHI have success criteria and performance metrics defined by stakeholders and managed by OeHI and OIT's Portfolio Management Office.

Assumptions for Calculations – OeHI assumes that CMS would approve the activities defined in this request at the proposed federal match rates. OeHI assumes that all implementation and general administrative costs would qualify at 90% FFP and that all subscription fees would qualify for 75% FFP. The federal fund match for this project will be requested once the state funds are appropriated⁵. At that point, the specific timelines will be developed in partnership with HCPF. If this budget request is not approved with FFP from CMS, OeHI will complete the current phase of the project and reassess future efforts. This request was advanced due to the new opportunity to qualify for an ongoing federal fund match in partnership with HCPF.

Currently, 45 of the 84 rural safety-net facilities have access to the COVID-19 surveillance dashboard. Only 33 of the 84 rural safety-net facilities are connected to any state HIE. OeHI would use this funding to complete the roll-out of the COVID-19 surveillance dashboards, provide technical assistance to all rural safety-net providers, and fund HIE fees for safety-net rural facilities over the three-year lifespan of the appropriation. Funding this work would lessen the divide between rural and urban providers through common and shared access to HIE infrastructure, analytics, and technical assistance. Provider technical, financial, and capacity readiness will inform which safety-net rural facilities will be onboarded. Technical assistance will be provided to rural safety-net providers who need additional support to achieve readiness for future connectivity.

The average onboarding cost to connect one facility to a HIE is \$20,000 with average ongoing costs ranging from \$3,000 to \$10,000 per facility per month, depending on the EHR and version, HIE pricing model, and what HIE services the provider contracts for. This project assumes cost saving by reducing point-to-point interfaces. The HIEs have standard protocols for accessing and sharing information. The variability and risks are related to the EHRs, version, type, etc. and in some cases these providers are not using any EHR. Discussions are underway with the HIEs to negotiate a bulk rate for rural safety-net providers at a reduced cost.

For this funding request, OeHI based assumptions and calculations on the following:

- For detailed calculations, please see Appendix A: Assumptions & Calculations
- For market research, reference Appendix B: Market Research
- For literature review, reference Appendix C: Literature Review
- For Colorado's strategy, reference Colorado's Health IT Roadmap

For national strategy, reference ONC Federal Health IT Strategic Plan⁶

⁵ MMIS criteria refer to 42 CFR 433 Subpart C and the State Medicaid Manual Part 11, MMIS funding is available for clinical decision support functionality that ties directly to the state's Medicaid program to reduce cost and improve outcomes

⁶ <https://www.healthit.gov/topic/2020-2025-federal-health-it-strategic-plan>

Consequences if not Funded

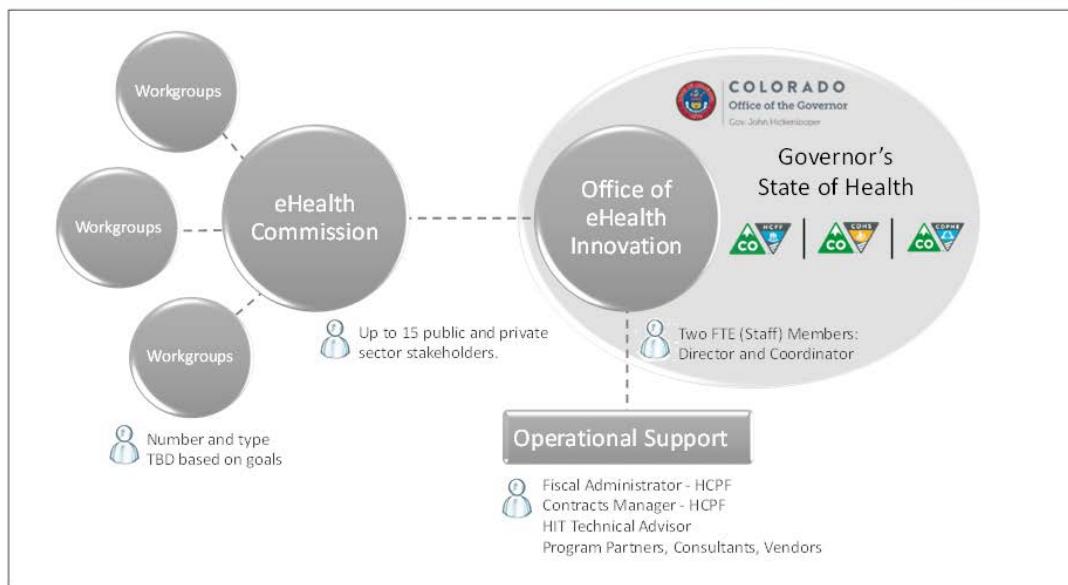
Not proceeding is a missed opportunity to leverage enhanced federal fund match and delays sustainability for these safety-net providers. Without funding, providers and the patients they serve will continue to be at a disadvantage, in comparison with the urban health systems and providers who have the funding to pay for connectivity. This disadvantage could result in worse health outcomes and higher health care costs for patients such as duplicate tests and procedures.

Implementation Plan

The Implementation Plans for these initiatives are being developed by OeHI, in collaboration with OIT managed day-to-day by OeHI/OIT Health IT Portfolio Management Office (PMO), and governed by the eHealth Commission, who serves as the Steering Committee for the Colorado Health IT Roadmap. Through the development of Colorado's Health IT PMO specific metrics and outcomes are being defined for all funded efforts. As part of this planning effort and ongoing assessment, OeHI conducted research to understand how other states have planned, designed, and implemented statewide health IT leveraging. Appendix B includes literature research from the initial request and Appendix C includes research on investments other states have made on HIE and health information technology to improve care and reduce costs. The following visual depicts OeHI and eHealth Commission's governing structure.

Organizational Structure

Who we are



Change Management

Change Management is a requirement for all OeHI projects. The change management strategy includes training, communication, and testing as applicable. Additional change management and technical assistance for statewide initiatives such as the implementation of electronic clinical quality measurement report is necessary to ensure providers adopt the technology in a meaningful way.

Alignment with OIT Best Practices or Standards

All efforts outlined in this proposal would comply with applicable rules, policies, procedures, and standards issued by OIT, including change management, project lifecycle methodology and governance, technical

standards, documentation, and other requirements⁷. This includes all Cyber Security Policies, all IT standards, and partnership with the Governor's Data Advisory Board.

Procurement

The procurement of this project involves both programmatic (non-technical) efforts and technical projects. OIT is directly involved with OeHI scoping and procurement of solutions through the Health IT PMO. OeHI has an interagency agreement with the OIT to contract for project managers and technical staff and fund HIE projects. Projects are gated through OIT as applicable. OeHI continues to work with OIT in a coordinated and collaborative manner.

Security and Backup/Disaster Recovery

All implementations would be compliant with all existing state and federal IT architecture, security and business continuity requirements and guidelines, and State cybersecurity policies set forth by the Office of Information Security. Additionally, all OIT Project Gating would be closely followed to ensure adequate risk assessments are conducted and all necessary actions are taken as a result. The Disaster Recovery Plan is a requirement of Gate 4 and the Authorization to Operate would not be granted without the needed documentation and planning.

Accessibility Compliance

It is not clear what portions of implementation would require accessibility compliance. However, as these items are developed, compliance would be ensured.

Impact to IT Common Policy

It is not anticipated that this request would impact common policy. Any ongoing appropriations would be directly appropriated to the HCPF or the Governor's Office.

⁷ www.oit.state.co.us/about/policies

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	See attached.	

ESTIMATED PROJECT TIME TABLE		
Steps to be completed	Start Date	Completion Date
COVID-19: Surveillance Dashboard Release -Emergency Response	05/01/2020	09/30/2020
Rural Connectivity: Assessment of Providers Readiness -Assessment informs program design and development	11/22/2020	09/30/2021
Rural Connectivity: COVID-19 Dashboard release part 2- (39 of 84 remaining rural safety-net facilities)	11/22/2020	09/30/2021
Rural Connectivity: HIE Onboarding- (51 of 84 remaining rural safety-net providers)	10/01/2020	09/30/2021
Rural Connectivity: Broadband Expansion -pending supplemental	03/01/2021	03/01/2022
Rural Connectivity: Decision Item Implementation- (includes training and testing based on phased roll-out) <i>pending funding</i>	07/01/2021	06/30/24
Sustainability Planning for Ongoing Operations	07/01/2022	06/30/23
Project Close Out and Transition to Ongoing Operations	06/30/24	-

FY 2021-22 Colorado Rural Health Connectivity
Appendix A: Assumptions and Calculations

Table 1: FY 2021-22 Colorado Rural Health Connectivity Summary by Line Item									
Row	Line Item	Total Funds	FTE	Capital Construction Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP	Notes/Calculations
A	*NEW LINE ITEM IN HCPF CAPITAL CONSTRUCTION BILL	\$6,498,000	0.0	\$1,081,800	\$0	\$0	\$5,416,200	83.35%	Table 2, Row D

FY 2021-22 Colorado Rural Health Connectivity
Appendix A: Assumptions and Calculations

Table 2: FY 2021-22 Colorado Rural Health Connectivity Summary by Initiative								
Row	Item	Total Funds	Capital Construction Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP	Notes / Calculations
A	Implementation Costs	\$3,318,000	\$331,800	\$0	\$0	\$2,986,200	90.00%	Table 3.1: Row A + Row C + Row D
B	Subscription Fees	\$2,880,000	\$720,000	\$0	\$0	\$2,160,000	75.00%	Table 3.1: Row B
C	General Administrative Costs	\$300,000	\$30,000	\$0	\$0	\$270,000	90.00%	Table 4: Row D
D	Total	\$6,498,000	\$1,081,800	\$0	\$0	\$5,416,200	83.35%	Row A + Row B + Row C

Table 3.1: Contractor Costs by Fund Split

Row	Item	Total Funds	Capital Construction Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP	Notes / Calculations
A	<i>HIE Onboarding</i>	\$420,000	\$42,000	\$0	\$0	\$378,000	90%	Table 3.2, Row A
B	<i>HIE Subscription</i>	\$2,880,000	\$720,000	\$0	\$0	\$2,160,000	75%	Table 3.2, Row B
C	<i>Data Analytic Fees</i>	\$2,718,000	\$271,800	\$0	\$0	\$2,446,200	90%	Table 3.2, Row C
D	<i>Technical Assistance</i>	\$180,000	\$18,000	\$0	\$0	\$162,000	90%	Table 3.2, Row D
E	Total Costs	\$6,198,000	\$1,051,800	\$0	\$0	\$5,146,200		Sum Rows A - D

Table 3.2 Implementation Costs

Row	Item	Total Cost	FFP	Notes / Calculations
A	HIE Onboarding Fees	\$420,000	90%	Vendor Estimate
B	HIE Basic Subscription Fees	\$2,880,000	75%	Vendor Estimate
C	Data Analytic Fees	\$2,718,000	90%	Vendor Estimate
D	Technical Assistance Fees	\$180,000	90%	Vendor Estimate
E	Total	\$6,198,000		Sum Rows A - D

FY 2021-22 Colorado Rural Health Connectivity
 Appendix A: Assumptions and Calculations

Table 4: General Administrative Costs

Row	Item	Total Funds	Capital Construction Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP	Notes / Calculations
A	Personnel Costs	\$228,000	\$22,800	\$0	\$0	\$205,200	90.00%	Vendor Estimate
B	Operating Costs	\$12,000	\$1,200	\$0	\$0	\$10,800	90.00%	Vendor Estimate
C	Consultant Costs	\$60,000	\$6,000	\$0	\$0	\$54,000	90.00%	Vendor Estimate
D	Total	\$300,000	\$30,000	\$0	\$0	\$270,000	90.00%	Row A + Row B + Row C

RY_CC-IT: CAPITAL CONSTRUCTION INFORMATION TECHNOLOGY REQUEST FOR FY 2021-22									
	Department	Governor's Office of eHealth Innovation (OeHI)		Signature Department Approval:		Date			
	Project Title	Colorado Rural Health Connectivity		Signature OIT Approval:		Date			
	Project Year(s):	FY 2021 - 22		Signature OSPB Approval:		Date			
	Department Priority Number	1							
	Five-Year Roadmap?	Yes or No		Name and e-mail address of preparer:					
Revision? Yes No If yes, last submission date:	Total Project Costs	Total Prior Year Appropriations	Current Request FY 2021-22	Year 2 Request	Year 3 Request	Year 4 Request	Year 5 Request		
A. Contract Professional Services									
(1) Consultants/Contactors	\$ 6,498,000	\$ -	\$ 6,498,000	\$ -	\$ -	\$ -	\$ -	\$ -	
(2) Quality Assurance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(3) Independent Verification and Validation (IV&V)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(4) Training	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(5) Leased Space (Temporary)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(6) Feasibility Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(7a) Inflation for Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(7b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
(8) Other Services/Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(9) Total Professional Services	\$ 6,498,000	\$ -	\$ 6,498,000	\$ -	\$ -	\$ -	\$ -	\$ -	
B. Software Acquisition									
(1) Software COTS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(2) Software Built	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(3a) Inflation on Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(3b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
(4) Total Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
C. Equipment									
(1) Servers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(2) PCs, Laptops, Terminals, PDAs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(3) Printers, Scanners, Peripherals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(4) Network Equipment/Cabling	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(5) Other (Specify)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(6) Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
(7) Total Equipment and Miscellaneous Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
D. Project Contingency									
(1) 5% project contingency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
E. Total Request									
Total Budget Request [A+B+C+D]	\$ 6,498,000	\$ -	\$ 6,498,000	\$ -	\$ -	\$ -	\$ -	\$ -	
F. Source of Funds									
GF	\$ 1,081,800	\$ -	\$ 1,081,800	\$ -	\$ -	\$ -	\$ -	\$ -	
CF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
RF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
FF	\$ 5,416,200	\$ -	\$ 5,416,200	\$ -	\$ -	\$ -	\$ -	\$ -	

check (should = E)

\$6,498,000

\$0

\$6,498,000

\$0

\$0

\$0

\$0

\$0



COLORADO

Department of Labor and Employment

Jared Polis
Governor

Joe Barela
Executive Director

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


Signature

10.27.20
Date

RY – 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. Currently, MyUI+ is in the final stages of modernization and implementation.

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 CATS legacy application is built on antiquated technology. 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 is done separately in CATS and MyUI+ without comprehensive cross-system regulation, which risks generating inaccurate employer experience rates and thus driving up employer costs.
- CATS was not built to adhere to the most basic accounting principles and does not maintain an internal system ledger, which risks creating inaccuracies in employer billing.
- Potential inaccuracies with legacy system calculations lead to increased financial burden on the employer community and inaccurate Federal reporting.
- Extensive testing and staff resource time are required on an annual basis to review annual experience rate calculations. An average of about eighty hours of staff time per week is spent on maintaining system calculations.
- The current online employer self-service options limit the ability of third-party administrators to participate in account management, reducing access for a large portion of the employer community.
- If an employer makes a mistake on a report or other correspondence submitted through CATS, the 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.
- 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. This request would provide for a more adaptable, stable, and cost-effective system, with accessible and user friendly self-service options.

Justification:

Since 1978, CDLE has operated both the claimant and employer portals using the same technology solutions. As the technology 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 both components of the UI system and identify best approach to modernization. Given the age of the system and its significant deficiencies in automation, CDLE determined that the only way to solve the issues mentioned above is to fully replace its legacy systems. After scoping out multiple options, CDLE has concluded that a COTS product that offers full system integration is the best path forward. MyUI+ will launch in early 2021, and 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.

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 a reduction in staff costs and network and mainframe costs. 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, 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 in experience rate calculations should decrease the amount of staff hours needed to maintain the system and increase billing accuracy for employers. Providing employers easy access to the adjudication process will promote greater accuracy in benefit payments, 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, a need which has become even more pronounced and urgent during the COVID-19 Pandemic, with not only the ability to scale up, but as anticipated over the next years in recovery, to scale down as well. Most importantly, building a system with a modular approach will eliminate the need for significant future IT capital investments, and will allow the Division to maintain the modern system piece-by-piece over a longer period of time. CDLE will never need to request IT capital funding for this system again, and can instead manage the ongoing upgrades through an operating rather than a capital request.

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 will seek a COTS product with customizable features to ensure alignment with Colorado's unique statutory and business environment.
2. 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.
3. 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.

4. 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.
5. 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.
 - 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 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. The Department has intentionally designed MYUI+ and intend 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.

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 an outdated system, 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.

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 claimant portal. 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 engage with OIT on technology and security needs, the Department will be negotiating with directly 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, communication, and testing as applicable.

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.

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

RY_CC-IT: CAPITAL CONSTRUCTION INFORMATION TECHNOLOGY REQUEST FOR FY 2021-22

Department:	Labor and Employment		Signature:	<i>Patricia Nond</i>	Date:																																																																																								
Project Title:	Modernize the Unemployment Insurance Employer Services System		Department Approval:	Off Approval:																																																																																									
Project Year(s):	FY 2021-2024		Signature:	OSPB Approval:																																																																																									
Department Priority Number:	1		Signature:	Date:																																																																																									
Five-Year Roadmap?			Name and e-mail address of preparer:																																																																																										
Revision?	Yes	No																																																																																											
If yes, last submission date: _____																																																																																													
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<p>D. Project Contingency</p> <table border="1"> <thead> <tr> <th></th> <th>Total Project Costs</th> <th>Total Prior Year Appropriations</th> <th>Current Request FY 2021-22</th> <th>Year 2 Request</th> <th>Year 3 Request</th> <th>Year 4 Request</th> <th>Year 5 Request</th> </tr> </thead> <tbody> <tr> <td>(1) 5% project contingency</td> <td>\$ -</td> </tr> <tr> <td>E. Total Request</td> <td>\$ -</td> </tr> <tr> <td>Total Budget Request [A+B+C+D]</td> <td>\$ 28,422,240</td> <td>\$ -</td> <td>\$ 15,000,000</td> <td>\$ 10,000,000</td> <td>\$ 3,422,240</td> <td>\$ -</td> <td>\$ -</td> </tr> <tr> <td>F. Source of Funds</td> <td>CF \$ 28,422,240</td> <td>\$ -</td> <td>\$ 15,000,000</td> <td>\$ 10,000,000</td> <td>\$ 3,422,240</td> <td>\$ -</td> <td>\$ -</td> </tr> </tbody> </table>							Total Project Costs	Total Prior Year Appropriations	Current Request FY 2021-22	Year 2 Request	Year 3 Request	Year 4 Request	Year 5 Request	(1) 5% project contingency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	E. Total Request	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Total Budget Request [A+B+C+D]	\$ 28,422,240	\$ -	\$ 15,000,000	\$ 10,000,000	\$ 3,422,240	\$ -	\$ -	F. Source of Funds	CF \$ 28,422,240	\$ -	\$ 15,000,000	\$ 10,000,000	\$ 3,422,240	\$ -	\$ -																																																
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COLORADO
Governor's Office of
Information Technology

10/09/2020

Lauren Larson
Director
Office of State Planning and Budgeting
111 State Capitol
Denver, Colorado 80203

RE: FY 2021-22 Modernize the Unemployment Insurance Employer Services System

Dear Director Larson:

Pursuant to OSPB instructions, this letter is to confirm that the Office of Information Technology (OIT) has collaborated in the development and submission of this proposed FY 2021-22 unemployment technology system modernization request for the Department of Labor and Employment (CDLE) titled, *Modernize the Unemployment Insurance Employer Services System*.

OIT has completed an internal review to ensure the project aligns with statewide IT goals and determined that OIT has the capacity to shift and reassign resources to meet the requirements of the project.

Sincerely,

Patricia Nord

10/08/2020

Patricia Nord, OIT Budget Director

Matthew Bidwell - OIT 10/8/2020

Matthew Bidwell, OIT CDLE IT Director





COLORADO

Department of Human Services

Jared Polis
Governor

Michelle Barnes
Executive Director

FY 2020-21 Request Year-IT Capital Request | [11/2/2020]

RY – Department IT Capital Construction Priority: [priority number] Behavioral Health Infrastructure Investments

Summary of Request	Total Funds	CCF-IT	Cash Funds	Reappropriated Funds	Federal Funds
FY 2020-21	\$0	\$0	\$0	\$0	\$0
FY 2021-22	\$10,480,017	\$10,480,017	\$0	\$0	\$0
FY 2022-23	\$0	\$0	\$0	\$0	\$0

Select One: Categories of IT Capital Projects (most are driven by one category with components of all)

System Replacement (costs escalating, failing technology, software or vendor support ended, or new technology, e.g., DRIVES, CHATS)	System Enhancement Regulatory Compliance (new functionality, improved process or functionality, new demand from citizens, regulatory compliance, e.g., CBMS)	Tangible Savings Process Improvement (conscious effort to reduce or avoid costs, improve efficiency, e.g., LEAN, back office automation)	Citizen Demand “The Ways Things Are” (transformative nature of technology, meet the citizens where they are, e.g., pay online, mobile access)
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Request Summary:

The Office of Behavioral Health (OBH) requests a one-time increase of \$10,480,017 total funds/General Fund and 9.0 temporary FTE for FY 2021-22 through FY 2023-2024 over the course of the projects. This request for funding is to improve Colorado's behavioral health system by increasing telehealth crisis services, decreasing provider administrative burden and improving outcomes for clients seeking behavioral health service through technology investments. Portions of this request will improve some aspects of regulatory compliance but the majority of the request will improve efficiencies of the system by decreasing duplicative processes between state agencies, decreasing administrative burden on providers, consolidating data collection to improve the state's ability to report on outcomes of the delivery system, and improve

access to crisis services for Coloradans. This increase will address technology and telehealth recommendations by the Behavioral Health Task Force created by Governor Polis. This request is a one time increase for FY 2021-22.

Specifically, the Department, in partnership with the Department of Health Care Policy and Financing and the Governor's Office of eHealth Innovation, is implementing several recommendations from the Behavioral Health Task Force related to telehealth infrastructure and information technology infrastructure including:

- On-demand virtual crisis services delivered via tele-behavioral health to connect Coloradans to real-time triage and crisis interventions via a downloadable app. This platform would also enable scheduling of follow-up and coordination of services with telehealth clinicians to ensure coordinated ongoing care with local physical health and behavioral health providers in the patient's community.
- Consolidate administrative and clinical data collection to reduce provider burden and increase financial transparency and analysis between Medicaid, commercial insurance and other relevant funding organizations to support payment methodologies, reporting on quality and outcomes of service delivery and ability to analyze and identify necessary community investments in the behavioral health continuum. This system improvement would be achieved through consolidation of OBH's federally required data collection systems and clinical data reporting in addition to leveraging integration with HCPF systems including claims payment system (MMIS), the eligibility determination system (CBMS), and the business data warehouse (e.g. HCPF's BIDM) and the State Health Information Exchanges (HIE).
- Invest in HIE for behavioral health providers to improve outcomes for clients. HIE utilizes real time alerts, allowing providers to intervene with clients that may be in crisis and supports providers in coordinating care and reducing provider burden through access to real-time information in order to support treatment decisions and client interventions.
- Expand technology infrastructure for bed capacity tracking for providers to identify available residential, inpatient, crisis and respite beds, and identify locations for opioid treatment services to streamline access and support law enforcement inpatient drop-off. The capacity tracker would provide real-time notifications about availability of beds across the State.
- Creation of a virtual training system for providers to access relevant resources for training that will decrease provider burden, expand workforce capacity, and build workforce competencies.
- Provide capacity-building grants for providers to invest in HIPAA-compliant telehealth systems and/or electronic health records to enable provider support for documentation and reimbursement and to enable providers statewide to offer telehealth.

Project Description:

In the spring of 2019, Governor Polis established a Behavioral Health Task Force to evaluate the State's current behavioral health system, and develop a blueprint that will reform the system so that all Coloradans can access the support and services they need. Colorado is in the bottom half of states (ranked 29th) by Mental Health America in terms of the prevalence of mental illness and access to care for adults and children. Per the Centers for Disease Control, Colorado has one of the highest suicide rates in the U.S., amongst the ten worst states (ranking 43rd). Despite making significant investments in its behavioral health system over the past eight years, the demand for services is increasing, and our State is falling short. The Behavioral Health Task Force aligned recommendations to support a statewide behavioral health system

that works for everyone – regardless of an individual’s ability to pay, their income, where they live in the State, or the level of services they need.

Many Coloradans report they are not able to access timely care because the services they need are not available in their communities, wait times are too long, or providers can’t accommodate their disabilities. With approximately 1 million people in Colorado in need of behavioral health services, Colorado needs a stronger behavioral health system that puts people first. This includes Task Force recommendations for increasing access to care, enhancing tele-behavioral health services, improving provider competency through training, easing provider’s administrative burden, and improving information sharing within the behavioral health system.

During the pandemic, there were immediate benefits that were highlighted in the use of telehealth to deliver behavioral health care. Specifically, of the 375 Coloradans surveyed by the Office of Behavioral Health, 36% reported reduced travel to receive care and 10% reported reduced wait times for scheduling appointments. Some people felt that it was easier to share information with their provider (12%) and believed their care was “better” (11%) using technology. For a State that has been ranked in the lower half of states as it relates to access to care, these improvements demonstrate a potential solution to serving Coloradans with behavioral health needs.

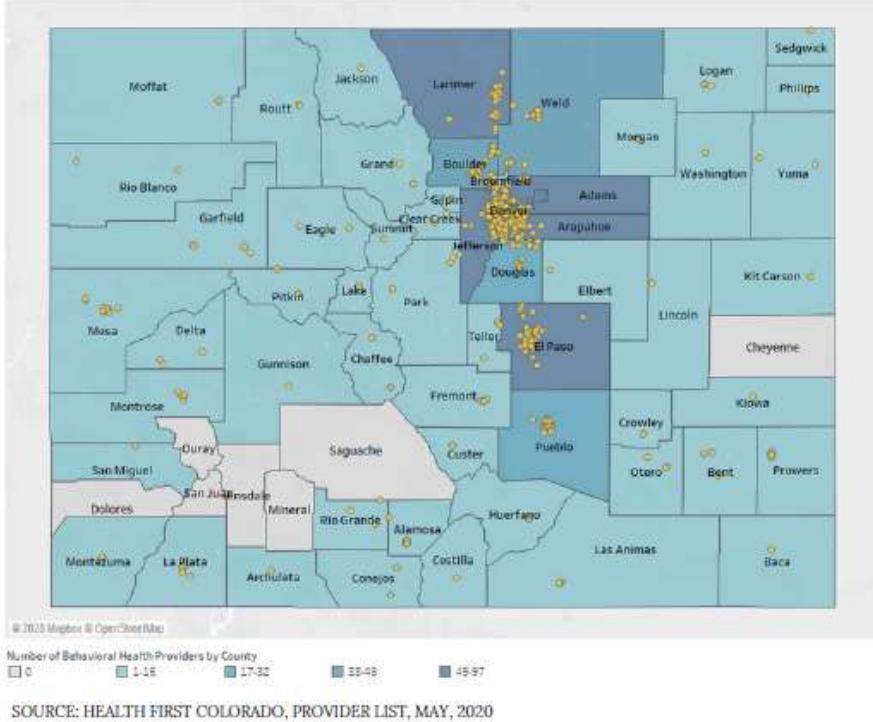
The reality is the most vulnerable populations are often hit the hardest during a crisis. Thus, these populations who are at heightened risk for lapses in care or have other disadvantages must be identified to ensure they have access to tele-behavioral health. In addition, with enhancements in broadband capacity in rural areas of Colorado, with the enhancements to virtual behavioral health services access to care can be afforded to more Coloradans.

Background of Problem or Opportunity:

Although tele-behavioral health has been in use across Colorado for years, new flexibilities have allowed for increased access for both clinicians and clients who may not have used it before. Use of telehealth services was rising before the onset of the novel coronavirus pandemic according to claims data analysis conducted by the Center for Improving Value in Health Care (CIVHC), "From January 2018 to February 2020, telehealth utilization per 1,000 members increased from 57 to 75.9 (33%) for commercial, 28.9 to 55.1 (91%) for Medicaid, and 125.7 to 142 (13%) for Medicare Advantage members." OBH claims data analysis that has been submitted to date indicates 41.5% of services being provided via telehealth during COVID-19 when you compare March through June timeframes for 2019 to 2020. When used within comprehensive care plans, tele-behavioral health has the potential to reduce no-shows and cancellations, and provide immediate access to services.

Though telehealth provides an additional access point for people who are seeking behavioral health services, it is one tool for providers to assist clients that need access to a continuum of services that are not locally available (Figure 1). The identified rural and frontier counties also have more individuals in a safety net population defined as having high behavioral health needs, and poor behavioral health outcomes. Tele-behavioral health can be an important solution to augment resource-dry communities that lack certain types of local services, including specialists and those who serve people with unique needs (e.g., those with limited or no English proficiency, those seeking LGBTQ-affirming care, or those with a preferred language, including sign language). Consumers should have the choice to utilize tele-behavioral health and in-person services as a result this can increase access to care.

Figure 1. Health First Colorado Providers Billing Behavioral Health Services



In addition, technology can increase the efficiency of the behavioral health workforce. Training designed to enhance the professional competency of the behavioral health providers and easing the administrative burden of data collection processes for providers will result in a stronger workforce.

Problems:

- Access to Care:** Numerous studies, including the Behavioral Health Task Force Blueprint and OBH's Behavioral Health Needs Assessment have identified challenges with access to care, a high suicide rate, lack of rural infrastructure, inefficient and uncoordinated services, and unnecessary involvement by criminal justice when individuals are in an acute crisis.
- Data Systems:** Multiple data collection systems exist across state agencies and impact provider burden and the ability for Colorado to successfully administer state and federal behavioral health funding, report on outcomes, cost, quality and address health disparities and align policies. Multiple legacy systems cannot look across the full spectrum of behavioral health; are extremely "siloed" and not interoperable; are not user friendly; do not provide enough useful information to inform decision making; and lack the flexibility and adaptability to meet the needs of an increasingly evolving behavioral health environment.
- Clinical Data:** Real-time clinical data is lacking and is needed to support care coordination and clinical decision making, including identification of bed availability and capacity tracking across the State.
- Workforce:** The State has workforce shortages, inadequate workforce competencies, and no comprehensive strategy for building workforce capacity and providing necessary technical assistance.

1. IT Infrastructure: Small providers do not have access to health IT infrastructure that will support access to data reporting and billing, telehealth platforms, and electronic health records that impact efficiencies for providers and decrease access to a trained workforce if a provider is unable to make necessary investments in infrastructure.

Justification:

This request supports the fundamental infrastructure required to successfully enable the recommendations from the Behavioral Health Task Force in critical areas identified. The Behavioral Health Task Force endorsed the creation of a Behavioral Health Administration that would be responsible for overseeing statewide behavioral health services and this request establishes this foundation to move the system and service delivery forward. Establishing coordinated health IT infrastructure in alignment with the Behavioral Health Task Force Recommendations and the creation of a single Behavioral Health Administration will ensure a standard of high quality, integrated, consumer-centric behavioral health care access and services that transform our current system by:

- Putting people first;
- Eliminating fragmentation;
- Promoting transparency;
- Offering a streamlined and efficient approach; and
- Minimizing the burden to providers so they can focus on client services.

Recommendations from the Behavioral Health Task Force's COVID-19 Special Assignment Committee recommended increased access to telehealth and further capacity building in the crisis system including follow-up post-hospitalization; care navigation; expansion of safe-to-wait services (STW); diverting crisis calls to community providers/partners; expansion of warm hand off; and, expansion of ongoing services provided by the Colorado Crisis Services to bridge care (up to 90 days) for delayed access to outpatient care. Leveraging telehealth infrastructure through on demand services will support these key recommendations to improve the crisis system.

The following table demonstrates the proposed strategies and the level of evidence based policy based on available data, and research.

Table 1: EVIDENCE-BASED CONTINUUM STEP DETERMINATION AND JUSTIFICATION

OBH will initiate several evidence-based steps to ensure that tele-behavioral health services have expanded and administrative burden was reduced as intended. The investment in technology infrastructure, alignment of data systems, and reduction of administrative burden to providers will result in consolidated and accessible data that can be evaluated on a regular cycle to monitor program outcomes, performance measures, and quality and adherence to clinical standards of care. Additionally, the alignment and standardization of data collection practices across agencies (e.g., HCPF, HIE, OBH) give OBH the ability to assess disparities to delivery or access to care for priority populations as outlined in the Statewide Behavioral Health Needs Assessment.

Effort	Step #	Step Description	Step Justification
Virtual Crisis Telehealth app	3	Collect and evaluate data on whether objectives are achieved	The Colorado Crisis System currently has a relatively rich set data available for programmatic evaluation. OBH uses these data to monitor utilization numbers and trends. In line with current practices, programmatic efforts to determine utilization and utilization trends will be gathered for this portion of the request. This effort has the added advantage of consolidating data so that we will be able to examine fiscal outcomes and enables OBH to calculate national clinical quality measures for services.
Consolidated Behavioral Health Data Collection Include non-Medicaid, behavioral health services in the Medicaid Management Information System	3	Collect and evaluate data on whether objectives are achieved	This effort will be achieved once OBH and other State agencies have determined what, and how, duplicative data can be collected and shared and non-Medicaid behavioral health data is included in the MMIS. Once data collection begins, the data can be used for descriptive and multi-level analysis, this effort has the potential to advance along the evidence-based continuum and report on cost, quality and outcomes of the state behavioral health system. A “Level 3” rating is appropriate because OBH will gain and share access to payment and cost data. This will enable OBH to examine the appropriate allocation of resources, look at decrease in emergency room utilization, and typical or unexpected cost drivers.
Health Information Exchange Investment	3	Collect and evaluate data on whether objectives are achieved	This effort will be achieved once OBH and the State HIEs formalize care coordination opportunities for behavioral health, allowing for real-time information and notifications to providers. A “Level 3” rating is appropriate because OBH will be able examine the impact of real-time notifications on general care coordination and client outcomes once a sufficient amount of data is collected.
Capacity tracking and Bed Management System	2	Develop a conceptual link b/w program activities and objective	This effort will be achieved once the Capacity Tracker is able to provide real-time notifications about availability of beds across the State and is accessible by high priority users. A “Level 2” rating is warranted because the Tracker will capture the number of persons using the system and common inquiries (i.e., need), such as bed requirements and regional differences.

Virtual Training System for Providers	3	Collect and evaluate data on whether objectives are achieved	This effort will be achieved once OBH has secured and developed a single platform for training providers. A “Level 3” rating is warranted because the distance learning platform will have the ability to track users and implement pre-and post test assessments.
Capacity-building Grants for Telehealth Platforms	3	Collect and evaluate data on whether objectives are achieved	This effort will be achieved once providers receive grants to develop their telehealth capacity and/or electronic health records. A “Level 3” rating is warranted because any client data collected through the new architecture will be submitted to OBH and the data can be used for descriptive and multi-level analysis.

Specifically, there is an opportunity to improve the behavioral health system in Colorado and address the problems identified above with the following proposed solutions:

1. **Virtual Crisis Telehealth App.** Creating a downloadable app that enables an on-demand telehealth visit for behavioral health that enhances virtual “mobile crisis services” and improves access to care in communities by creating a virtual “front door” for any Coloradan to connect with a clinician. It also enables a scheduling platform to connect with routine behavioral health services with a searchable directory that allows you to search providers based on selected factors. This on-demand service also improves access to mobile crisis responses where we have workforce challenges, geography considerations, rural disparities, and supports first responders capacity to immediately “schedule” a virtual behavioral health visit for individuals in a behavioral health emergency.
 - o Recommendations from the Behavioral Health Task Force COVID-19 Special Assignment Committee demonstrated the increased reliance on the crisis services system during a public health emergency and illustrated the need to have an adequate plan to successfully increase capacity for the hotline to handle more calls and potential expansion of other crisis services in future emergencies. Additionally, the impact of COVID on anxiety, depression, and substance use will necessitate further utilization of crisis services for Coloradans.
 - o This project would identify processes and virtual providers, agreed upon by OBH and HCPF that would deliver virtual on-demand crisis services and the crisis line would refer to emergency and non-emergent behavioral health services. In addition to referring patients to virtual clinicians with established connections and agreements with local mental health providers and primary care providers, this project would enhance crisis line triage systems and processes to better support crisis staff in addressing client needs. This platform can also be iteratively enhanced to provide non-clinical staff working in behavioral health settings (ie. jails, withdrawal management, Walk-in crisis centers) access to psychiatry and other clinicians to consult in real-time about medication reconciliation or other clinical consultation needs to avoid unnecessary emergency department utilization or jail bookings.
 - o This work and “no wrong door” approach advances the Behavioral Health Task Force recommendations for a coordinated and aligned telebehavioral health infrastructure built upon the crisis system and processes.

1. **Consolidated Behavioral Health Data Collection.** Aligning data collection systems between HCPF and OBH to address the administrative burden that clinicians experience on paperwork and that providers experience from participating in siloed systems for services designed by different state agencies. OBH and

HCPF will align data collection and reporting infrastructure into streamlined and interoperable systems to collect necessary clinical and administrative data to reduce time spent on duplicative or redundant processes in an effort to free up clinical time delivering services to Coloradans. Consolidated behavioral health data collection infrastructure that aligns disparate reporting and consolidates the multiple legacy databases into a unified structure is necessary to achieve the goals outlined in the BHTF recommendations. A new robust and provider centered Behavioral Health Management System would increase efficiencies and reduce administrative burden for providers; improve data collection to be more timely and accurate; to increase the availability of meaningful data to improve strategic planning; improve customer service and access to necessary information for agencies receiving funds or delivering services; perform interoperability while maintaining and securing client privacy and security; and ultimately making it easier for clients to find appropriate services and improve their health care experience.

2. Health Information Exchange Investment. Invest in Health Information Exchange for behavioral health providers to more efficiently coordinate care across multiple treatment providers and reduce provider burden through access to real-time information in order to support treatment decisions and client interventions. Connecting the hotline and mobile service providers to health information exchange will support coordination of services for patients and access to relevant treatment information for providers as patients move through the Behavioral Health Crisis System in Colorado with the opportunity to improve care coordination and support transitions of care with access to relevant treatment information.

3. Capacity Tracking and Bed Management System. Expand technology infrastructure for bed capacity tracking for providers to identify available residential, inpatient, crisis and respite beds, and identify locations for opioid treatment services to streamline access and support law enforcement inpatient drop-off. The capacity tracker would provide real-time notifications about availability of beds across the state.

4. Virtual Training System for Providers. Creation of a virtual training system for providers to access relevant resources for training that will decrease provider burden, expand workforce capacity, build workforce competencies. A unified statewide provider credentialing platform will help fill critical gaps and improve access to care.

5. Capacity-Building Grants for Telehealth Platforms. Establishing mini grants to support small providers with technology infrastructure to enable HIPAA compliant telehealth services, integrated electronic health records and billing systems will reduce administrative burden on small providers, enhance workforce in communities with service gaps, and scale telehealth infrastructure recommended in the COVID-19 Special Assignment Committee to improve access to services.

The Department did not perform a formalized business process analysis. However, in the spring of 2019, Governor Polis established a Behavioral Health Task Force to evaluate the State's current behavioral health system, and develop a blueprint that will reform the system so that all Coloradans can access the support and services they need. As part of the Behavioral Health task force assessment process five problem areas were identified including:

- Access to Care
- Data Systems issues
- Lack of real-time clinical data to support care coordination and clinical decision making.
- Workforce and training issues
- Provider Information Technology Infrastructure

In 2016 The Office of State Planning and Budget conducted a behavioral health funding study identified that the provision of behavioral health services by several state agencies, including continued segregation of the data and administration of Medicaid and non-Medicaid programs by HCPF and OBH (respectively), creates challenges, complexities and inefficiencies. OBH and HCPF are aware of the difficulties created by the current administrative structure and these complementary budget requests reflect HCPF and OBH

efforts to address these challenges. The OSPB report also indicated that the state's current "behavioral health service delivery and reimbursement system is outdated and its structure prevents any significant increases in efficiency and effectiveness. It seems inevitable that the current system requires funds and resources that could otherwise be directed to providing direct care." Office of State Planning and Budget Behavioral Health Funding Study-2016 Western Interstate Commission for Higher Education 2016.

Most recently the Colorado Department of Human Services-Office of Behavioral Health selected Health Management Associates to conduct a Statewide Behavioral Health Needs Assessment in which Stakeholders consistently cite Colorado's fragmented, disconnected and poorly integrated system as their main concern. "The root of system fragmentation lies in the fact that Colorado's mental health and substance use programs are overseen by multiple state agencies with mixed authority and are funded by numerous separate and discrete sources. Additionally, state agencies largely function in silos with limited integration necessary to support a statewide system of care. Although state leaders are aware of these challenges and spend considerable time dealing with consequences of the silos, without a more formal structure of collaboration, fragmented decisions will remain the natural fallout of separate missions, accountabilities, and at times, a lack of understanding about how a decision by one entity can have significant consequences on the integration of the system and impact the care of individuals." *Health Management Associates-CDHS-OBH Statewide Behavioral Health Needs Assessment. 2020*

The implications of the lack of shared and aligned vision for behavioral health are outlined in the Behavioral Health Needs Assessment as follows:

- Limited state response to decades of recommendations and reports on how to improve the behavioral health system and improve gaps in care. The most significant change needed is for a shared authority across state agencies and entities.
Result: Repeated failure to address gaps.
- Ineffective prioritization of populations in need leading to a patchwork of prioritized populations with varying eligibility, service availability and funding for services.
Result: Reduced whole person care and increased challenges for individuals with co-occurring conditions.
- A lack of shared vision for how the continuum of care is designed, expanded and improved to meet population need. Multiple networks of providers work on parallel tracks with separate visions, goals and accountability tied to their population, and public dollars are spent inefficiently. Historically, this approach has also failed to address conflict of interest between the administration of programs and the providers delivering services, the lack of provider choice for the consumer; and the lack of competition for delivering high quality among providers.
Result: Significant gaps in the continuum, with disparities by population and region, and a lack of standardization of core behavioral health services.
- Fragmented funding with no holistic viewpoint, creating an obstacle to developing a single comprehensive continuum of care or the ability to plan for long-term needs for the state, regions and prioritized populations.
Result: Significant duplication of funding for stand-alone services, lack of improvement and investment in the future, sense of misalignment with regional need and a lack of innovation from providers.

- A lack of consistency in state agency accountability. Each state agency has different goals, regulatory authority, administrative rules, quality metrics and incentives for the system of care.
Result: Conflicting regulations/rules limiting service delivery and creating confusion.
- Inconsistent data which is increasingly challenging in an era of big data and data-driven financial decisions for states. Each state department, accountable entity, and payor is using different metrics, different definitions of the same metric and different time frames. Data is not shared between entities (even state departments) and no one entity's data is complete, creating silos of information and understanding.
Result: Inability to make data-driven decisions, share data or metrics in a meaningful way or leverage resources efficiently.

Business Process Analysis

The Behavioral Health Task Force recommendations address areas of the Behavioral Health System that are currently lacking and have not been fully developed into a comprehensive system. This request establishes foundational infrastructure to address the fractured and siloed systems that exist in the behavioral health system and across state agencies. This request invests in existing state technology that includes Health Information Exchanges, HCPF's eligibility and claims processing system, and business intelligence data management infrastructure. New investments include the consolidation of multiple small databases including OBH's federally required data collection, jail behavioral health data collection system, crisis system data collection, licensing and designation data, central registry for opiate treatment programs, among others. CDHS is currently selecting a vendor to support identification of programs and resources that may exist in other agencies that may also be consolidated into the unified data collection infrastructure. As a result of this, there has not been any information from any Requests for Information (RFIs) issued to date related to the project being requested, or any other formal market research related to the project being requested. The Department proposes to competitively procure the proposed projects listed in Table 2 below that will define the scope of work for each of the projects. The Department has not engaged with a vendor or a consultant to assist in preparing the specifications and statement of work for each of the projects in this request. The Department will collaborate with the Department of Health Care Policy and Financing, along with the Governor's Office of eHealth Innovation and The Office of Information Technology in the development of these system improvements.

● Success Criteria and Improved Performance Outcomes

Table 2 describes five Behavioral Health System problem areas and the Department's proposed solutions. Table 2 also describes the anticipated outcomes of implementing the proposed solutions for each of the five identified problem areas.

Table 2: Anticipated Outcomes

Problem	Solution	Anticipated Outcomes
<p>1) Access to Care</p> <p>Challenges with access to care, a high suicide rate, lack of rural infrastructure, inefficient and uncoordinated services, and unnecessary involvement by criminal justice when individuals are in an acute crisis.</p>	<p>Virtual Crisis Telehealth App</p>	<ul style="list-style-type: none"> • Expanded crisis services delivered via telehealth across the State to support immediate access for clients in a behavioral health crisis get needed services • Real-time scheduling of follow-up appointments saving clients time in identification of providers • Reduction in unnecessary emergency department visits impacting the state Medicaid program and uncompensated care • Addresses workforce shortages especially in rural areas by leveraging statewide provider networks • Enables behavioral health services in rural areas, including the ability to consult with a physician in areas with workforce shortages • Improves integration of services so there is no wrong door for access into acute services and services are coordinated among an individual's team • Strengthens and expands the safety net system in alignment with Senate Bill 19-222 • Diverts individuals with behavioral health disorders from the criminal and juvenile justice system • Supports first responders in identifying appropriate supports for patients in crisis freeing up first responders to return to responding to other emergencies.
<p>2) Data Systems</p> <p>Multiple data collection systems exist across state agencies and impact provider burden and the ability for Colorado to successfully administer behavioral health funding, report on outcomes, cost, quality and address</p>	<p>Consolidated Behavioral Health Data Collection</p>	<ul style="list-style-type: none"> • Improved coordination of funding and resource allocation across State agencies allowing for identification of redundancies and inefficiencies. • Identification of potential duplicative payments to providers • Access to information by clinicians to improve quality and care for patients using consistent metrics • Improved transparency and reduction

<p>health disparities and align policies.</p>		<p>of duplicative services that impact the cost of care and impact clients accessing services when they need them</p> <ul style="list-style-type: none"> ● Reduced provider burden of reporting into disparate systems ● Improved eligibility determination for clients seeking services ● Improved transparency and reporting on cost, quality, and outcomes of services statewide ● Increased ability to improve services and care based on data. ● Improved efficiency for multiple state staff attempting to consolidate and analyze disparate data sets ● Increase ability to develop adequate payment models to support behavioral health service delivery ● Increased ability for understanding the network of services in communities enabling strategic investments for the behavioral health continuum
<p>3) Clinical Data</p> <p>Lack of real-time clinical data to support care coordination and clinical decision making, including identification of bed availability and capacity tracking across the State.</p>	<p>Health Information Exchange Investment</p> <p>Capacity Tracking and Bed Management System</p>	<ul style="list-style-type: none"> ● Improved outcomes for clients by improving care coordination and transitions of care for clients ● Reduced provider burden of calling and faxing or emailing to locate necessary information for clinical decision making, placement availability and improves coordination of care for clients ● Support provider clinical decision making and access to relevant clinical data including labs, admission, discharge and transfer information -including notifications about relevant hospital, crisis and other emergency services, that supports care coordination ● Enable bed capacity tracking for withdrawal management, residential beds, crisis beds, and opioid treatment capacity.

<p>4) Workforce</p> <p>Workforce shortages, inadequate workforce competencies, and no comprehensive strategy for building workforce capacity and providing necessary technical assistance.</p>	<p>Virtual Training System for Providers</p>	<ul style="list-style-type: none"> • Decrease provider burden by reducing clinical staff non-productive time traveling to training; reduces costs. • Expand workforce capacity; reduce wait-time for new staff to on-board as required training would be available on-demand and online. Decreasing clinical staff's non-value add time (waiting and travel) increases productivity which is a key driver to provider capacity. • Increase speed to launch new programs and accelerate timeline to deliver services to clients and utilize funding within a grant or budget period. • Build workforce competencies in all areas of the state • Reduced time in training and retraining behavioral health providers as interventions evolve and new evidence and effective interventions are developed • Opportunity to train non-clinical workforce and leverage workforce extenders allowing licensed staff to work at the top of their license.
<p>5) IT Infrastructure</p> <p>Small providers do not have access to HIPAA-compliant health IT infrastructure that will support access to data reporting and billing, telehealth platforms, and electronic health records that impact efficiencies for providers and decrease access to trained workforce if a provider is unable to make necessary investments in infrastructure.</p>	<p>Capacity-Building Grants for Telehealth Platforms</p>	<ul style="list-style-type: none"> • Improve and expand capacity and capability of HIPAA-compliant telehealth systems and/or electronic health records to enable provider support for documentation & reimbursement • Providers across the State will have the necessary technology for telehealth service delivery, enabling telehealth to be provided to more Coloradans • Small providers will see decreased administrative burden through the use of electronic health records • More providers will be able to bill for telehealth, which increases access to a trained and financially supported workforce

The Department of Human Services' request is complementary to HCPF's request that will provide the necessary infrastructure for behavioral health information system alignment. HCPF's request aligns with Colorado's Health IT Roadmap and includes cost allocation of shared systems between HCPF and CDHS including the Medicaid Management Information System (MMIS) where claims data is submitted; Cost Allocation changes related to federal funding for Medicaid; Colorado Benefit Management System (CBMS) eligibility modifications for identifying behavioral health benefits a client may be eligible for between HCPF and CDHS-OBH; and Business Intelligence Data Management (BIDM) data warehouse and analytics investments to consolidate disparate reporting. The two requests together will leverage existing state investments into a centralized system for submitting health care service billing information, determining client eligibility, and insurance information for state programs will support operation of a successful BHA and provide a central point of admission and eligibility for Coloradans seeking State funded behavioral health services.

- Assumptions for Calculations**

The tables that follow represent the anticipated costs of the Behavioral Health Task Forces solutions previously described:

Table 3: Investments to Enhance Access to Behavioral Health Care Budget Summary

Description	FY 2021-22 FTE	FY 2021-22
Temporary Analyst V Personnel Services and Operating to develop the projects below: Assume 9.0 FTE will complete work by December 31, 2022.	9.0	\$1,022,385
Subtotal Personnel and Operating Funds	9.0	\$1,022,385
1) Virtual Crisis Telehealth App to enable Coloradans to immediately connect with a crisis clinician. It is assumed this line item will fund a professional information technology company with a team consisting of various functions such as: project	0.0	\$2,318,356

<p>management, software design, user interface consulting, website development, telehealth platforms and virtual service delivery on HIPPA compliant platforms and other necessary services.</p> <p>It is assumed that a fully loaded rate will be approximately \$180/hr X12,880 hours. It is assumed that multiple team members from the professional information technology company will be working on the project at the same time. It is assumed that this will be procured by the Department through a request for Behavioral Health proposals process.</p>		
<p>2) Consolidated Behavioral Health Data collection. Disparate state and federal data will be consolidated into centralized behavioral health data management system</p> <p>Note: Behavioral Health Information System Alignment and infrastructure development: HCPF & OBH Cost Allocation of Shared System (MMIS Modifications, Cost Allocation changes, CBMS, Peak Pro)</p> <p>It is assumed this line item will fund a professional information technology company with a team consisting of various functions such as: project management, software design, user interface consulting, interoperability, cloud based data organization, cybersecurity, and other necessary services.</p> <p>It is assumed that a fully loaded rate will be approximately \$180/hr X 13,333 hours. It is assumed that multiple team members from the professional information technology company will be working on the project at the same time. It is assumed that this will be procured by the Department through a request for proposals process.</p>		\$2,400,000
<p>3) Health Information Exchange Investment And Integration with Providers*</p> <p>A. Large MH & SUD Providers: $\\$875,000 = 25 \times \\$35,000$</p> <p>B. Other MH & SUD Providers:</p>		\$2,440,000

<p>$\\$1,150,000 = 230 \times \\$5,000$</p> <p>C. Jails, Emergency Medical Services (EMS), Prevention Providers: $\\$415,000 = 55 \times \\$7,500$</p> <p>It is assumed that this will be procured by the Department through the state Health Information Exchanges.</p>		
<p>4) Capacity Tracking and Bed Management System*</p> <p>It is assumed this line item will fund a professional information technology company with a team consisting of various functions such as: project management, software design, user interface consulting, website development, and other necessary services.</p> <p>It is assumed that a fully loaded rate will be approximately \$180/hr X 1,667 hours. It is assumed that multiple team members from the professional information technology company will be working on the project at the same time. It is assumed that this will be procured by the Department through a request for proposals process.</p>		\$300,000
<p>5) Virtual Training System for Providers*</p> <p>It is assumed this line item will fund a professional information technology company with a team consisting of various functions such as: project management, software design, user interface consulting, website development, video conferencing and other necessary services.</p> <p>It is assumed that a fully loaded rate will be approximately \$180/hr X 5,556 hours. It is assumed that multiple team members from the professional information technology company will be working on the project at the same time. It is assumed that this will be procured by the Department through a request for proposals process.</p>		\$1,000,000

6) Capacity-Building Grants for Telehealth Platforms to provide Behavioral Health Services to expand access through extended network (i.e. jails, clinics, schools)*		\$1,000,000
Estimated cost of grants is \$25,000 per grant. It is estimated that 40 grantees may be served. If grant applications are lower than more grantees will be served. It is assumed that these grants will include: telecommunications hardware, professional installation and configuration, minor building improvements, and labor costs. Clinical services costs are not included.		
Subtotal Capital Funds		\$9,458,356
Grand Total:	9.0	\$10,480,741

*The Department assumes that 50% of the project will be expended in each of the two fiscal years.

Table 4: FTE Calculations

FTE Calculation Assumptions:				
Operating Expenses – Base operating expenses are included per FTE for \$500 per year. In addition, for regular FTE, annual telephone costs assume base charges of \$450 per year.				
Standard Capital Purchases – Each additional employee necessitates the purchase of a Personal Computer (\$900), Office Suite Software (\$330), and office furniture (\$3,473).				
General Fund FTE – Beginning July 1, 2019, new employees will be paid on a bi-weekly pay schedule; therefore new full time General Fund positions are reflected in Year 1 as 0.9615 FTE to account for the pay-date shift (25/26 weeks of pay). This applies to personal services costs only; operating costs are not subject to the pay-date shift.				
Expenditure Detail		FY 2021-22	FY 2022-23	
<i>Personal Services:</i>				
Classification Title	Monthly Salary	FTE	FTE	
Analyst V	\$6,659	9.0	\$719,172	\$0
PERA			\$78,390	\$0
AED			\$35,959	\$0
SAED			\$35,959	\$0
Medicare			\$10,428	\$0
STD			\$1,223	\$0
Health-Life-Dental			\$90,377	\$0
Subtotal Position 1, #.# FTE		9.0	\$971,508	-
Classification Title	Monthly Salary	FTE	FTE	
PERA			\$0	\$0
AED			\$0	\$0
SAED			\$0	\$0
Medicare			\$0	\$0
STD			\$0	\$0
Health-Life-Dental			\$0	\$0
Subtotal Position 2, #.# FTE		-	\$0	-
Subtotal Personal Services		9.0	\$971,508	-
<i>Operating Expenses:</i>				
		FTE	FTE	
Regular FTE Operating	\$500	9.0	\$4,500	\$0
Telephone Expenses	\$450	9.0	\$4,050	\$0
PC, One-Time	\$1,230	9.0	\$11,070	-
Office Furniture, One-Time	\$3,473	9.0	\$31,257	-
Other				
Subtotal Operating Expenses			\$50,877	\$0
TOTAL REQUEST		9.0	\$1,022,385	-
<i>General Fund:</i>				
<i>Cash funds:</i>				
<i>Reappropriated Funds:</i>				
<i>Federal Funds:</i>				

	FY 2020-21	FY 2021-22	pending updates from OSPB
PERA	10.90%	10.90%	
AED	5.00%	5.00%	
SAED	5.00%	5.00%	
Medicare	1.45%	1.45%	
STD	0.17%	0.17%	
Health-Life-Dental	\$10,042	\$10,042	

- **Consequences if not Funded** – If this project is not funded, the current state of technology infrastructure, data availability, and information flow will be maintained. Providers will continue to send in State and Federally mandated data into the Office of Behavioral Health in spreadsheets, the OBH will have no practical tools to validate or reconcile that data, the OBH clinical data will continue to be disparate, resulting in inefficiencies, duplicative reporting requirements, and significant challenges in the capability to transform data to actionable information and enable effective decision-making. Further, the crisis services system will continue to be almost exclusively delivered through in-person modalities, limiting the most responsive services to those physically

near to crisis centers which limits access and holds the growth of the system within the constraints of a high-cost model. Without support of the State funding of technology expansion within behavioral health providers, providers, who largely are not-for-profit organizations with little to no operating margin to fund infrastructure investments, are not likely to be able to connect to the State Health Information Exchanges. Of course, if the project is not funded, these funds will not be expended on capital IT investments.

Implementation Plan:

- **Change Management** –These projects are aligned with the Governor’s initiative driven by the Behavioral Health Task Force, which includes significant change management and stakeholder engagement. Through project design and implementation, stakeholders will be engaged through communications from the BHTF and more directly as behavioral health providers contracted by the Office of Behavioral Health. Through each sub-project’s design and implementation phase, stakeholders may be engaged in various types of design collaboration, testing, and training, such as:
 - Training may include: (1) business process training due to changes as a result of the technology; (2) system training; and (3) technical training for resources supporting the system. Training media might include instructor-led classes, webinars, on-demand computer-based training, or online help.
 - Testing types may include: (1) user-acceptance testing; (2) unit testing; (3) system integration testing; (4) performance testing; and (5) data migration testing.
- **Alignment with OIT Best Practices and Standards** – This request aligns with the State’s OIT Five-Year IT Telehealth Roadmap. In the Five-Year IT roadmap, this project aligns with “Objective 1” of the roadmap. “Objective 1” of the roadmap states: “To ensure every Coloradan will have access to the behavioral health services they need.” Additionally, these projects align with OIT’s Wildly Important Goal #3 to expand virtual access to government services anytime and anywhere. These projects were developed in partnership with the Department of Health Care Policy and Financing and the Governor’s Office of eHealth Innovation, is implementing several recommendations from the Behavioral Health Task Force related to telehealth infrastructure and information technology infrastructure including:
 - On-demand virtual crisis services delivered via tele-behavioral health
 - Consolidation of OBH’s federally required clinical data collection and reporting systems in addition to leveraging integration with HCPF systems including claims payment system (MMIS), the eligibility determination system (CBMS), and the business data warehouse (e.g. HCPF’s BIDM) and the State Health Information Exchanges (HIE).
 - Investing in HIE for behavioral health providers
 - Expand technology infrastructure for bed capacity tracking and opioid treatment services
 - Creation of a virtual training system for providers
 - HIPAA-compliant telehealth systems and/or electronic health records capacity-buildingThe Department will work with OIT to ensure that best practices and standards are integrated into the Request for Proposals procurement process and subsequent implementation.
- **Procurement**

This is a new project and at the beginning stages of procurement planning. The Department has collaborated with the Governor's Office of eHealth Innovation, Office of Information Technology as well as the Department of Health Care Policy and Financing in the development of these recommendations and budget requests for the system improvements outlined in this document. The Department has not yet engaged with a vendor or a consultant to assist in preparing the specifications and statement of work for each of the projects in this request. The Department proposes to competitively procure the proposed projects listed in Table 2 below that will define the scope of work for each of the projects.

- **Disaster Recovery and Business Continuity**

In relation to disaster recovery and business continuity, the Department has not conducted a risk analysis for these projects. The Department intends to address disaster recover and business continuity as part of the procurement requirements, design, and implementation.

- **Accessibility Compliance**

The Department will work with OIT to ensure that best practices and standards for accessibility compliance are integrated into the Request for Proposals procurement process and subsequent design and implementation.

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
Initiate Procurement	February 2021	April 2021
Hiring staff	April 2021	July 2021
Procurement Scoring and Award	May 2021	June 2021
Contract with IT Vendors	July 1, 2021	December 2021
Project Design and Implementation	July 1, 2021	TBD
Roll-forward request evaluation	April 1, 2022	June 2022
Prepare and submit operating budget request	Nov. 1, 2022	Nov. 1, 2022
Go-live	Upon Completion of Each Project in FY 2022-23	TBD

CASH FUND PROJECTIONS (DELETE IF NOT APPLICABLE)			
Cash Fund name and number:	N/A		
Statutory reference to Cash Fund:	N/A		
Describe how revenue accrues to the fund:	N/A		
Describe any changes in revenue collections that will be necessary to fund this project:	N/A		
FY 2018-19 Actual Ending Fund Balance	FY 2019-20 Projected Ending Fund Balance	FY 2019-20 Projected Ending Fund Balance with Project Approval	FY 2020-21 Projected Ending Fund Balance with Project Approval
N/A	N/A	N/A	N/A