

Fiscal Year 2015-16 Information Technology Request

Human Services

Child Care Automated Tracking System Enhancement

PROGRAM PLAN STATUS and OIT BEST PRACTICES

2016-039

Approved Program Plan? Date Approved:

The department says it is developing a five-year technology vision and roadmap to help the Office of Early Childhood (OEC) achieve its mission and business goals, support decision-making and prioritization of resources from the Governor's Office of Information Technology (OIT), establish OIT standards, set OIT budgets, and drive future OIT initiatives.

PRIORITY NUMBERS

Prioritized By	Priority	
DeptInst	6 of 6	
OSPB	10 of 10	Prioritized and recommended for funding.

PRIOR APPROPRIATION AND REQUEST INFORMATION

Fund Source	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
FF	\$0	\$1,533,125	\$1,458,125	\$270,000	\$3,261,250
Total	\$0	\$1,533,125	\$1,458,125	\$270,000	\$3,261,250

ITEMIZED COST INFORMATION

Cost Item	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
Land Acquisition	\$0	\$0	\$0	\$0	\$0
Professional Services	\$0	\$1,188,125	\$1,113,125	\$0	\$2,301,250
Construction	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0
Contingency	\$0	\$0	\$0	\$0	\$0
Software Acquisition	\$0	\$345,000	\$345,000	\$270,000	\$960,000
Total	\$0	\$1,533,125	\$1,458,125	\$270,000	\$3,261,250

PROJECT STATUS

This is a new, never-before requested project. DHS says this project will replace the original CHATS system, initially deployed in 2010 at a cost of \$14.7 million.

PROJECT DESCRIPTION / SCOPE OF WORK

The Department of Human Services (DHS) is requesting federal funds spending authority to enhance and replace major components of the Child Care Automated Tracking System (CHATS) in OEC. This project is planned for a five-year deployment using a hybrid approach that retains and enhances certain CHATS functionality and allows for replacement of selected functionality with new or current state-leveraged systems. The department says that the new system will leverage existing technologies, enhance functionality while utilizing new technology, and make needed updates to both hardware and software. This includes replacing the point-of-sale (POS) system for attendance tracking, providing easy-to-read and concise reports, and building a user-friendly environment for both providers and families.

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The hybrid solution enhances and replaces CHATS modules in a phased approach, consisting of a set of thirteen technical and non-technical initiatives to address the gaps and system requirements identified by CHATS users, providers, OIT, and OEC. These initiatives are discussed in more detail in the Program Information section.

Source of federal funds. The department is requesting to fund this project using the uncommitted Child Care Development Fund (CCDF) balance. The department says it receives annual grant awards from the federal Administration for Children and Families. The majority of the funding is allocated to counties and is used to fund and administer subsidized childcare assistance throughout the state. The remaining money is used for quality initiatives and administration by the state. Historically, the annual allocation is not fully spent, and the department rolls forward the unspent monies to future fiscal years. Based on the consistent roll-forward of CCDF appropriations, the department requests to use a portion of those funds for the project.

PROJECT JUSTIFICATION

According to the DHS, the CHATS system was deployed in 2010 to update technology and address business needs related to tracking attendance, improving financial management, improving access to data, and preventing fraud. However, poor requirements gathering and development along with budget request constraints resulted in significant CHATS shortcomings that failed to meet user expectations. Some of these shortcomings include no robust reporting capability, no provider portal, and no operations and maintenance support team.

DHS says CHATS high-impact challenges include:

- functionality that does not support statewide policies, such as assessing the correct parent fees, managing unpaid parent fees, preventing manual claims, and recovering payments;
- existing functionality that does not effectively support complaints, investigations, or fraud prevention;
- many users disliking the POS system, citing technical problems, user issues with POS cards, and a burden on parents and providers;
- some providers choosing to no longer be Colorado Child Care Assistance Program (CCCAP) providers, or becoming reluctant to become providers, due to the challenges and administrative burdens of the current tracking and attendance system; and
- limited standard reports and a lack of ad hoc reporting or querying capabilities, which severely hinder state and county staff at all levels. Counties and the state have very limited access to program data to conduct program planning, monitoring, analysis, budgeting, needs assessments, and auditing.

In 2013, Deloitte Consulting was hired by the department to complete a Rapid Risk Assessment for CHATS. The assessment identified significant deficiencies, including:

- insufficient technical and policy resources;
- significant backlog of work;
- increasing system instability;
- complex system technology;
- a lack of web-based training, video-based training, or learning management systems for all users and groups;
- no capacity to add environments for troubleshooting, evaluating, and testing; and
- environmental constraints that limit the ability to develop and test new functionality.

In 2014, BerryDunn was hired by the department to perform a comprehensive needs assessment of CHATS, including an interface with other OEC systems. After extensive analysis, including stakeholder meetings, interviews with county staff and providers, an evaluation of best practices, and identifying current and future interdependences with other OEC systems, BerryDunn recommended a hybrid approach to incrementally enhance and replace current CHATS modules in a phased approach.

Project alternatives. According to the department, alternative projects were evaluated, including a “do nothing” approach to a full system replacement. The department says the hybrid solution of enhancing and replacing modules was determined to be the most cost-effective, most time-efficient, and least risky. Furthermore, the benefits of the hybrid approach include the ability to reuse current CHATS coding, while leveraging infrastructure and shared resources with other data systems within the department. DHS says the other alternatives failed to achieve the

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department's desired outcomes.

If the project is not funded, the department says critical impacts include:

- persistence of gaps, affecting user support systems, maintenance activities, and governance structure with OIT;
- accumulation of "technical debt", which will eventually overwhelm the system;
- vulnerability of the POS system to ongoing maintenance and support;
- exposing the system to security vulnerabilities as most Windows-based operating systems will be at the end of their support life;
- retaining the current inefficient notice printing environment;
- the lack of decision support analytics and ad hoc reporting;
- the absence of an interface with QRIS, resulting in time-consuming manual processes;
- the absence of a more user-friendly interface;
- reduced assistance to counties to investigate complaints against providers and to manage corrective actions;
- an unimproved financial module, continuing the need for manual payments and recovering overpayments; and
- the continued failure of the system to meet the needs of families served by the department.

PROGRAM INFORMATION AND IMPLEMENTATION PLAN

DHS says non-technical initiatives addressed by the project include:

- a comprehensive strategic technology plan to define technical priorities through active consultant engagement;
- increased staffing efficiencies that apply to the CHATS modernization plan identified through a lean process;
- additional user training, activities, and materials, as part of the business function of CCCAP; and
- planning for and implementation of attendance and benefit tracking replacement.

A non-functional technical initiative of the project is to research CHATS hardware and software, in cooperation with OIT. Functional technical initiatives include:

- designing and incorporating an electronic document management system (DMS) into CCCAP workflow;
- redesigning batch notice printing to better meet the needs of CCCAP providers and families;
- providing agile data management to better meet the needs of CCCAP providers and families; and
- improving business intelligence and predictive analytics from the current static and inflexible reporting environment.

Business initiatives include:

- providing a more robust CHATS interface with the Quality Rating and Improvement System (QRIS) and other state systems;
- developing a more friendly CHATS user interface and user experience (UI/UX) for CCCAP providers and families, in cooperation with stakeholders;
- increasing capacity to manage complaints and investigations; and
- enhancing the financial module to allow for better tracking of attendance, reconcile attendance and payments, collect overpayments, and process manual claims.

COST SAVINGS / IMPROVED PERFORMANCE OUTCOMES

According to DHS, the BerryDunn analysis identified the hybrid solution as the most cost effective solution. If the project is not funded, DHS says the current system will be due for a lifecycle refresh in five years. Furthermore, a complete system replacement may be necessary due to the accumulation of help desk tickets and continued deterioration in system performance. As technology costs have gone up in recent years, a full system replacement in five years has the potential to be very costly to the state. A full replacement is estimated to cost \$20 to \$25 million, not including ongoing maintenance and operation. However, DHS says full replacement is deemed unnecessary at the current time, as components of the CHATS system are still able to function efficiently, making the hybrid solution

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the most cost effective, and potentially saving the state \$10 million.

The department says the project will result in several improved performance outcomes, including: an enhanced POS system for providers and CCCAP families; improved child care attendance tracking and payment reconciliation; increased access to child care-related information by end users, customers, research entities and other interested parties; increased ability for real time attendance tracking; and reduced inefficiencies and maintenance costs of the current technological environment.

SECURITY AND BACKUP / DISASTER RECOVERY

According to the department, OIT's Information Security Office will review the security of the modernized components of CHATS before being put into production. The backup and disaster recovery specifications will be designed in cooperation with OIT and will be built to minimize risk and ensure business continuity.

BUSINESS PROCESS ANALYSIS

According to the department, BerryDunn conducted an extensive business process analysis as part of the first deliverable of their engagement. The analysis included outreach with county staff, state staff, providers, information technology staff, and subject matter experts. The analysis looked at the current state as well as future technology, business process changes, and legislative initiatives. BerryDunn identified over 110 business and technology gaps that are impacted by the current CHATS system. The hybrid recommendation is tailored to address the current and evolving business process needs. Specifically, BerryDunn included a series of four "nontechnical" initiatives designed to ensure business processes are in sync with technology changes.

PROJECT SCHEDULE

	Start Date	Completion Date
Contracting	July 2015	August 2015
Implementation	September 2015	March 2017
Equipment	September 2015	March 2017
Completion		March 2017

OPERATING BUDGET

The department says there may be a need to seek additional operating funds in the future. The department has submitted an associated operating budget request, not part of this request, to the Joint Budget Committee for \$900,000 in FY 2015-16 and anticipates \$1,200,000 in on-going annual operating expenses beginning in FY 2016-17.

STAFF QUESTIONS AND ISSUES

1. CHATS was originally built to DHS specifications and deployed in 2010 at a cost \$14.7 million. Does the new system have the required functionality that was missing from the first CHATS deployment?

Yes, the new system does have elements of the required functionality that was missing from the original CHATS deployment. This functionality will now support state monitoring of county adherence to plans, capture county detail plans, provide real-time electronic notifications when updated plans are ready for review, and several other critical enhancements.

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Furthermore, the new system improves upon existing functionality in the current CHATS environment, as well as utilizing more modern technology. For example, the original system provided point-of-sale thermal paper reconciliations for providers. The functionality was delivered, however the thermal paper reports proved extremely difficult to interpret, reconcile, and store.

2. The Deloitte Consulting report called out several deficiencies including “complex system technology” and “lack of training”. What planning processes have changed that would affect this project for the better?

The BerryDunn assessment also confirms the deficiencies related to complexity and lack of training identified in the Deloitte Consulting report. Their recommendation calls for two specific initiatives to address these concerns. First, NT#1- Office of Early Childhood Strategic Technology Plan is the cornerstone of the projects’ success. The consultants recommended, and the Office is developing a “5-year technology vision and roadmap to help Office of Early Childhood achieve its mission and business goals, support decision-making and prioritization of OIT resources, establish Office of Information Technology standards, set Office of Information Technology budgets, and drive future Office of Information Technology initiatives”. This strong governance will ensure that the appropriate technology is in alignment with the Office’s strategic priorities. Additionally, the Department has built Independent Validation and Verification (IV&V) and certified project management into the project budget. These resources serve as an additional layer of project control to ensure the project meets specifications and deliverables.

The second initiative, NT#3 CHATS User Training, “establishes training as a core Colorado Child Care Assistance Program business function supported through training planning, revision of training materials and user documentation, and ongoing assessment of training needs and activities”. This initiative addresses the need for immediate training for the existing system, as well as a robust, user-friendly training module in the new system.

3. The previous deployment of CHATS was allocated only 3.5 of the requested 18 FTEs (reduced by 14.5 FTEs) due to budget restrictions, “which proved to be a critical defect in implementation, and the system was never fully able to recover.” This new project does not contain any request for new FTEs for the ongoing maintenance and support of the system. Had the originally shorted 14.5 FTEs been funded would this new CHATS enhancement and replacement project still have been needed?

It is difficult to speculate as to whether proper maintenance would have avoided system replacement. By the time the new system is fully operational, the original CHATS will be close to 10 years old, and ready for a lifecycle refresh from the technology platform standpoint. The lack of adequate staffing to perform ongoing maintenance and operation support prevented the Department from making ongoing enhancements.

To avoid similar defects with the new system, the Department is following the BerryDunn recommendation to utilize contract staff to significantly increase ongoing operation and maintenance support with the current system during the hybrid transition, as well as when the hybrid system is fully operational.