

# Fiscal Year 2016-17 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 has hired a contractor to develop a five-year Strategic Technology Plan 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	3 of 3	
OSPB	1 of 4	Prioritized and recommended for funding.

#### PRIOR APPROPRIATION AND REQUEST INFORMATION

Fund Source	Prior Approp.	FY 2016-17	FY 2017-18	Future Requests	Total Cost
FF	\$1,533,125	\$1,458,125	\$90,000	\$270,000	\$3,351,250
<b>Total</b>	\$1,533,125	<b>\$1,458,125</b>	\$90,000	\$270,000	\$3,351,250

#### ITEMIZED COST INFORMATION

Cost Item	Prior Approp.	FY 2016-17	FY 2017-18	Future Requests	Total Cost
Land Acquisition	\$0	\$0	\$0	\$0	\$0
Professional Services	\$1,188,125	\$1,113,125	\$0	\$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	\$345,000	\$345,000	\$90,000	\$270,000	\$1,050,000
<b>Total</b>	\$1,533,125	<b>\$1,458,125</b>	\$90,000	\$270,000	\$3,351,250

#### PROJECT STATUS

This is a continuation request. Phase I of this project was funded in FY 2015-16. This request is for Phase II funding.

#### 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, initially deployed in 2010 at a cost of \$14.7 million. This request is for Phase II of a planned 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 balances, 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 child care 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 less than 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 displaying reluctance 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.

In July 2015, BerryDunn was hired by the department to conduct a Strategic Technology Plan for the OEC, funded through the department's FY 2015-16 federal funds spending authority for the CHATS Enhancement project. This plan will provide a technology, business process, and business strategy roadmap for all programs within the OEC,

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and is scheduled to be completed prior to the award of the CHATS Enhancement RFP.

**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 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 a lack of 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 the Quality Rating and Improvement System (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 and 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 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

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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 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. The department conservatively estimates an annual savings of \$477,854 from the new system, primarily from more efficient and accurate attendance tracking. See question #9 in the Staff Questions and Issues Section for more information.

### 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 going live. The backup and disaster recovery specifications will be designed in cooperation with OIT and will be built to minimize risk, ensure business continuity, and meet federal and state IT requirements.

### BUSINESS PROCESS ANALYSIS

According to the department, BerryDunn conducted an extensive business process analysis as part of the first deliverable of their contract. The analysis included outreach with county staff, state government staff, providers, IT staff, and subject matter experts. The analysis looked at the current and 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 "non-technical" initiatives designed to ensure business processes are in sync with technology changes.

### PROJECT SCHEDULE

	Start Date	Completion Date
Contracting	November 2015	February 2016
Implementation	March 2016	April 2017
Completion		April 2017

### OPERATING BUDGET

The department submitted an associated operating budget request in 2015 to the Joint Budget Committee for \$900,000 for FY 2015-16 and \$1,290,000 for FY 2016-17 and future years. The request was approved and provides \$1,290,000 in on-going annual operating expenses.

### STAFF QUESTIONS AND ISSUES

1. Was BerryDunn involved in the original CHATS deployment, back in 2010?

*No, BerryDunn was not involved in the original CHATS deployment.*

2. Based on the timeline given in Figure 1.1, the OEC Strategic Technology Plan contract should have been awarded

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in September 2015, and the CHATS Modernization RFP should have been released in July 2015, and possibly awarded by now. Have these milestones been met? If they haven't, please explain why, and what penalties are being assessed against BerryDunn for not meeting its deadlines?

*The OEC Strategic Technology Plan was awarded ahead of schedule. Vendor selection was completed on July 7, 2015.*

*The release of the RFP was delayed because the RFP development process proved more complex than anticipated, primarily due to the need to ensure proper coordination with other related projects (operating and maintenance, Provider Self-Service Portal, HB14-1317 Implementation, etc.). The vendor completed field work in August. The RFP then went through several internal clearance processes including CDHS Contracts and Procurement, and the OIT gating process. The RFP is currently under review and the public posting is expected to close mid to late December 2015.*

*None of the project delay is attributable to BerryDunn. The vendor met all project schedules and deliverables. The delays that did occur were directly related to the need to obtain approval and review from multiple entities on a complex project. The Department believes that this due diligence is warranted given the size and scope of the project.*

3. The CHATS Modernization project is scheduled for completion by April 2017. Is the department on track for this?

*Yes, based on where the Department currently is in the project time line the project is on track to meet the April 2017 deadline. However, at this time a vendor is not under contract. The Department will work with the vendor to establish realistic timelines, with the goal of meeting the proposed April 2017 date.*

4. How was the development of the OEC's Strategic Technology Plan funded? Were the federal funds appropriated for the CHATS Modernization project in FY 15-16 used?

*Yes, the Department used FY 2015-16 Child Care Development Funds (CCDF) to pay for the OEC Strategic Technology Plan.*

5. How much of Phase I funding has been encumbered at this point?

*The Department has encumbered \$1,157,635 to this point (Project Management, OEC Technology Strategic Plan, CHATS Modernization Phase I).*

6. Are there deadlines associated with OIT's gating process for this project? How do they fit into the overall project timeline?

*We have incorporated the OIT gating process and work associated with completing these milestones into the high level project plan, as well as additional time to account for unforeseen issues into the overall timeline for CHATS Modernization.*

7. It is noted that the department has several other IT projects underway that will interface with CHATS at some level. Please confirm which projects these are.

*The following projects require modifications to, or net new integrations with CHATS that will occur in concert with CHATS Modernization: Universal Application / PEAK to CHATS integration; Quality Rating Information System (QRIS) to CHATS integration; and CHATS to Colorado Department of Education (CDE) Link integration. Depending on the awarded vendor's solution, existing integrations with other systems may need to be enhanced or modified, and that additional work will be included in the Modernization efforts.*

8. Will this project roll up to and integrate with an overarching OIT Program Plan including these various OIT projects? Have the activity dependencies/timelines across the individual projects been identified? Are they being tracked?

*Yes, OIT has been involved throughout all parts of the planning process. The RFP incorporates OIT enterprise*

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*strategic directions, and at a high level identifies dependencies across projects. Not all dependencies will be identified until the awarded vendor is engaged and they provide the detailed project plan.*

9. House Bill 15-1266 requires all information technology budget requests to identify and quantify anticipated administrative and operating efficiencies or program enhancements and service expansion through cost-benefit analyses and return-on-investment calculations. Has DHS quantified the cost savings as part of the cost benefit analysis? If so, please provide the quantification, or, if not, make quantification about the assumptions stated in the cost-benefit analysis section of the CC-IT narrative.

*BerryDunn conducted an analysis of the relative cost and benefits of various options based on the following criteria: Meets User Objectives, Alignment with Industry Trends & Best Practices, Impact on Stakeholders, Long-term Viability, Time to Implement, Estimated Total Cost of Ownership, Technical Feasibility, and Overall Risk. The Hybrid solution was not only one of the most cost effective, but it also was the highest rated for meeting program needs. The analysis conservatively estimated annual savings of \$477,854, primarily from more efficient and accurate attendance tracking.*

10. In addition, please indicate why a “do nothing” approach would cost the state \$28 million, and indicate any manpower efficiencies that will be gained through the new system.

*The BerryDunn analysis identified the “do nothing” option as the most expensive in terms of total cost of ownership. The lack of ongoing investment would cause continued degradation of the system, resulting in reduced functionality and higher personnel service costs. Ultimately, the Department would be faced with a total replacement (\$28M) at a cost greater than current technology.*

*The analysis did not identify specific manpower efficiencies. However, the Department believes that newer technology has the potential to reduce ongoing operating and maintenance costs.*