John W. Hickenlooper Governor

> Ellen Golombek Executive Director

FY 2017-18 Funding Request | November 1, 2016

Department Priority: R-01
Request Detail: Conveyance SaaS Solution

Summary of Incremental Funding Change for FY 2017-18	Total Funds	Cash Funds
Conveyance Program Application and Database	\$445,000	\$445,000

### Problem or Opportunity:

The Division of Oil and Public Safety (OPS) is responsible for a variety of regulatory functions related to environmental and consumer protection and public safety, including establishing and enforcing rules, regulations and statutes which govern amusement rides and devices, explosives, boilers, conveyances, fuel products, underground and aboveground petroleum storage tanks, cleanup of petroleum contamination and reimbursement of cleanup costs to qualifying storage tank owners/operators.

The Conveyance Section regulates the installation, alteration, periodic inspection and testing of conveyances as defined in the Elevator and Escalator Certification Act. These conveyances consist of elevators, platform lifts, personnel hoists, dumbwaiters, escalators, moving walks, and automated people movers like the trains at Denver International Airport. The section is responsible for ensuring that conveyance owners comply with minimum safety standards regarding the performance of the above activities within the conveyance industry. The Division currently oversees 20,000 conveyances annually.

The Conveyance program currently utilizes a Commercial off the Shelf (COTS) software product called Amanda. A vendor was engaged to build and configure this product for OPS six years ago. This product has proven inadequate for a multitude of reasons, including design flaws and implementation issues that have necessitated the development of many "work-arounds" outside the Amanda database. The current software has unnecessary complexity that makes utilizing the database inefficient. There is also no ability to create customer invoices within the system, resulting in the need to use multiple systems in order to see a complete customer account. It is difficult for OIT to manage incidents, create changes to the application, and manage enhancements due to numerous design flaws and configuration issues inherent as the system was delivered from the original vendor.

While significant effort has been put forth to mitigate these challenges, including engaging the vendor, these are now proving to be costly (in excess of \$100,000) and unsustainable. OIT is unable to do a rewrite inside of the existing application, as the State does not own the code. Instead, the Conveyance program must build a new application.

# **Proposed Solution:**

The Colorado Department of Labor and Employment (CDLE), specifically the Division of Oil and Public Safety Conveyance Program, in cooperation with the Governor's Office of Information Technology (OIT), is requesting funding to migrate its current system to a modernized computer platform. The Division is requesting \$445,000 in cash spending authority and no FTE for this project. Funding will be from fund balance from the Conveyance Safety Cash Fund with no anticipated fee or surcharge rate increase as a result of this request. The cost avoidance of the current annual maintenance fees for Amanda will offset the initial future year costs of subscription licensing for the software as a service (SaaS) solution. Given the limited program budget, cost was a key consideration.

OPS is requesting that with high level business requirements established, an RFP be developed to solicit database SaaS design proposals. Ideally, the selected cloud based solution chosen would be configurable so that enhancements can be made to meet the demand of ongoing changes in regulation for the business needs. Also, choosing this solution will provide the opportunity to leverage the OIT Implementers Pool for the initial build.

If this request is not funded, OPS will continue to struggle to provide the end-to-end service it is charged with in its mission of regulating the installation, alteration, periodic inspection and testing of conveyances. Staff is generally frustrated because productivity has dropped due to laborious steps to complete transactions, duplicative data entry requirements, inadequate payment processing, manual reconciliation for all jurisdictions, and incomplete process flows necessitating more work outside of the database.

CDLE used a tool to determine if the SaaS solution would be a viable solution for this program. After engaging with OIT Application Services, a Business Analyst, and completing a review of the high level business requirements it was determined that SaaS is a good solution for the workflow, sustainability; flexibility/agility needed for future changes, and allows for a stronger managed IT infrastructure, as OIT will have access to the code for updates and/or changes.

#### **Anticipated Outcomes:**

#### **Expected Outcomes.**

The modernization project will achieve the following benefits:

By going with a SaaS solution, we no longer need to maintain the infrastructure as that is part of the subscription license. The department is also no longer dependent on a vendor to make basic business workflow changes needed to manage daily duties, hence eliminating change requests and increases in our maintenance costs, and we can anticipate the cost of the program for out years, as it is only the cost of the subscription licenses. In addition, the maintenance and operations will align with the program area and OIT.

- The Conveyance system will be moved off the outdated operating system and positioned to meet current and future customer service needs.
- The future cost of maintaining the Conveyance system will be more dependable and anticipated future costs more manageable.

• The new system will have the ability to deliver essential services while reducing IT vulnerabilities and risk.

#### Measurements of success indicators will be:

- 1. Uninterrupted delivery of services
- 2. Increase in satisfaction survey results from stakeholder feedback.
- 3. Allow field inspectors to plan their site visits based on certain criteria
- 4. Invoicing and traceability of payments within system
- 5. Improve reporting of data eliminating the need for manual creation of reports
- 6. Decrease in State infrastructure needs and efforts to maintain multiple systems

## **Departmental Performance Plan Links:**

- Process Improvement Initiative CDLE has an initiative to continually improve processes. By building a system that brings all the necessary processes into one system, we will streamline the regulatory process.
- Meeting goals of Information Technology Initiative CDLE has an IT Initiative whose goal is to review, manage and optimize our technology investments so that they yield the highest value to CDLE users and the citizens of Colorado. Building a system that removes risk and complexity from our IT environment, allows for workflow development to bring all necessary components into the IT system, and contains ongoing costs are all a part of this.
- Employee Engagement Initiative One of CDLE's initiatives is within its Vision Statement is to provide an employee engaging environment.
- Customer Service Initiative CDLE has as one of its goals to continually improve on the customer
  experience. By centralizing data collection, we can remove redundant communications to
  customers, and allow for easier, more accurate access to their data.

#### **ROI:**

- Increased Staff Productivity Currently, there are many manual workarounds requiring many external systems. This replacement should address those allowing for an increase in productivity.
- More efficient and effective customer service/experience will result in better stakeholder relationships.
- Reduction in State owned and maintained infrastructure, making upgrades to operating systems transparent to the State staff and end users.

#### **Planning:**

- A comprehensive requirements gathering around both statutory needs and regulations will be completed. An evaluation regarding re-engineering the business processes for workflow improvement will be done prior to implementation.
- Building the product is estimated to take 24-36 weeks, plus subsequent testing to ensure technical and functional viability.

Steps to be completed	Start Date	<b>Completion Date</b>	Weeks
Requirements Gathering	Monday, July 10, 2017	ly 10, 2017 Monday, August 21, 2017	
RFP Documentation	Monday, August 21, 2017	Monday, September 11, 2017	3
RFP Publication, Response	Monday, September 11, 2017	Monday, November 06, 2017	8
Review and Vendor Selection			

Finalize Vendor SOW	Monday, November 06, 2017	Monday, November 27, 2017	3
Vendor Design / Development	Monday, November 27, 2017	Monday, April 02, 2018	18
Functional / User Test	Monday, April 02, 2018	Monday, June 11, 2018	10
Deployment / Warranty	Monday, June 11, 2018	Monday, June 25, 2018	2

# Assumptions and Calculations:

Project Duration: 31-40 weeks

Ongoing Support – OIT under Common Policy and Program Staff as exists today

There is no FTE included in this funding request.

Implementation Costs with a Vendor	\$ 360,000
Training of OIT staff and Program Staff in SaaS platform	15,000
Project Management provided by OIT as Interagency Agreement	40,000
Software licenses (SaaS, database, network)	6,000
Equipment costs (RAM, Server, Hosting, Storage, etc.)	19,000
Disaster Recovery	5,000
Total	\$445,000

CASH FUND PROJECTIONS (DELETE IF NOT APPLICABLE)					
Cash Fund name and number:	Conveyance Safety Fund				
Statutory reference to Cash Fund:	9-5.5-111				
Describe how revenue accrues to the fund:	The primary source of funding is through the initial registration certificate of operation, inspection fees, and license fees.				
Describe any changes in revenue collections that will be necessary to fund this project:	No changes to the surcharge rate are anticipated for this project.				

The Division of Oil and Public Safety (OPS) FY 2017-18 Change Request

## Cost and FTE

- The Department requests up to \$425,000 Cash Fund spending authority in FY 2017-18 from the Division of Oil and Public Safety's (OPS) Conveyance Fund.
- The Department is not requesting any additional FTE.

# Current Program

- The OPS purpose is to protect the public and our environment by ensuring the safe storage and use of fuel products and explosives and the safe operation of amusement rides, boilers and conveyances.
- The Conveyance program annually regulates and inspects about 20,000 conveyances (e.g. elevators, escalators, dumbwaiters, and wheelchair lifts).
- The public safety programs are funded entirely by registration fees, certificate fees, and license fees.
- The current database application is known as Amanda, a COTS (Commercial Off The Shelf) system, that does not meet the needs of the program's customers.

# Problem or Opportunity

- The Conveyance program currently utilizes Amanda and is dissatisfied with the product for multiple reasons, including lack of adequate support, design flaws, and implementation issues that have affected functionality and make use of the database inefficient.
- The Department has spent time and money trying to address the functionality issues within the existing system.
- OIT is unable to develop enhancements for the application due to the numerous design flaws and configuration issues.

# Consequences of Problem

- Lack of functionality of certain modules resulting from design flaws and implementation issues has necessitated the development of many "work-arounds" outside the Amanda database.
- Productivity has dropped due to laborious steps to complete transactions, duplicative data entry requirements, and incomplete process flows necessitating more work outside of the database.

### **Proposed Solution**

- The Department requests up to \$425,000 Cash Fund spending authority in FY 2017-18 from the Conveyance Fund for a new system.
- OPS is requesting that with high level business requirements established, an RFP be developed to solicit database software as a service (SAS) design proposals. Ideally, the selected cloud based solution would be configurable so that enhancements can be made to meet the changing business needs.
- Current fees will not be increased to implement this project.

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Fund	Initial Appropriation	Supplementa I Request	Base Request	Change Request	Continuation
Total	\$11,981,089	\$0	\$10,861,547	\$131,354	\$0
FTE	0.0	0.0	0.0	0.0	0.0
GF	\$2,419,143	50	\$2,419,143	\$0	\$0
CF	\$5,145,801	\$0	\$4,451,685	\$65,677	\$0
RF	\$384,102	\$0	\$384,102	\$0	\$0
FF	\$4,032,043	\$0	\$3,606,617	\$65,677	50
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Total	\$11,981,089	\$0	\$10,861,547	\$131,354	50
FTE	0.0	0.0	0.0	0.0	0.0
GF	\$2,419,143	\$0	\$2,419,143	\$0	\$0
CF	\$5,145,801	\$0	\$4,451,685	\$65,677	\$0
RF	\$384,102	\$0	\$384.102	50	50
FF	\$4,032,043	\$0	\$3,606,617	\$65,677	\$0
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Total of All Line	FTE	0.0	0.0	0.0	0.0	
Items Impacted by	GF	\$0	\$0	\$0	\$0	\$0
Change Request	CF	\$3,436,935	\$0	\$3,769,961	\$35,751	\$0
	RF	\$0	\$0	50	\$0	\$0
	FF	\$0	50	\$0	\$0	\$0
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Information	Fund	Appropriation	l Request	Request	Request	Continuation
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Type of Request?		Department of	Labor And Er	mployment Non-F	<sup>o</sup> rioritized Requ	æst
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	RF		\$0	\$0	\$0	\$0	\$0
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Interagency Approval or Related Schedule Personnel and Administration

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Summary		Initial	Supplementa		Change	The state of the s
Information	Fund	Appropriation	l Request	Base Request	Request	Continuation
<u> </u>	Total	\$11,981,089	\$0	\$10,861,547	\$52,529	\$(
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Total of All Line Items Impacted by	GF	\$2,419,143	\$0	\$2,419,143	\$0	\$0
Change Request	CF	\$5,145,801	\$0	\$4,451,685	\$26,264	\$0
- ,	RF	\$384,102	\$0	\$384,102	\$0	\$0
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Line Item Information	Fund	Initial Appropriation	Supplementa I Request	Base Request	Change Request	Continuation
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	Total	\$11,981,089	\$0	\$10,861,547	\$52,529	\$0
	FTE	0.0	0.0	0,0	0,0	0.0
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Payments to OIT	RF	\$384,102	\$0	\$384_102	\$0	\$0
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CF Letternote Text Revision Requir		No			
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Type of Request? Department of Labor And Employment Non-Prioritized Request					
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# Schedule 13

# Funding Request for the FY 2017-18 Budget Cycle

### **Department of Labor And Employment**

Department of Eddor And Employment		
Request Title		
R-01 Conveyance App and DB Decision	1 Item	
Dept. Approval By: Math or 10-7-16	_	Supplemental FY 2016-17
OSPB Approval By:	<u>x</u>	Change Request FY 2017-18 Budget Amendment FY 2017-18

Summary Information  Total of All Line Items Impacted by Change Request	Fund Ap	FY 2016	5-17	FY 2017-18		FY 2018-19	
		Initial Appropriation	Supplemental Request	Base Request	Change Request	Continuation	
		\$741,333	\$0	\$741,333	\$445,000	\$0	
	FTE	0.0	0.0	0.0	0.0	0.0	
	GF	\$0	\$0	\$0	\$0	\$0	
	CF	\$596,312	\$0	\$596,312	\$445,000	\$0	
	RF	\$0	\$0	\$0	\$0	\$0	
	FF	\$145,021	\$0	\$145,021	\$0	\$0	

Line Item Information	Fund	FY 2016-17		FY 2017-18		FY 2018-19	
		Initial Appropriation	Supplemental Request	Base Request	Change Request	Continuation	
	Total	\$741,333	\$0	\$741,333	\$445,000	\$0	
	FTE	0.0	0.0	0.0	0.0	0.0	
05. Division of Oil and Public Safety,	GF	\$0	\$0	\$0	so	so so	
(A) Oil and Public	CF	\$596,312	\$0	\$596,312	\$445,000	\$0	
Safety - Operating Expenses	RF	\$0	\$0	\$0	\$0	so so	
	FF	\$145,021	\$0	\$145,021	\$0	\$0	

CF Letternote Text Revision Required?	Yes	No		if Yes, see attached fund source detail.
RF Letternote Text Revision Required?	Yes	No		
FF Letternote Text Revision Required?	Yes	No		
Requires Legislation?	Yes	No	х	

# **Department of Labor And Employment**

Type of Request?

Department of Labor And Employment Prioritized Request

Interagency Approval or Related Schedule 13s: Office of Information Technology