



COLORADO
Department of Revenue

Executive Director's Office

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November 1, 2014

The Honorable Crisanta Duran
Chair, Joint Budget Committee
Colorado General Assembly
200 E. 14th Avenue, Third Floor
Legislative Services Building
Denver, CO 80223

Subject: Department of Revenue
FY 2013-14 RFI #4

Dear Representative Duran:

The Department of Revenue (DOR) and the Office of Information Technology (OIT) are submitting this response to the Joint Budget Committee's Request for Information (RFI) regarding the progress implementing the Department's FY 2013-14 Budget Request #2 – DOR IT Infrastructure Enhancements. The RFI states:

“Governor – Lieutenant Governor – State Planning and Budgeting, Office of Information Technology (OIT); and Department of Revenue, Executive Director's Office – The Governor – Lieutenant Governor – State Planning and Budgeting and the Department of Revenue are requested to submit to the Joint Budget Committee a report detailing: (1) the progress made to-date on the implementation of the Department of Revenue's Request #2 – DOR IT Infrastructure Enhancements, including a comparison of the reliability of the new system components with the old system components; (2) data justifying the continuing budgetary support of the 22.0 FTE in OIT dedicated to serving the Department of Revenue during the implementation of Request #2; and (3) address each of the specific anticipated outcomes cited in the budget submission as justifications for the project. The report is requested to be provided for FY2014-15 with the FY 2015-16 budget submission.”

The Department received \$3,917,008 (\$2,859,487 General Fund and \$1,057,521 cash funds) in FY 2013-14, and \$3,264,141 (\$2,206,620 General Fund and \$1,057,521 cash funds) in FY 2014-15 for server hosting services, hardware and software upgrades, and operations support services. The request consists of four components all of which are interdependent and will enhance the performance of the Department's information technology infrastructure. The four components include the following:

1. **Migration to the Enterprise Computing Environment (ECE).** This request totals \$831,600 in each fiscal year to support a server virtualization strategy for the Department and provides a stable modern and sustainable environment for its aging IT infrastructure. A portion of this request totaling \$412,800 is ongoing to fund virtual server and storage fees.
2. **Modernization of the core data network infrastructure.** This request totals \$558,807 in FY 2013-14 to replace switches, routers, and UPS devices.
3. **Ongoing software licenses.** This request totals \$150,000 and is ongoing to purchase software licenses for hardware operating systems that support the GenTax application.
4. **Operational support services.** This request totals \$2,376,601 in FY 2013-14 and \$2,282,541 in FY 2014-15 and ongoing to fund 22.0 FTE to provide service desk support, desk side support, network support, server and system support, security, and project management.

Migration to the Enterprise Computing Environment - This project includes the identification and analysis of all computing systems that support the divisions of Motor Vehicles, Taxation, Enforcement, and the Executive Director's Office. OIT has defined the scope, cost, and schedule, secured the resources required, and begun the migration of the Department's systems to the new DOR virtual environment. OIT, along with its selected contractor, World Wide Technologies, recommended a three-prong approach to address systems migration: (1) install a new virtual environment specifically designed for the Department of Revenue (completed in September 2014); (2) conduct an analysis of the Department's network performance and connectivity (completed in June 2014); and (3) map the Department's applications to identify system dependencies, specifications, license details, architecture, and IP addressing schemes (completed in July 2014). OIT has made significant progress implementing this project, including a complete redesign and upgrade of all the Department's firewalls and routing protocols, creating much needed stability and standardization of the computing environment.

OIT has identified Department systems that meet the criteria for migration and mapped the applications into migration groups. Those systems that do not meet the criteria for migration will remain in the physical environment. A detailed Department system migration schedule was created and approved by the Department's Executive Committee in July 2014 as referenced in Addendum A. This project was delayed due to identified migration complexity, connectivity issues, and interdependence on other infrastructure projects. Delays were documented and approved by Department leadership. Migration is expected to be completed by the end of 2014. Operational support services staff as previously mentioned will manage and maintain the virtual environment as well as the remaining physical environment for the foreseeable future.

Modernization of the core data network infrastructure - Addendum B provides an update of the equipment purchased to date. A total of \$514,766 was expended to date to purchase network switches, UPS (uninterrupted power supply) devices, and fiber patch cables, connectors, and

cross connects. SMARTnet, which provides support tools and expertise for the IT infrastructure and network, was also purchased. SMARTnet is an 8 hours a day/5 days per week/next business day warranty that must be renewed annually. This warranty covers the replacement of any hardware failures. Deployment of the equipment at 1375 Sherman Street and 1881 Pierce Street was completed in August 2014. Although the project is now complete, it was delayed due to connectivity issues and interdependence on other infrastructure projects. However, delays were documented and approved by Department leadership. Funding for this equipment was a one-time request; however, the Department indicated in the decision item that since the useful life of this equipment is five years, the Department anticipates a funding request to modernize the network infrastructure every five years. In addition, operational support services staff noted below will manage and maintain this infrastructure for the foreseeable future.

Ongoing software licensing - The GenTax project, which was completed in December of 2012, requires funding each year for software licenses to support the GenTax application on the network. To ensure the software supporting the GenTax application on the network is secure, monitored for threats and backed up; numerous licenses were purchased or renewed including monitoring software such as Altiris and Solarwinds, virtualization software such as VMware, and system backup and recovery software such as CommVault. Please see Addendum C for a list and cost of all the software purchased. A total of \$148,415 was expended. Funding for this request is ongoing.

Operational Support Services – This request supports 22.0 FTE on an ongoing basis to provide additional staff to the Department of Revenue for service desk support (3.0 FTE), desk side support (5.0 FTE), network support (1.0 FTE), server/systems support (10.0 FTE), security (1.0 FTE), and project management (2.0 FTE). While the assignment of positions has been modified slightly due to business needs, 19.0 FTE are currently filled with three positions vacant. Please see Addendum D for staffing detail by service team.

Eight server/system administration staff, two network administrators, one access control, and six desk side services support staff have been assigned for both project management and maintenance support on an ongoing basis. Additional support service staff has provided the Department with a more stable environment, resulting in increased systems availability and a reduced number of incidents while attaining greater efficiency in tickets resolved. Addendum E shows systems were available 99.33 percent of the time in FY 2013-14 compared to 98.30 percent in FY 2011- 12. This resulted in a 59.25 percent decrease in unplanned downtime. Addendum F shows the number of maintenance tickets logged and resolved over a ten-month period decreased 3.46 percent from 21,871 in the period November 2012 through August 2013 to 21,115 in the period November 2013 to August 2014. Because fewer tickets were logged, the number of tickets resolved also decreased 3.67 percent from 21,040 to 20,267 for the same period of time.

In addition to the work required to implement components of the decision item, there are 38 projects listed in Addendum G that require staff support. These projects are focused on enhancing customer service and providing ongoing stability with the information technology infrastructure and systems. There are eight major projects of which two include Colorado DRIVES (DMV-Driver License, Record, Identification, and Vehicle Enterprise Solution) and the

Colorado Automated Testing System (CATS). These two projects support the Department's efforts to modernize systems and the operations of the Division of Motor Vehicles as delineated in the Department's strategic plan. The modernization effort began with the Governor's FY 2014-15 budget, which included decision items to improve customer service and reduce wait times. The budget also included funding for the first year of the DRIVES capital construction project to replace the Driver's License System, Colorado State Titling and Registration System, and supporting systems. The Governor's FY 2015-16 budget includes funding for the second year of the DRIVES project as well as funding for CATS to provide ongoing maintenance and support of the new automated testing system. This is anticipated to improve both customer service and reduce wait times by providing a more efficient and effective testing environment. Additionally, 11 of the 17 medium projects are DMV-related further enhancing customer service and information technology infrastructure and systems.

We appreciate the opportunity to respond to this request. Please let me know if you have any additional questions.

Sincerely,



Barbara J. Brohl
Executive Director

Cc: Representative Jenise May, Joint Budget Committee
Representative Bob Rankin, Joint Budget Committee
Senator Pat Steadman, Vice-Chair, Joint Budget Committee
Senator Mary Hodge, Joint Budget Committee
Senator Kent Lambert, Joint Budget Committee
Scott Thompson, staff, Joint Budget Committee, Colorado General Assembly
Henry Sobanet, Director, Governor's Office of State Planning and Budgeting
Erick Scheminske, Deputy Director, Governor's Office of State Planning and Budgeting
Alice Wheat, staff, Governor's Office of State Planning and Budgeting
Sumana Nallapati, Secretary of Technology & CIO, Governor's Office of Information Technology
Dannette Mathis, IT Director, Governor's Office of Information Technology

ADDENDUM A
System Infrastructure Replacement Project Schedule - Phase II
(as of October 14, 2014)

Task Name	Start	Finish	% Complete
VDC, E-Fort, and Kipling Hardware Upgrade	4/15/14	10/3/14	82%
DOR Network Modernization and Simplification	4/21/14	10/6/14	84%
Application Prioritization & Virtual Migration	6/2/14	11/24/14	39%
Develop a prioritized list of applications for migration	6/2/14	11/24/14	39%
Review with application owners, server team and DBA and Developers	6/2/14	7/31/14	100%
Develop schedule and prioritize DOR application list	6/12/14	8/1/14	100%
Review Prioritized DOR application list with DOR leadership and Business groups	6/6/14	9/3/14	1%
DOR Approve prioritized application list	7/7/14	9/5/14	1%
Decide best approach for application	7/14/14	8/5/14	100%
Migration of Systems and applications	7/28/14	11/24/14	32%
USC Infrastructure preparation	9/15/14	9/22/14	100%
Migration Group A	8/1/14	9/30/14	100%
MyLo in HP Today	8/15/14	9/30/14	100%
License 2000 in HP Today	8/15/14	9/30/14	100%
Tobacco case manager	8/1/14	9/30/14	100%
DL Accounting	8/1/14	9/30/14	100%
CSTARS –NSP	8/1/14	9/30/14	100%
CSTARS-RPIP/PIMS/BHD	8/1/14	9/30/14	100%
CSTARS – Strafish	8/1/14	9/30/14	100%
Migration Group B	9/26/14	9/29/14	100%
VBReports	9/26/14	9/29/14	100%
Teammate	9/26/14	9/29/14	100%
CTOS	9/26/14	9/29/14	100%
COMCASH	9/26/14	9/29/14	100%
Emissions	9/26/14	9/29/14	100%
Migration Group C-1	10/3/14	10/6/14	100%
Renew by Mail	10/3/14	10/6/14	100%
Vending Machine Label	10/3/14	10/6/14	100%
MVD Reinstatement form	10/3/14	10/6/14	100%
MVD Fairfax	10/3/14	10/6/14	100%
PAX	10/3/14	10/6/14	100%
Intranet	10/3/14	10/6/14	100%
Leave Request system	10/3/14	10/6/14	100%
COFRS	10/3/14	10/6/14	100%
Sales Tax Analysis	10/3/14	10/6/14	100%
Revenue Accounting	10/3/14	10/6/14	100%
Revenue on-line	10/3/14	10/6/14	100%
Customer Contract Tracking	10/3/14	10/6/14	100%
EARS (OLD)	10/3/14	10/6/14	100%
ECRS	10/3/14	10/6/14	100%
Legislative Tracking	10/3/14	10/6/14	100%
Position Cost	10/3/14	10/6/14	100%
Migration Group C-2	12/05/14	12/08/14	0%
ERS (new)	12/05/14	12/08/14	0%
PSR Public Safety Records	12/05/14	12/08/14	0%
CDO Remittance Processing	12/05/14	12/08/14	0%
Sales Tax Calculator	12/05/14	12/08/14	0%
Casino EZ file	12/05/14	12/08/14	0%
Delinquent Taxpayer	12/05/14	12/08/14	0%
Tax live class registration	12/05/14	12/08/14	0%
GenTax Migration to UCS	11/3/14	11/12/14	%0

ADDENDUM B
DOR Network Upgrade Project
Expenditures to Date

Description	Quantity	Unit Cost	Extended Cost
Cisco 2960s - 48 gig E PoE Switches	68	\$ 4,022.95	\$ 273,560.60
Cisco 1000MB SFP	124	\$ 335.50	\$ 41,602.00
APC 1500SMT Smart UPS	6	\$ 967.20	\$ 5,803.20
Cisco 8x5xNBD SmartNet for 2960s-48	68	\$ 316.40	\$ 21,515.47
1 Meter 10 Gig SC to SC Fibercords	80	\$ 19.50	\$ 1,560.00
3 Meter 10 Gig SC to LC Fibercords	35	\$ 21.00	\$ 735.00
APC 1500 UPS	6	\$ 532.00	\$ 3,192.00
Cisco Catalyst 6509 Switch	1	\$ 166,797.36	\$ 166,797.36
		TOTAL	\$ 514,765.63

ADDENDUM C
GenTax Software Licensing Costs

SOFTWARE	PURPOSE	TOTAL COST
Altiris	Management Tool	\$6,530.00
Solarwinds	Monitoring Tool	\$1,899.86
VMWare	Virtualization Software	\$34,135.00
CommVault	System Backup and Recovery	\$100,000.00
MSN Licensing	General Support	\$2,650.00
Checkpoint Firewall Capacity	Firewall	\$3,200.00
TOTAL		\$148,414.86

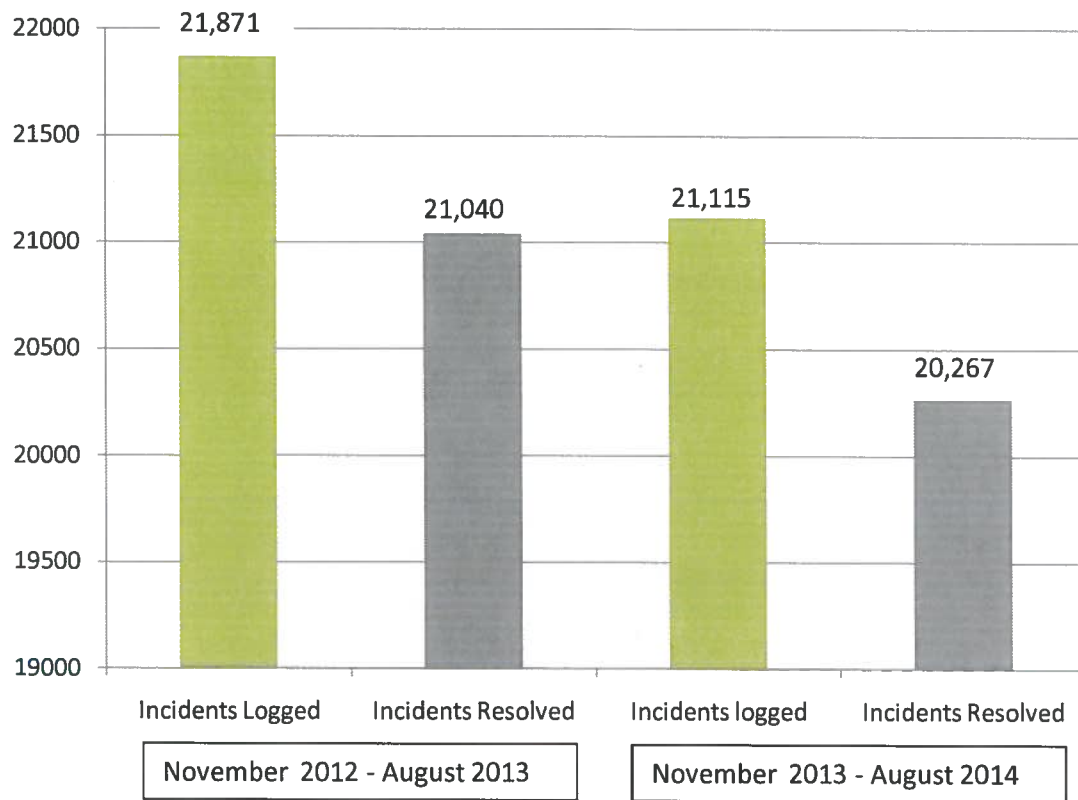
ADDENDUM D
Staffing Detail by Service Team

Position#	Employee	Service Team	Start Date	Assignments	Notes
EGB40000	Bryan Fields	Service Desk	7/15/13	Daily KLO	
EGB40001	Bruce Lance	Network Administration	7/15/13	Daily KLO DOR Network Upgrade DOR SIR Viper Upgrade Longmont MED Golden Gaming site upgrade	
EGB40002	John Baker	Network Administration	7/15/13	Daily KLO DOR Network Upgrade Tax Pipeline DL Expansion at two DOC locations CATS Grand Junction MED	
EGB40003	Trung Nguyen	Server / Systems Administration (SSA)	7/22/13	Daily KLO DOR SIR	
EGB40004	Yury Faer	Server / Systems Administration (SSA)	8/5/13	Daily KLO DOR SIR	
EGB40005	Jeremy Gelderman	Server / Systems Administration (SSA)	7/29/13	Daily KLO	
EGB40006	James Van Fleet	Server / Systems Administration (SSA)	7/29/13	Daily KLO	
EGB40007	Achyut Chalise	Server / Systems Administration (SSA)	7/22/13	Daily KLO	
EGB40008	Dana Thorson	Server / Systems Administration (SSA)	7/22/13	Daily KLO DOR SIR	
EGB40009	Jacob Stewart	Server / Systems Administration (SSA)	7/29/13	Daily KLO CSTARS FY14 Refresh	
EGB40010	Vacant	Server / Systems Administration (SSA)			Position filled, then vacated; recruiting in process
EGB40011	Jennifer Johnson	Access Control Services (AC)	7/15/13	Daily KLO	
EGB40012	Vacant	Desk Side Services (DS)			Position was filled; employee transferred to position # EGB40013. This position to be backfilled.
EGB40013	Jason Goode	Desk Side Services (DS)	7/29/13	Daily KLO DOR FY14 XP to Win7 upgrade & Win7 refresh	
EGB40014	Kelli Foster	Desk Side Services (DS)	7/8/13	Daily KLO DOR FY14 XP to Win7 upgrade & Win7 refresh	
EGB40015	Vacant	Desk Side Services (DS)			Position was filled; employee transferred to position # EGB40017. This position to be backfilled.
EGB40016	Melissa Pedas	Desk Side Services (DS)	12/2/13	Daily KLO DOR FY14 XP to Win7 upgrade & Win7 refresh	
EGB40017	Leslie Sultz	Desk Side Services (DS)	7/1/13	Daily KLO DOR FY14 XP to Win7 upgrade & Win7 refresh	
EGB40018	Cynthia Beebe	Project Manager (PM)	7/22/13	DRIVES SB13-251 Driver License and ID Documents Golden Gaming site upgrade Grand Junction MED DL Credit Card Payment DOR FY14 XP to Win7 upgrade & Win7 refresh	
EGB40019	Bertha Trujillo	Project Manager (PM)	12/1/13	Viper Upgrade Amendment 64 Tax Pipeline METRC DRIVES DOR Lottery Internal Control System ENF – AID to MyLo migration Lottery Jackpot Online	
EGB40020	Thomas Fowler	Security / Policy	8/26/13	Daily KLO DRIVES	
EGB40021	Frank Muccio	Network Security	3/10/14	Daily KLO DOR System Infrastructure Refresh	

ADDENDUM E
DOR Applications Percent Available

Application Name	FY 2011- 2012		FY 2013 -FY 2014	
	Unplanned Downtime (hours)	Availability	Unplanned Downtime (hours)	Availability
CDO – Remittance Processing	0	100%	2.5	100.00%
DLS - Driver's License System	419.27	92.23%	3.38	100.00%
DLS – Interfaces	15.96	99.82%	15.08	99.80%
DLS – L1	18.31	99.79%	7	99.90%
DLS – On-line Systems	0	100%	0	100.00%
DLS – Wait Less	8.63	98.60%	0	100.00%
EDO	65.52	99.25%	1.87	100.00%
ENF – Auto Industry Dealers	0	100%	0	100.00%
ENF – License2000	76.23	99.13%	0	100.00%
ENF – MyLicense Office	752.3	87.10%	0	100.00%
ENF – PSR (Public Safety Records)	48	99.45%	2.5	100.00%
ENF - Marijuana Enforcement Tracking Reporting & Compliance (METRC)	N/A	N/A	0	100.00%
Lottery	10.5	99.88%	0	100.00%
MCS – IRP (GenTax)	4.23	99.95%	0	100.00%
MCS – IRP (Revenue Online)	4.23	99.95%	0	100.00%
MCS – POE Interfaces	0	100%	N/A	N/A
MCS – Port of Entry (POE)	11.9	99.87%	N/A	N/A
MVD – CSTARs	1,368.90	84.42%	1,097.83	87.50%
MVD – CSTARs Interfaces	10.7	99.88%	48.5	99.40%
MVD – EARS	5	99.94%	0	100.00%
Tax – GenTax/CITA	35.9	99.59%	2.25	100.00%
Tax – Legacy	20	99.77%	0	100.00%
Tax – Revenue Online	22.28	99.75%	0	100.00%
TOTAL	2,897.86	98.30%	1,180.92	99.33%

ADDENDUM F
Service Desk Tickets Logged and Tickets Resolved



ADDENDUM G
DOR Current IT Project List

Project ID	Project Name	Project Manager
PROJ004773	Colorado Automated Testing System (CATS)	Joe Jackson
PROJ006784	Colorado DRIVES	Cindy Beebe
PROJ005476	DOR Network Upgrade	Cindi Wika
PROJ004821	DOR System Infrastructure Refresh (SIR) Phase II	Joe Jackson
PROJ003120	ENF- AID to MyLo Migration	Bertha Trujillo
PROJ006824	Lottery Jackpot/Online	Bertha Trujillo
PROJ001969	OIT – VIPER Upgrade	Bertha Trujillo
PROJ004358	Tax Pipeline and Imaging Phase 3	Bertha Trujillo
8	Major	
PROJ007579	CSTARS FY15 Refresh and Upgrade	Cindi Wika
PROJ006427	CSTARS FY14 Refresh	Cindi Wika
PROK007533	CSTARS FY15 Approved Monthly Releases	Kathy Chase
PROJ007639	DL Legislation for Exceptions processing Data Collection (SB14-087)	Kathy Chase
PROJ007913	DOR ENF 2014 MyLo Upgrade	Kathy Chase
PROK006879	DOR Leave System	Kathy Chase
PROJ007457	DOR Lottery Internal control System (ICS)	Bertha Trujillo
PROJ007463	DOR OIT XP Upgrade 2014	Gerry Ushiyama
PROJ004793	Driver License & ID Card Production System (Morpho)	Gerry Ushiyama
PROJ002603	MVD-DL Driver License Credit Card Payments	Kathy Chase
PROJ007087	State Bank Contract – Chase to WF Transfer	Gerry Ushiyama
PROJ007588	DL Legislation for Wait Less Expansion (HB14-1336)	Gerry Ushiyama
PROJ006214	CSTARS-CARS-FY14 Approved Monthly Releases	Chuck Busch
PROJ007587	DL Legislation for County Fee Distribution (HB14-1066)	Kathy Chase
PROJ007582	DL Legislation for DL Fee Modification (SB14-194)	Kathy Chase
PROJ007585	DL Legislation for Online Renewal (SB14-194)	Kathy Chase
PROJ007335	DOR FY14 xp to Win7 upgrade & Win7 refresh	Cindy Beebe
17	Medium	
PROJ004180	Critical Reports for MMED from MyLo licensing application via SRSS Reports	Bertha Trujillo
PROJ007576	CSTARS – Alamosa County Relocation	Cindi Wika
PROJ007573	CSTARS -Teller/Woodland Park Relocation	Cindi Wika
PROJ007574	DL Office Expansion at two DOC Locations (HB14-1336)	Cindi Wika
PROJ007915	DOR GenTax V9 Developer Computer Upgrade	Gerry Ushiyama
PROJ005774	DOR-Re-cable 1375 Sherman annex	Cindi Wika
PROJ007602	MED Longmont Office	Cindi Wika
PROJ001981	MVD-DL-CDL Integrated Automated Testing Software	Kathy Chase
PROJ007754	DOR HB14-1034	Kathy Chase
PROJ007011	TeamMate 10.4 update	Kathy Chase
PROJ002843	MVD-DL-Death Records Hard Stops	Kathy Chase
11	Small	
PROJ004809	Amendment 64 Implementation	Bertha Trujillo
PROJ007634	GenTax version 9 upgrade	Mark Herrera
2	Minor	