



PROGRESS REPORT ON
SELECTED SYSTEM DEVELOPMENT PROJECTS
IN THE COMMONWEALTH

AS OF
DECEMBER 31, 2017

Auditor of Public Accounts
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REPORT SUMMARY

This report reflects our ongoing review of \$96.6 million in Commonwealth information technology (IT) systems development projects. Our review goal is to detect problems at the earliest possible point and alert decision makers of this information, thereby reducing potential project failures. We have chosen to highlight four projects across three different agencies in this report because they are experiencing schedule delays, budget concerns, or have other risks:

- Alcoholic Beverage Control Financial System Replacement and Licensing System Replacement
- Virginia Employment Commission Unemployment Insurance Modernization
- Department of Accounts Cardinal Payroll Project

For each of these highlighted projects, agency management is aware of the delays or concerns and the project team has been operating transparently to keep stakeholders aware of all associated risks. The project teams continue to inform us of decisions that affect these projects, invite us to attend project team meetings, and properly report the project's status to the Virginia Information Technologies Agency.

– TABLE OF CONTENTS –

Pages

REPORT SUMMARY

HIGHLIGHTS OF SELECTED SYSTEMS DEVELOPMENT PROJECTS

Alcoholic Beverage Control Financial System Replacement and Licensing System Replacement 1-2

Virginia Employment Commission Unemployment Insurance Modernization 2

Department of Accounts Cardinal Payroll Project 3

OVERVIEW OF OUR REVIEW PROCEDURES

Objectives and Scope 4

Methodology 4-5

Results 5

APPENDIX A

Comprehensive List of Systems Development Projects Currently Under Review 6-14

TRANSMITTAL LETTER

15

HIGHLIGHTS OF SELECTED SYSTEMS DEVELOPMENT PROJECTS

Financial System Replacement and Licensing System Replacement

Alcoholic Beverage Control

Chapter 665 of the 2015 Acts of Assembly established an Alcoholic Beverage Control (ABC) Advisory Committee, comprised of external officials, to review ABC's progress in planning, financing, procuring, and implementing information technology (IT) systems necessary to sustain the department's business enterprise. The two largest initiatives currently underway, a new financial system and a new licensing system, are part of our review and this report.

Financial System Replacement

At its June 2016 Advisory Committee meeting, ABC reported that it had recently cancelled a Request for Proposal (RFP) that it issued in March 2016 because its language was too restrictive and may not result in a system that was the best fit for ABC. After revising and broadening the requirements to allow ABC to adopt a broader Enterprise Resource Planning (ERP) strategy, ABC reissued another RFP. The reissued RFP, which was for a Software as a Service solution, closed in May 2017 and as of March 2018, ABC has narrowed down a vendor and is currently in contract negotiations. ABC is working with the Virginia Information Technologies Agency (VITA) Enterprise Cloud and Oversight Services (ECOS), to ensure the vendor will be capable of providing and complying with the Commonwealth's security standards before a contract is signed.

Licensing System Replacement

At its December 2017 Advisory Committee meeting, ABC reported it awarded a contract to Accela, Inc., to implement and maintain a new licensing system. ABC expects the new system to go live in February 2020 and to provide online license processing, payment collection, and regulatory enforcement. The project kicked off in January 2018 and by February 2018, ABC considered the project at risk because:

- The schedule was late due to questions regarding Accela's development, data conversion, and testing approaches.
- The contract prohibits offshore resources from directly accessing ABC's environments or data, but Accela may not have the technical ability to provide the suggested desktop virtualization.
- The contract requires all Accela resources to undergo background checks; however, Accela initiated those checks late.
- In December 2017, Accela told ABC that it needed a test environment in June 2018; however, one month later, Accela revised that date to April 2018.

As of March 2018, ABC is working with Accela to mitigate the project risk by reviewing and refining the schedule, reviewing proposed solutions to the offshore resources with consideration to Commonwealth security policies, completing background checks, and expediting a test environment. The resolution of these risks and their impact on the project's schedule, budget, and scope is uncertain at this time.

Unemployment Insurance Modernization

Virginia Employment Commission

The Virginia Employment Commission (Employment Commission) is continuing to develop the Unemployment Insurance Modernization project (UI Mod), which will replace multiple existing mainframe-based software systems with a web-based platform and reengineer the Employment Commission's business processes. The UI Mod project began in 2009 with the anticipated completion in 2013 and an overall budget of \$58.5 million. The Employment Commission currently estimates the final phase will go live in April 2019 with system turnover and project closeout being complete by May 2020. The project's overall budget is \$69.7 million.

The UI Mod project consists of three main phases:

- Imaging and Workflow, implemented in December 2011
- Tax, implemented in November 2015
- Benefits, in development with estimated completion of April 2019

Since July 2017, the Benefits implementation go live date has been extended twice, once from January 2018 to January 2019, and then to April 2019, resulting in a budget increase of \$1.5 million. The schedule changes are the result of business process modifications that were not included in the original Benefits requirements. With the extended timeframe, technological demands change, legislative mandates change, and agency needs change, thereby increasing the risk of an unsuccessful implementation. There is also a higher chance of losing key Employment Commission and vendor personnel with knowledge of the project. The Employment Commission has remained committed and engaged and continues to evaluate and mitigate risks as they arise.

Cardinal Payroll Project
Department of Accounts

In August 2016, the Department of Accounts (Accounts) launched a Payroll project, which will result in the replacement of the Commonwealth's existing payroll system. The current payroll system has been in place since 1986, and currently 200 state agencies use the system for payroll and/or leave tracking purposes. Accounts originally scheduled to complete the Payroll project during 2018 to coincide with the time sensitive availability of vendor software support for the existing payroll system. However, due to unexpected system modifications, complexity among the way agencies process payroll, and delayed data configurations from statewide systems that support the payroll process, Accounts extended the implementation date to June 2019. The vendor of the Commonwealth's existing payroll system extended its software support through the end of the new implementation timeline. Accounts will deploy the Payroll project in two releases. The first release is set for September 2018 and will include ten percent of state employees. The second release is set for March 2019 and will include the remaining state employees. Upon completion of the second release, the Commonwealth's existing payroll system will be fully decommissioned.

Accounts has estimated a total cost of \$43 million to implement the Payroll project. The project scope includes implementation of the following modules: payroll, time and labor, absence management, limited human resource functions, and view capabilities for earnings, benefits, and leave information. In addition, the project scope includes integration with the Commonwealth's accounting and financial reporting system. Accounts' Payroll project should reduce risks associated with an aging payroll system and meet the majority of the Commonwealth's payroll requirements. Further, by integrating payroll and financial system modules, the Commonwealth will have a variety of reporting capabilities available.

However, as with all projects, Accounts continues to face risks while implementing the Payroll project. Although the existing vendor of the Commonwealth's payroll system extended availability of vendor software support to align with the Commonwealth's updated project schedule, there is still a restrictive implementation timeline. In addition, although Accounts is familiar with the software product, their experience has been limited to the financial module; therefore, the new payroll subject matter inherently poses additional risks.

Additionally, there continue to be external risks to the Payroll project, such as the need for all agencies who use the Commonwealth's payroll system to maintain involvement and stay diligent in meeting the existing timeline so the project can achieve the planned schedule. This risk also extends to the Department of Human Resource Management (Human Resource Management) as the Commonwealth's human resource system owner. Any delays in completing required data configurations for the Payroll project could have a significant impact in the project's implementation timeline. Accounts, Human Resource Management, and all agencies that use the Commonwealth's payroll system will need to continue to devote key personnel and technology resources to mitigate the risks associated with the implementation plan of the Payroll project.

OVERVIEW OF OUR REVIEW PROCEDURES

Objectives and Scope

The Auditor of Public Accounts (APA) audits a number of IT development projects across the Commonwealth, and Appendix A has our on-going summary of these projects. Our audit objectives are to determine if:

- the project manager complies with the Commonwealth's Project Management Standards, as issued by VITA; or, if the agency is exempt from VITA requirements, that the project manager complies with project management best practices; and
- the project remains on time, within budget, and on scope.

Methodology

We continuously monitor various resources when identifying potential systems development projects, including legislative meetings, the Appropriation Act and Budget Bill, agency management and systems professionals, VITA's Project Management Division, and other sources. Once we identify a potential systems development project, we maintain a record of that system as it progresses through its development lifecycle.

The volume of ongoing projects dictates that we identify and follow only those that represent the most risk to the Commonwealth. To determine which projects to follow, we create a list of all potential projects from the sources listed above and meet to discuss each project. During that discussion, we consider things like project cost and complexity, the agency's success with similar projects, the project team's experience, and the underlying technology.

Our reviews generally include examining documents such as the project charter, project planning documents, and risk mitigation strategies. We regularly attend project meetings to note any issues affecting the project and meet with project managers to offer suggestions and recommendations based on our experience monitoring system implementations throughout the Commonwealth.

Our goal is to detect problems at the earliest possible point and alert decision makers to this information, thereby reducing project failures as well as costs. During our review process, we also gain an understanding of the system and its controls that will allow us to plan future audit work involving the system. Earlier releases of this report contain a detailed explanation of our review process, which we have not included with this report, and can be found at <http://www.apa.virginia.gov/reports/InfoTechProjects07.pdf>.

Effective July 1, 2009, §2.2-1509.3 of the Code of Virginia began requiring the Budget Bill to include appropriations for major information technology projects. In 2015, that requirement was modified by Acts of Appropriation, Chapter 665, Item 424 D.2., whereby VITA's Quarterly IT Project Status Report (Quarterly Report) would be used to satisfy the Code of Virginia requirements. As part of our regular review process, we reconcile projects in the Quarterly Report to information we have

collected regarding current and anticipated projects. If we identify discrepancies, such as projects not in the Quarterly Report but on our list of anticipated projects, we inquire with VITA and the proponent agency to identify why the discrepancy exists.

Results

During the year, we report the results of our project reviews in different ways, depending on the circumstances. Often we include project background and status information within the annual audit report of the agency. However, if there is a legislative request that we review a system, we will prepare a written report specifically addressing that request. Finally, if we identify serious project management concerns, which the agency has not resolved in a timely manner, we immediately notify the agency head and consider issuing a report detailing the concerns and our recommended corrective action.

Appendix A contains a background and history of all the projects we are currently following. All agencies with a project included in this report have verified the accuracy of information included in this report. However, since there were no new findings presented in this report, we did not conduct a formal exit conference or receive an agency response. The reader can find previously released reports by searching a specific agency name on the Auditor of Public Accounts' website at www.apa.virginia.gov.

COMPREHENSIVE LIST OF SYSTEMS DEVELOPMENT PROJECTS CURRENTLY UNDER REVIEW

The systems development projects listed below are those projects we are actively monitoring. While this list is not inclusive of all current projects across the Commonwealth, it does represent those projects that we consider of the highest importance due to risk, budget, and/or impact of the system. We discuss emerging project issues within a project's grid and summary below.

Table 1

Agency	System Name	System Budget	Page
Accounts	Cardinal Payroll Project	\$ 21,021,259	7
Alcoholic Beverage Control	Financial System Replacement	-	8
Alcoholic Beverage Control	Licensing System Replacement	1,376,142	9
Board of Accountancy	Licensing System	201,635	10
Employment Commission	Unemployment Insurance Modernization	51,750,762	11
Medical Assistance	MES Encounter Processing	3,721,116	12
University of Virginia	Ufirst Workday	15,500,000	13
VITA	Telecommunications Expense & Billing System	3,002,742	14
Total Budget		\$ 96,573,656	

Sponsoring agency and actual cost information detailed in the charts below are as of December 31, 2017. In addition, we have not repeated all projects reported in our December 2016 progress report on the following pages because some of the projects may have ended or we may have reprioritized them as lower risk. The reader can find historical information on these and other projects in our previous progress reports available at www.apa.virginia.gov.

Cardinal Payroll Project

The Cardinal team, with oversight by Accounts, launched the Cardinal Payroll project in August 2016, which will result in the replacement of the Commonwealth's Integrated Personnel and Payroll System (CIPPS). The Commonwealth implemented CIPPS in 1986 and currently 200 state agencies use the CIPPS for payroll and/or leave tracking purposes.

The Cardinal team has scheduled to complete implementation of the Cardinal Payroll project during 2019. It was originally scheduled for May 1, 2018; however, due to unexpected system modifications, complexity among agencies payroll, and delayed data cleansing/configurations, the team revised the schedule and obtained extend CIPPS service through the end of June 2019. The Cardinal team will deploy Cardinal Payroll project in two releases. The first release will occur in September 2018 and includes ten percent of state employees. The second release will occur in March 2019 and include the remaining state employees. Upon completion of the second release, CIPPS will be fully decommissioned.

Table 2

Project Sponsor	David Von Moll, State Comptroller Randy McCabe, Deputy State Comptroller
Project Manager	Edmond O'Neill and Stacy McCracken
Current Phase of Development	Execution and Control
Project Timeline	<ul style="list-style-type: none"> • Planning and Analysis September 2016 • Design February 2017 • Construction July 2017 • Release 1: System Test January 2018 • User Test Execution March 2018 • Release 1: Training Deployment September 2018 • Release 1: Go-Live September 2018 • Project Close-Out September 2018 • Release 2 Effort and Go-Live March - June 2019
Total Budget	\$43,000,000
Funding	Working Capital Advance to be repaid with Internal Service Fees
Actual Costs as of December 31, 2017	\$21,021,259
Outside Contractor(s)	<ul style="list-style-type: none"> • Integration Services: Accenture • Software: Oracle • IV&V Service Provider: Impact Makers, Inc.
Additional Information	Also, the section above entitled "Highlights of Selected Systems Development Projects" contains additional information on this project.
Prior APA Report and Issue Date	Secretary of Finance Report on Audit dated January 29, 2018 http://www.apa.virginia.gov/reports/SecretaryofFinance2017.pdf

Financial System Replacement

ABC is seeking a solution to modernize its legacy financial management system, known as Performance. Performance processes and maintains ABC’s financial accounting and fiscal functions, is approximately 20 years old, and operates on an unsupported technology. ABC plans to issue a Request for Proposal (RFP) with its requirements in the near future and hopes to select a solution as a result.

Chapter 665 of the 2015 Acts of Assembly established an Advisory Committee to review ABC’s progress in planning, financing, procuring, and implementing information systems necessary to sustain ABC’s business enterprise. The Auditor of Public Accounts serves as a member of this committee.

Table 3

Project Sponsor	Secretary of Public Safety and Homeland Security
Project Manager	To be determined
Current Phase of Development	Preliminary Planning
Project Timeline	To be determined
Total Budget	To be determined, but early estimate around \$13 - \$15 million
Funding	Enterprise Funds
Actual Costs as of December 31, 2017	\$0
Outside Contractor(s)	Gartner assisting with system requirements
Additional Information	The section above entitled “Highlights of Selected Systems Development Projects” contains additional information on this project.

Licensing System Replacement

ABC’s Licensing and Compliance System will replace several legacy systems with a modern means to store and maintain all information related to ABC licensee applications, records and compliance. ABC originally planned to start the project in 2013; however, the project is still in its early phase. The delays occurred because ABC decided to cancel and reissue a Request for Proposal (RFP) upon learning that the Virginia Information Technologies Agency (VITA) would allow them to open the procurement to Software as a Services (SAAS) vendors.

In Fall 2017, ABC awarded a contract to Accela, Inc., a government software solutions company that has extensive experience working with government agencies in providing licensing-type software. The project kicked-off in January 2018 and by February 2018, ABC considered the project at risk due to questions about Accela’s development conversion and testing approaches, ability to find onshore talent, delay in initiating background checks, and changes to an agreed-upon date for the test environment.

As of March 2018, ABC is working with Accela to mitigate the project risk by reviewing and refining the schedule, reviewing proposed solutions to the offshore resources with consideration to Commonwealth security policies, completing background checks, and expediting a test environment. The resolution of these risks and their impact on the project’s schedule, budget, and scope is uncertain at this time.

Table 4

Project Sponsor	Tom Kirby, ABC Bureau of Law Enforcement Frank Monahan, ABC Bureau of Law Enforcement
Project Manager	Robyn Young
Current Phase of Development	Initiation and Planning
Project Timeline	<ul style="list-style-type: none"> • Project Kick-off January 2018 • Project Initiation and Planning March 2018 • Detail Planning and Requirements Design ... October 2018 • Build June 2019 • Project Close-Out February 2020
Total Budget	\$8,745,000
Funding	Enterprise Funds
Actual Costs as of December 31, 2017	\$1,376,142
Outside Contractor(s)	<ul style="list-style-type: none"> • Implementer: Accela, Inc. • IV&V Service Provider: To be determined
Additional Information	The section above entitled “Highlights of Selected Systems Development Projects” contains additional information on this project.

Licensing System

The Virginia Board of Accountancy (VBOA) plans to replace its current licensing system/database. VBOA determined that a third-party hosted solution was most suitable for this project and selected MicroPact, Inc., as the vendor who will provide the solution. MicroPact will work with the current system vendor, System Automation, to integrate the legacy data into the new system. VBOA expects its licensing system to go live by October 2018 and formally close out the project by November 2018.

Table 5

Project Sponsor	Wade Jewell, Executive Director
Project Manager	Angie Schuler
Current Phase of Development	Execution and Control
Project Timeline	<ul style="list-style-type: none"> • Project Kick-off November 2017 • Validate Requirements and Design January 2018 • Configure, Convert Data, Test June 2018 • Testing and User Training October 2018 • Go-Live October 2018 • Project Close-Out November 2018
Total Budget	\$866,397
Funding	Dedicated Special Revenue
Actual Costs as of December 31, 2017	\$201,635
Outside Contractor(s)	MicroPact, Inc.

Unemployment Insurance Modernization

The Employment Commission is continuing to develop a modern unemployment insurance system, the Unemployment Insurance Modernization Project (UI Mod). UI Mod reengineers business processes to provide expanded customer service, increases efficiency for Employment Commission staff, responds faster to legislative changes, meets all United States Department of Labor reporting requirements, and improves system stability and reliability.

UI Mod is replacing systems that are 25 to 35 years old and impose risks and limitations to the Employment Commission's ability to administer the UI program adequately. In December 2011, the Employment Commission successfully implemented the Imaging and Workflow (IWF) component of the UI Mod project and scheduled the remaining phases, Tax and Benefits, to go live in December 2012 and May 2013. The project team subsequently required multiple extensions and the Tax phase did not go live until November 2015. Currently, the Employment Commission has scheduled the Benefits phase to go live in April 2019.

The original project budget of \$58.5 million was composed of \$49.1 million from the UI Trust Fund under provisions of the Reed Act, and the remaining \$9.4 million from the Employment Commission's penalty and interest funding. Additional funds were required during fiscal year 2016 and again in 2017, increasing the budget to \$69.7 million.

Table 6

Project Sponsor	William Walton, Unemployment Insurance Director
Project Manager	Theresa Anderson
Current Phase of Development	Execution and Control
Project Timeline	<ul style="list-style-type: none"> • UI Imaging and Workflow System Complete December 2011 • UI Tax System Complete November 2015 • UI Benefit System Complete/Project Close-Out..... January 2019
Total Budget	\$69,700,000
Funding	Approximately 70 percent Federal Funds, 30 percent Special Revenue Funds
Actual Costs as of December 31, 2017	\$51,750,762
Outside Contractor(s)	<ul style="list-style-type: none"> • Primary Development Vendor: HCL America Inc. • IV&V Service Provider: Impact Makers, Inc.
Additional Information	The section above entitled "Highlights of Selected Systems Development Projects" contains additional information on this project.

MES Encounter Processing

The Department of Medical Assistance Services (Medical Assistance) is replacing its 12-year old mainframe-based Virginia Medicaid Management Information System (VAMMIS) with a Medicaid Enterprise System (MES). Medical Assistance is proposing to develop, operate and maintain the system in-house in order to leverage the current investment in technical tools, provide an environment that will address business needs in an expedited manner, and greatly reduce operational costs. This system will build upon the Commonwealth’s Electronic Data Interchange (EDI) platform that it implemented in December 2015.

Table 7

Project Sponsor	Scott Crawford, Deputy Director
Project Manager	Dan Sullivan
Current Phase of Development	Execution and Control
Project Timeline	<ul style="list-style-type: none"> • Project Detailed Planning Approval September 2016 • Track 1 Design Develop and Implement July 2017 • Track 2 Design Develop and Implement January 2018 • Track 3 Design Develop and Implement July 2018 • Project Close-Out September 2018
Total Budget	\$8,031,549
Funding	90 percent Federal Funds, 10 percent General Funds
Outside Contractor(s)	IV&V Service Provider: Ernst & Young
Actual Costs as of December 31, 2017	\$3,721,116

Ufirst Workday

The University of Virginia (UVA) launched their Ufirst Workday project in June 2016 to align human resource services across its highly distributed environment, including the various schools in their academic division, UVA Medical Center, UVA Physicians Group, and the School of Medicine. Each of these currently have its own human resource system with different technology platforms and this has created difficulty in delivering strategic value and consistent service to its customers.

The Ufirst system will improve faculty, staff, and employee satisfaction through new and improved human resource services and improve UVA's ability to implement real-time reporting and analytics to improve decision-making. The project is currently in the execution and control phase and had an original planned go live date of July 2018. In March 2018, UVA experienced a few setbacks and began work to re-baseline the project. As a result, UVA expects it will increase the project's budget and extend the go live date to January of 2019.

Table 8

Project Sponsor	Pat Hogan – UVA Executive VP and COO Dr. Richard P. Shannon – Executive VP, Health Affairs Dr. Tom Katsouleas, Executive VP and Provost
Project Manager	Sean Jackson
Current Phase of Development	Execution and Control
Project Timeline	<ul style="list-style-type: none"> • Develop Structure and Staff for Implementation August 2016 • Detailed HR Design..... March 2017 • Ufirst Go Live..... January 2019
Total Budget	\$20,000,000
Funding	University Education and General Funds
Actual Costs as of December 31, 2017	\$15,500,000
Outside Contractor(s)	<ul style="list-style-type: none"> • System Implementer: Sierra Cedar, Inc. • IV&V Service Provider: Gartner, Inc.

Telecommunications Expense and Billing System

VITA’s Telecommunications Expense and Billing System (TEBS) provides a modern, integrated, user-friendly telecommunications expense and billing solution. TEBS replaced the 30-plus year-old mainframe Telecommunications Inventory Billing System (TIBS) that supported VITA’s telecommunications service delivery.

Although the project experienced some schedule delays, it the project successfully went live in July 2017. VITA expects to close out the project in March 2018.

Table 9

Project Sponsor	Dana Smith, Executive Director of Administration and Finance
Project Manager	Susan Cousins
Current Phase of Development	Close-Out
Project Timeline	<ul style="list-style-type: none"> • Go-LiveJuly 2017 • Project Close-OutMarch 2018
Total Budget	\$3,689,610
Funding	Internal Service Funds
Actual Costs as of December 31, 2017	\$3,002,742
Outside Contractor(s)	Northrop Grumman is responsible for the service delivery of the Commonwealth’s IT infrastructure needs with oversight by VITA. Ernst & Young is the IV&V provider.



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March 30, 2018

The Honorable Ralph S. Northam
Governor of Virginia

The Honorable Robert D. Orrock, Sr.
Chairman, Joint Legislative Audit
And Review Commission

We are currently conducting audits of the systems development process for several major information technology projects and submit our report entitled, **“Progress Report on Selected System Development Projects in the Commonwealth”** for your review.

We found that for the major information technology projects included in this progress report, the project managers comply with the Commonwealth’s Project Management Standard, as issued by the Virginia Information Technologies Agency or with project management best practices, where exempt from the Commonwealth standard. In Appendix A, we provide a summary of each of the projects we are currently following. Further, we include additional information on the projects at the Virginia Alcoholic Beverage Control, the Virginia Employment Commission, and the Department of Accounts to highlight unique aspects of their status.

This progress report does not include new audit recommendations for any of the projects we are currently following, but instead describes project history, activities, and status. We verified the accuracy of this information with all of the agencies; however, since there were no audit recommendations, we did not conduct an exit conference or receive an agency response.

AUDITOR OF PUBLIC ACCOUNTS

KKH/alh