

Quarterly Update on Enterprise Information Technology Initiatives

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Report Focus

This report provides an update on information technology programs and initiatives under the office of the State CIO. The report covers the first quarter of 2014.

Specific areas discussed are:

Government Data Analytics Center (GDAC)

Innovation Center

Enterprise Grants Management

E-forms and Digital Signatures

Each program area includes a description, accomplishments during the past quarter and a discussion of issues and next steps.

Program Updates

Government Data Analytics Center (GDAC)

Description

The General Assembly in 2013 codified North Carolina's longstanding initiatives in data collection and analysis by establishing the Government Data Analytics Center (GDAC) in the Office of the State Controller. The legislation moved GDAC to the Office of the State Chief Information Officer (CIO), effective July 1, 2014.

Section 7.10(f) of Session Law 2013-360 asked the State Chief Information Officer (CIO), in consultation with the Controller's Office, to develop a plan for the cooperative transition of GDAC to the State CIO, and to report to the Joint Legislative Oversight Committee for Information Technology by October 1, 2013. The plan activities and milestones were provided in the Transition of the Government Data Analytics Center to the State CIO October 1, 2013 report.

This quarterly update provides the activities completed to support the transition of the GDAC to the State CIO since the January report.

Accomplishments

The GDAC program represents a dedicated staff whose major job responsibilities are the development and support of GDAC applications with minimal cross-functional OSC duties that would be impacted by the transition. In addition, the GDAC analytic solutions are vendor-hosted, eliminating the need for any data center or application migration activities. As a result, the transition plan will focus primarily on the



logistics of moving the program staff and responsibilities from the State Controller's office to the State CIO's office.

The plan outlines the transition of budget, staff, equipment, and business operations for the applications and projects affected. Consideration was given to minimizing impact on the support of existing applications and the progress in development activities associated with ongoing projects.

- Activity
- ❖ Milestone

Activities – Q1 2014

- GDAC Staff Positions – **COMPLETE**
 - GDAC currently fully staffed
- Facilities Management – finalize plan for office space location, furniture, equipment, security – **IN PROGRESS**
 - Facility discussions and agreements in development
- Transition Logistics – finalize plan for transfer of electronic documentation, web presence, and equipment – **IN PROGRESS**
 - Detailed plans have been developed and are being worked by team personnel
- GDAC HelpDesk Logistics – establish a plan for transition of GDAC HelpDesk (24x7 support for CJLEADS) – **IN PROGRESS**
 - Costs and approach under review by transition team
- GDAC Governance Structure – establish GDAC governance structure in accordance with Session Law 2013-360
- GDAC Transition Quarterly Report - **COMPLETE**

Planned Activities – Q2 2014

- ❖ GDAC Governance Structure – begin governance structure participation and meetings
- ❖ GDAC Re-location – plans are to have GDAC staff remain in current location for near-term
- ❖ GDAC Logistics – complete transition of documentation, web presence, equipment, HelpDesk based on plan
- ❖ Complete Type 1 Budget transfer
- GDAC Transition Quarterly Report



Next Steps

- Finalize agreement for office facilities for GDAC program
- Finalize transfer of electronic documentation, web presence, and help desk support procedures to ITS
- Define GDAC Governance Structure
- Complete budgetary work for Type 1 transfer

Innovation Center

Description

The General Assembly in 2013 endorsed the creation of a State Information Technology Innovation Center (iCenter) “to develop and demonstrate technology solutions with potential benefit to the State and its citizens.” The legislation, Section 7.13 of Session Law 2013-360, requested quarterly reports on initiatives being developed and the resources used to support the center.

Accomplishments

Current accomplishments and initiatives continue to focus on addressing strategic technology gaps and refining the processes the iCenter utilizes. Accomplishments and ongoing initiatives include:

Completed Initiative - Hosted Virtual Desktop

The iCenter completed the hosted virtual desktop solution proof-of-concept (PoC). This PoC included testing hardware and software solutions that move a user’s desktop and applications from an endpoint computing device (laptop, desktop) to a private cloud (Eastern Data Center) that enables employee mobility and bring-your-own-device. The initiative included five agencies (DCR, DOA, DENR, OSBM, OSHR, and OITS) and multiple vendors.

Current Initiatives

Endpoint Computing Form Factor Testing

This effort consists of testing computer endpoints of smartphones, tablets, thin clients, zero clients, and laptops in the field to make sure the device type meet the users’ specific needs. Agencies explored endpoints at the iCenter to inform decisions for the bulk-buy purchases to assist with addressing the Windows XP remediation. This effort will be continuous as new endpoints are released approximately every 6 months and end user needs change with similar frequency.



Customer Self-Service Solutions

Self-service solutions increase throughput at state facilities, provide customer driven information, and enable cross-agency data and information sharing. Commerce is investigating solutions for Welcome Centers and airports, DENR is considering solutions for the Zoo, Parks and Aquariums, and DOT is testing solutions at the DMV and considering solutions for ferries.

Immersive Virtual Collaboration

The iCenter continues to test virtual meeting hardware and software that replaces physical face-to-face team meetings with high-definition virtual face-to-face ones. This includes many-to-many, many-to-one, and one-to-one meetings and the accompanying hardware and software to enable collaboration. DENR, DOT, OITS, DPS, Commerce, the Governor's Office, and the Lieutenant Governor's Office continue to utilize the iCenter virtual collaboration technology for meetings with other entities across the country.

NC State University Engagements

The iCenter continues to work with the NC State University Senior Design Center students on completing the second generation of the NC Business Link express site in collaboration with Commerce, DOR, OSC, and the Secretary of State. This effort will create a central and easy access point to help entrepreneurs complete the necessary documentation to start a company.

Next steps

In addition to the on-going efforts mentioned above, the following efforts are in the initial phases of engagement for an innovation center test: security enhancements, global load balancing across the western and eastern data centers, digital signage, mobile applications, and other digital channel customer interactions.

Enterprise Grants Management

Description

The State Chief Information Officer is tasked to oversee the development and implementation of the enterprise grants management system and to chair the Grants Management Oversight Committee to coordinate the development of the system.

A 2012 study recommended the utilization of DOT's SAP system for the Grants Management platform. Approval was given at that time to develop a Grants application for the Department of Commerce. All further work was deferred until a more strategic plan could be developed.



The migration of DOT's SAP environment from an externally hosted location to the ITS data center along with architectural modifications has delayed any additional effort related to Grants Management, as resources have not been available.

Accomplishments since last report

The first meeting of the Grants Management Oversight Committee has been calendared for April 21, 2014.

Next steps

The Grants Management Oversight Committee will determine system requirements, priorities and funding needs. It will also determine whether the DOT SAP environment is still the appropriate platform for the implementation of a Grants Management System.

E-forms and Digital Signatures

Description

Legislation passed by the General Assembly in 2011 directed the State Controller to plan, coordinate and implement a statewide capability for enterprise electronic forms and digital signatures. (Section 6A.18 (a) of Session Law 2011-145.)

A survey of high-level agency requirements and some of the possible approaches led OSC to organize this effort into two projects:

- The **Authentication Project** focused on digital signatures, eliminating resource-intensive processes that require agencies, citizens, and staff to manually sign documents.
- The **Automation Capability Project** focused on helping agencies be more efficient while eliminating paper processes by automating complex processes that encompass multiple forms and checkpoints. The initial effort was on inspections, licensing and permitting.

Based on feedback from agencies, OSC adopted a decentralized approach on the projects. This allowed OSC to enter into contracts with vendors and allowed agencies to access services as they needed them. Separate vendors were selected to provide the electronic forms and digital signatures capability.

OSC's role was to provide contract administration, help agencies adopt the systems, and help provide training and help desk support. Agencies maintained their own forms, workflows, and configurations that met their business needs.



The General Assembly transferred responsibility for the enterprise electronic forms and digital signature services from OSC to the State CIO in 2013. The transition was effective October 1, 2013.

Authentication Project

Approach

The Authentication Project focused on the use of digital signatures, eliminating resource-intensive processes that required agencies, citizens and staff to manually sign documents.

After an open procurement, OSC awarded a contract to DocuSign, Inc., in August 2012. DocuSign is a Software as a Service (SaaS) vendor. Under the SaaS model the state has no hardware or software installed and running on its infrastructure, all processing is done in the cloud.

The original contract was a two-year contract that procured 100,000 envelopes for each year. The contract also includes onboarding services, training for users, assistance with template creation and access to DocuSign's Enterprise Support services. The envelopes are good for two years.

The contract is available for use by Executive Branch agencies as well as non-state agencies as permitted by law. The contract offers a tiered volume pricing model that leverages the state's purchasing volume.

When the contract was awarded there was an assumption that the adoption rate would be significantly faster than it has actually been. It was assumed by the team at OSC that the travel reimbursement process would be a business process that was ripe to implement using electronic signature and forms.

Based on this assumption, OSC put a provision in the contract for OSC to pay a subscription fee each year of \$355,000.00. This money would provide OSC with 100,000 envelopes or transactions for use in the automation of the travel reimbursement program. This annual payment by OSC would also provide for all other government entities that used this convenience contract a significantly lower envelope or transaction fee of \$0.48. OSC was obligated to pay this subscription fee both years of the current contract. Before OSC transferred this responsibility to ITS, it paid \$355,000.00 in each year for a total of \$710,000.00. This money procured 200,000 envelopes or transactions for OSC to use. At the point of transfer to ITS fewer than 5,000 of these envelopes had been used.

Current Users

Several entities are using the digital signature contract:

- The Governor's Office - Application for Boards and Commissions
- University of North Carolina - UNC Wellness Center
- East Carolina University – HR Department
- Office of Information Technology Services (ITS) – Personnel Changes



- Department of Public Safety Hiring Process
- Department of Transportation – Roadway Construction
- Department of Public Safety – Juvenile Justice Division
- Rowan Cabarrus Community Colleges – Financial Office
- Travel Authorization and Reimbursement Forms Pilot – This form was selected as a pilot by OSC. Based on the number of reimbursements, OSC agreed to purchase the required envelopes or transactions to pay for this pilot from the appropriated monies. Approximately 110,000 travel reimbursements are processed annually for state agencies using the North Carolina Accounting System (NCAS). Each employee uses a Travel and Expense spreadsheet which, along with supporting receipts, is routed through an approval workflow. In the past, this was a manual process with paper forms and wet-ink signatures and at the end of the process; the data was entered into NCAS. The initial deployment includes the automation of the form, travel receipts, workflow process and electronic signature(s).

Issues

- The current two-year contract with DocuSign ends this August and the state has approximately 194,000 envelopes that have been purchased but not consumed. The current contract with DocuSign is a subscription model.
- The current arrangement calls for the state to pay a premium for envelopes.
- The current staffing model does not support a centralized program to drive adoption and changes to business processes within the Executive Branch agencies.
- The roadblock to automation of the travel reimbursement forms was the need to significantly change the business office processes and procedures within each agency. Since there was no mandate for the agencies to participate, agency adoption has been slow.
- As of this report only a few agencies (ITS, Department of Public Safety, Secretary of State, State Auditor, Wildlife Resource Commission, Office of the State Controller, Office of State Budget & Management, and North Carolina Community Colleges System Office) are using the new process and only 5,737 of the purchased 200,000 envelopes have been used.

Plans/Actions

- Renegotiate the contract with DocuSign. There are no plans to renew under the current arrangement.
- Redirect dollars not going to DocuSign to staffing the project
- Transfer already purchased envelopes to agencies interested in using DocuSign, eliminating the agency need to purchase envelopes. Approximately 20,000 envelopes have been transferred to other agencies for their use.
- Drive adoption and business change:
 - Build engagement model to drive adoption of electronic signatures



- Identify staff requirements to drive adoption and secure agreement to dedicate staff
- Prioritize potential users of digital signatures and work to secure agreement at the appropriate level to drive business change and adoption.
- Increase the number and frequency of informational sessions offered by DocuSign for state resources to attend
- Develop a group of frequently used use cases for state government consumption

Electronic Certification, License, Inspection and Permit System (ECLIPS) Project

Approach

The goal of the ECLIPS Project (initially called *eForms*) is to develop an enterprise automation capability that eliminates paper forms and duplicate data entry, streamlines processing time, improve data integrity and automates the workflow.

As with digital signatures, a convenience contract was established for Executive Branch agencies and others authorized by law to use services provided by the Office of Information Technology Services (ITS), such as local governments and universities. The Controller's Office awarded the contract to CSDC Systems. The initial effort focused on inspections, licensing and permitting. Future efforts will place more emphasis on reducing duplication and streamlining and improving business processes, as described later under Next Steps.

ITS manages the service, which includes providing the systems and core components of the application in test and production in the Eastern Data Center, support staff, vendor and contract management as well as program management. Each agency purchases client licenses to access the application and configures the system to meet its business processes requirements for a wide variety of inspection, licensing, and permitting functions.

Current Users - Pilots

The first two pilots onto the ECLIPS platform are under way. These deployments are the Department of Environment and Natural Resources (DENR) sedimentation and erosion control permits and Department of Agriculture nursery licenses/certificates.

The Department of Environment and Natural Resources (DENR) -- Sedimentation and erosion control permits

The department conducts an average of 18,756 inspections annually, encompassing multiple forms. The automated back office system is expected to go live in May 2014; it was originally scheduled for



February 2014. This is a change from the last report due to resource allocation issues. The mobile inspection phase and portal phase are scheduled to go live in summer 2014.

Agency defined expected benefits include:

- Enhanced customer service through an organized and transparent regulatory process
- Decreased processing times through direct data entry instead of handwritten forms that are then entered into a system
- Improved data accuracy
- Improved workflow management
- Fewer status calls; customers can look up their status online
- Improved tracking, scheduling and reporting

Customers will also save time and money. An entire construction project must wait for DENR approval before beginning a project. When the approval time is reduced, costs are minimized.

The state will save on certified mail, postage, printing, ink, envelopes and paper costs. Time savings will be redirected to plan reviews during peak times, process improvements, customer follow-up and other customer service tasks.

The Department of Agriculture and Consumer Services -- Plant Protection Specialist

Nineteen plant protection specialists inspect over 10,000 acres of nursery stock each year and issue nursery licenses/certificates to authorize the distribution or sale of nursery stock or collected plants. The automated back office system went live in November 2013. The mobile inspection phase is scheduled to go live in May 2014. The portal phase is scheduled to go live in July 2014.

Agency defined expected benefits include:

- Increased efficiency
- Improved planning, scheduling and navigation to inspection sites
- Greater efficiency of inspection reporting/processing resulting in less time spent processing inspection results and more time performing inspections
- Reduced backlog of overdue inspections
- Reduced cost of operations
- Future cost avoidance
- More effective inspection techniques resulting from improved plant pest specialist access to data and inspection resources resulting in:
 - Improved ability to identify violations and discrepancies
 - Greater violation enforcement—ensuring that all known violations are addressed in a timely manner



- More effective management capabilities, resulting from faster, broader access to higher-quality data resulting in:
 - Better short-term deployment of resources by identifying problem areas
 - Improved long-term strategic planning
 - Identification of training needs and process improvement opportunities
 - Improved fee collections

The back office system yielded process improvement savings, the portal and mobile phases will help the department realize significant cost savings.

Future Plans

Agriculture has identified other uses. The current plan is to do simple processes in-house to build expertise. More complex business processes will continue to require vendor assistance.

DENR recognizes the great potential for ECLIPS; however at this time there are no future plans. Once the short-term and long-term planning has been completed, DENR will engage the DENR Technology Management Committee for prioritization and associated budget considerations. DENR will utilize the Requirements Analysts within the Office of Information Technology Services (OITS) to assist in gathering requirements.

Additional potential deployments of the electronic forms platform that have been identified can be found in Appendix B.

Issues

As the e-forms project has moved into production, a number of issues have surfaced that need addressing. ITS is working with the vendor, CSDC, as well as with Department of Agriculture and DENR to address the issues and build a sustainable operating environment.

Some of these issues include:

- Need to clarify roles & responsibilities for ongoing support
- Vendor project resource turnover
- Lack of plan for skills and knowledge transfer to state team

Actions/Plans

- Complete all phases of first two pilots by fall 2014
- Document lessons learned from first two pilots
- Stabilize operational platform and validate enterprise readiness
- Review and gain agreement on staffing needs to include business process re-engineering skills



- Gain agreement on the need to focus on business process re-engineering for new process candidates
- Work to develop an engagement model with the Requirements Analyst team, or other resources identified, for this program
- Identify next candidates for implementation
- Develop new implementation plan based on lessons learned in first two pilots.

Next Steps

To gain the full efficiencies of electronic forms and digital signatures, the state must look for ways to streamline and improve their business processes. Otherwise, we are simply automating inefficient business practices. ITS has the ability to assist agencies in this area with the Business Analysts currently being hired under the IT Reserve Fund. To fully realize these efficiencies agencies need to be invested in re-engineering processes. ITS and the agencies involved need to plan to include re-engineering of business processes with future processes incorporated into the ECLIPS platform.



Appendix A: E-forms and Digital Signatures Legislation

This is the text of Section 7.15 of Session Law 2013-360.

ENTERPRISE ELECTRONIC FORMS AND DIGITAL SIGNATURES

SECTION 7.15(a)

The state's enterprise electronic forms and digital signatures project shall be transferred from the Office of the State Controller to the Office of the State Chief Information Officer (CIO) as a Type I transfer, as defined in G.S.143A-6. The State CIO shall continue the planning, development, and implementation of a coordinated enterprise electronic forms and digital signatures capability, as well as the use of digital certificates. As part of the process, the Office of the State CIO shall include the capability to allow one-time data entry for multiple applications.

SECTION 7.15(b)

The State CIO shall continue to integrate executive branch agencies developing, or identifying the need to develop, electronic forms or digital signatures projects, or both. The State CIO shall also review existing electronic forms and digital signatures capabilities and develop a plan to consolidate them. The State CIO may consolidate current agency electronic forms and digital signature capabilities, and cancel ongoing projects, and may redirect the resources associated with the capabilities and projects to the enterprise electronic forms and digital signatures project. Beginning November 1, 2013, the State CIO shall submit quarterly reports on the status of the project to the Joint Legislative Oversight Committee on Information Technology and the Fiscal Research Division.



Appendix B: Potential Users of Inspections, Licensing and Permitting Automation System

Listed below are potential projects that have been identified. OITS believes there is even further potential for the requested solution.

Department of Agriculture

Anticipated Deployment	Anticipated Number of Inspections/Permits/ per Year	Total Number of Professional and Business Licenses	Current Professional and Business Licenses (New or Renewed)	Anticipated System Users	Concurrent System Users
Fertilizer (PIFF)		710	446	2	2
Plant Protection (PIPP)	6500	8492	4637	3	3
Seed (PISE)		6882	4612	4	2
Structural Pest (SPSP)	5600	8653	5253	15	10
Pesticide (FDPR)	850	21378	14778	15	10
Pesticide (FDPE)	7050	25152	12542	17	10
Sleep Products	3000	1700	1700	5	2
Animal Welfare (VEVE)		1151	750	9	6
Avian/Livestock (VERL)		3677	1565	10	3
Food (FDCL)		5191	842	5	2
Prescription Drug (FDPD)		2290	1560	3	2
LP Gas (STLP)	6676	2653	1602	5	3
Scale & Petroleum Device (STSL)		3071	1304	1	1
Weighmaster (STWM)		12032	6603	5	2
Fiscal Mgmt Grain (ADFM)		612	354	2	2



Department of Labor

Anticipated Deployment	Anticipated Number of Inspections/ Permits per Year	Anticipated Number of Professional and Business Licenses	Anticipated Users	Concurrent System Users
Migrant Housing Annual Inspection	1400		10	5
Boiler and Pressure Vessel Inspections	45,000		100	25
Youth Employment Certificates		85,000	3	1

Department of Transportation

Anticipated Deployment	Anticipated Number of Inspections/ Permits per Year	Anticipated Number of Professional and Business Licenses	Anticipated Users	Concurrent system users
Driveway Inspections	2000	0	25	15
Outdoor Advertising	1000	0	10	7

Department of Environment and Natural Resources

The Department of Environment and Natural Resources manages 140 types of permits, plans, licenses and certifications across air quality water quality, waste management land management and marine fisheries. We are working with DENR to build a plan for the remaining permits, plans, licenses and certifications.

