

# **North Carolina Government Data Analytics Center**



**Report to the  
Chairs of the House of Representatives Appropriations Committee  
Chairs of the Senate Based Budget/Appropriations Committee  
Joint Legislative Oversight Committee on Information Technology  
Fiscal Research**

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Q2 Report Fiscal Year 2014-2015

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## Introduction

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### Report Focus

This quarterly report is provided in accordance to G.S. 143B-426.38A (e).

Submit and present quarterly reports on

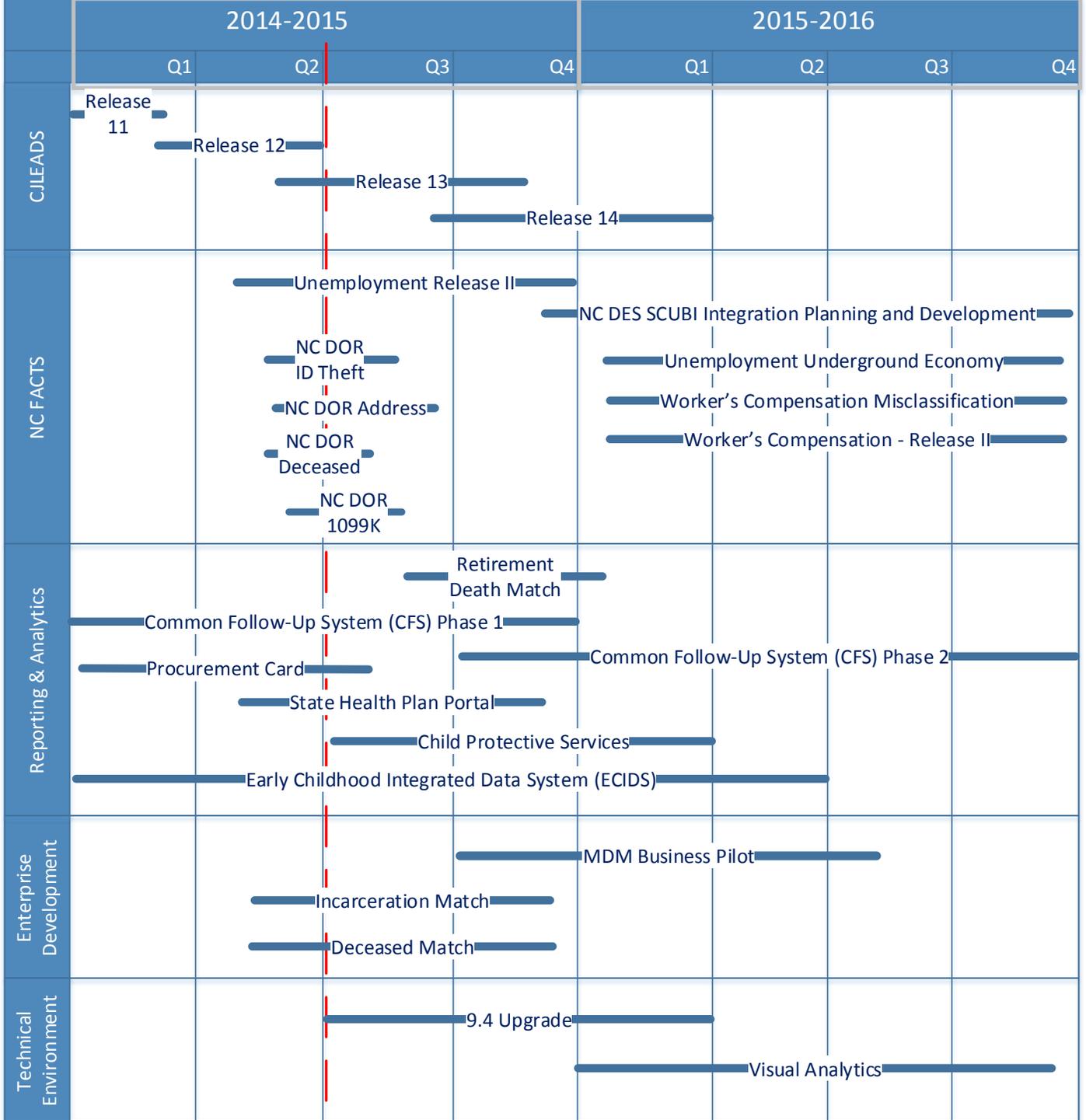
- (1) The implementation of Phase I of the initiative and the plan developed as part of that phase
- (2) A report prior to implementing any improvements, expending funding for expansion of existing business intelligence efforts, or establishing other projects as a result of its evaluations, and quarterly thereafter,
- (3) A written report detailing progress on, and identifying any issues associated with, State business intelligence efforts
- (4) A status on existing solutions; CJLEADS, NC FACTS, ECIDS, Reporting and Analytics
- (5) The opportunities identified and any improvements, expending funding for expansion of existing business intelligence efforts, or establishing other projects as a result of its evaluations

The GDAC manages enterprise program activities as well as the development and support of analytics projects and systems including the North Carolina Financial Accountability and Compliance Technology System (NC FACTS) fraud, waste and improper payment detection project, the Criminal Justice Law Enforcement Automated Data Services (CJLEADS) criminal justice data integration system, the Early Childhood Integrated Data System (ECIDS), and state reporting and analytics efforts. Session Law 2014- 244, SB744 expanded the GDAC responsibilities to include all State agency business intelligence activities, including planning and development associated with creating BI capability, and master data management efforts. Further it directed the State Chief Information Officer to ensure that State agencies use the GDAC for all agency business intelligence requirements.

The GDAC has supported the development of enterprise solutions and, where possible, reduced costs by avoiding an increase in licenses and installation of additional hardware and through fraud and compliance initiatives. The status and planned GDAC activities can be found in the following chart.



# GDAC Activities



## GDAC Solution Development Activities

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### GDAC – CJLEADS

The Criminal Justice Law Enforcement Automated Data Services (CJLEADS) application has served the criminal justice community for the past 6 years. Capable of being used on any device at any time with 24 x 7 x 365 access, CJLEADS maintains two primary objectives:

1. To provide a comprehensive view of an offender through a single application, allowing for positive identification of an offender through a photographic image.
2. To provide an “offender watch” capability that alerts criminal justice professionals when an offender has a change in status.

### Status

CJLEADS is used by approximately 28,541 federal, state, and local criminal justice professionals with an operational presence in North Carolina. On a weekly basis, an average of 12,462 users access CJLEADS. In the last 12 months, CJLEADS users have run over 20.8 million searches and accessed over 17.9 million offender and DMV records.

The GDAC CJLEADS team strives to continuously improve the system and meet the changing needs of the criminal justice community. CJLEADS capabilities are expanded and deployed in a planned release schedule through regular communications with end users.

Release 12 - Deployed to production, December 18, 2014

### Additional Data Integration

- Department of Public Safety Information:
  - Gang Information available in the Department of Community Corrections Records
  - PPO and Chief PPO email address and phone number.
- Court Records
  - Special conditions associated with convictions
  - Court record judge initials

### System Functionality

- Records export capability - Export Feature allowing Law Enforcement and Law Enforcement Support roles, which allows for exporting information to an excel document.
- Enhanced search capability -Scars/Marks/Tattoos in the Advanced Search function – Additional search feature provides the ability to filter by scar/marks/tattoos text description.
- User Feedback – Users can now submit feedback electronically within the CJLEADS application
- Tool Tips – A “Did You Know” quick access to features and functionality.
- Alerting



- Enhanced Court Case Record Status Change Notification
- Enhanced Probation Alerts
- Reporting
  - Enhanced pretrial report
  - Enhanced Offender and Criminal Cases reports to include offender contact numbers on file provided captured by various data source entry.

#### Future Opportunities for Expansion Development

The following CJLEADS items have been identified as enhancements to existing functionality and/or statutorily required:

#### Additional Data Integration

- Federal Interface – continue efforts to obtain access to federal criminal information, specifically Hot File access for wanted persons, stolen vehicles and stolen weapons.
- Pretrial Conditions – Real-time web service to NCAWARE to display court orders. Violations of court orders can result in additional charges.
- DMV
  - Towed Vehicles – Real-time web service to DMV display vehicle towing information.
  - Handicap Placard– Real-time web service to DMV Link handicapped information

#### System Functionality

- Pistol Purchase Permit (PPP) Revocation Reporting Automation – refine and automate the data handling process to improve efficiency and provide alerting capabilities for sheriffs’ offices.
- Habitual Felon Icon – Add icon to identify habitual felons; habitual felon status could potentially increase sentencing up to four times the normal prison term.
- Offender Compare – Add ability to view multiple offenders at once on the same screen. The user will be able to stack beside each other multiple offenders so that comparisons can be made on one screen.
- Out-going data feeds – provide web services from CJLEADS to other application systems
- Addresses Query by date – Include access to historical DMV addresses
- Criminal Justice Portal
  - Single Sign-on – Collaborate with the Department of Justice on a criminal justice web portal, potentially allowing single sign-on with access to multiple criminal justice applications based on user authorization.
  - Explore advanced authentication (2-factor) if need is determined based on changing CJIS directives.



## GDAC – NC FACTS

North Carolina Financial Accountability and Compliance Technology System (NC FACTS) is the fraud and compliance detection tool which utilizes integrated data available in the GDAC to alert agencies and business units of suspicious activities. NC FACTS surfaces leads and prioritizes opportunities based on risk and recovery modeling. The solution is designed to meet the individual business needs of a partner agency.

Several new development activities with the NC Department of Revenue (DOR) were started during this reporting quarter. The GDAC, DOR, and our vendor partner are working in partnership to provide supplemental advanced analytics to enhance DOR's refund fraud program and other compliance initiatives. Utilizing DOR data sources as well as data within the GDAC, DOR expects to increase the amount of refund savings and/or additional tax liability assessments, with the overall goal of positively impacting General Fund revenues. This effort initiated with a Pilot phase approach (referenced below) and included three initiative areas within refund fraud programs and one within non-filer/under-reporting audit initiatives inclusive of multiple tax schedules.

Status

<u>NC FACTS Development Activities</u>	<u>Release Date</u>
DOR Identity Theft Analysis - Pilot	February 2015
DOR Deceased Master Matching – Pilot	January 2015
DOR Address/Neighborhood Analysis – Pilot	March 2015
DOR 1099K Business Entity recognition - Pilot	March 2015
DES UI Wage/Tax Analysis and Alerts – Release 2	June 2015
DES UI Claims and Benefit Analysis and Alerts - Release 2	June 2015

DOR Identity Theft Analysis - Pilot

Development of analytical models applied to prevent refund payments from being released in the case of a stolen identity; proactively identify potential cases of identity theft before a tax refund is issued.

DOR Deceased Master Matching - Pilot

Leverages the GDAC deceased master file which contains multiple records of deceased individuals from state/federal sources to identify returns fraudulently submitted using the identity of a deceased taxpayer.

DOR Address/Neighborhood Analysis - Pilot

Analysis of returns to identify suspicious tax returns based on the risk associated with the returns and the proximity of the related taxpayer addresses.



## DOR 1099K Business Entity Recognition – Pilot

Utilize advanced analytics to standardize and match business information to 1099-K forms to individual and corporate tax return data to generate audit leads.

## DES Unemployment Insurance Claims and Benefit Analysis/Alerts and Unemployment Insurance Wage and Tax Analysis/Alerts – Release 2

NC FACTS Release 2 includes the integration of additional data and the tuning of fraud models based upon investigator feedback. Release 2 will also realign with the improved DES investigator workflow and business processes.

## GDAC – Reporting and Analytics

The reporting and analytics capability for the GDAC shares the same hosted technical environment as the NC FACTS. This common technical infrastructure and data repository provides data access to support agency program analytics, metrics, predictive analysis and executive dashboards.

### Status

#### Reporting and Analytics

#### Release Date

Early Childhood Integrated Data System – Phase 1	September 2015
DOA Procurement Card Reporting	October 2014
DST Retirement Eligibility Verification Death Match – Proof of Concept	January 2015
Commerce – Common Follow-up System – Phase 1 Migration	July 2015
Commerce – Common Follow-up System – Phase 2 Modernization	March 2016
DHHS – Child Protective Services – Pilot	December 2015
OSC – CAFR Data Visualization & IT Expenditures Proof of Concept	November 2014

### Early Childhood Integrated Data System (ECIDS)

The GDAC technical team is responsible for performing application development services in support of the Early Childhood Integrated Data System (ECIDS) Project that was reorganized by OITS into the GDAC Division effective August 2014. The GDAC team has focused on staff development activities to support the application development and technical platform. Installation and development activities will begin in the third quarter of FY2014-2015. The purpose of ECIDS is to develop and sustain a high-quality early childhood data system in North Carolina that integrates data from key participating agencies to inform policies and practices that ultimately support better outcomes for children and families.



## DOA Procurement Card Reporting

DOA Procurement Card (Pcard) Reporting provides agency Pcard administrators and the Department of Administration with more timely and efficient oversight of agency purchases associated with Pcards.

## DST Retirement Eligibility Verification Death Match – Proof of Concept

Leverages the GDAC deceased master file which contains multiple records of deceased individuals from state/federal sources to verify eligibility of retirement benefits.

## Commerce Common Follow-up System – Phase 1 & 2

Migration and modernization of the Common Follow-up System improves access to the State's longitudinal data providing flexibility and scalability, and improved data analysis capabilities associated with workforce and educational program operation and performance.

## DHHS – Child Protective Services - Pilot

Provides a unified view of a child and the family, which will enable the social worker, law enforcement and/or other staff to perform their job more efficiently and effectively. Enabling social worker's access to information to provide evidence informed practices that improve outcomes for vulnerable children served through child protective services.

## OSC – CAFR Data Visualization & IT Expenditures Proof of Concept

Proof of concept supporting the development of a visual perspective of data tables highlighting the various capabilities and ease of operability.

## GDAC – Enterprise Development Activities

To date, the GDAC Enterprise Development Activities have been limited to the GDAC-hosted environment. As the GDAC matures and broadens its mission to support all data and integration efforts it anticipates that enterprise activities will expand across various platforms.

Status

### Enterprise Development

### Release Date

Deceased Match

May 2015

Incarceration Match

May 2015



Enterprise Deceased Match

The enterprise deceased match integrates deceased data received from State, and Federal data sources. Analytics match individual records to deceased records assist in service and payment eligibility verification. The enterprise model will provide the capability for State systems to interconnect with the deceased mater to surface eligibility records that are suspect and require investigation.

DST Retirement Eligibility Verification Death Match – Proof of Concept

The enterprise deceased incarceration match leverages information in CJLEADS compiled from the State prison and local jails. Analytics match individual records to incarceration time periods to assist in service and payment eligibility verification. The enterprise model will provide the capability for State systems to interconnect with the deceased mater to surface eligibility records that are suspect and require investigation.

## GDAC Budget Summary

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The following chart details the current fiscal year’s GDAC funding and expenditures:

As of December 31, 2014	FY 2014-2015		
	<u>Budget</u>	<u>Actuals (BD701)</u>	<u>Balance</u>
<b><u>CJLEADS</u></b>			
Recurring Funding	\$ 7,683,740	\$ 3,635,906	\$ 4,047,834
<b><u>GDAC/NCFACFS</u></b>			
Recurring Funding	\$ 1,417,515	\$ 532,502	\$ 885,013
Non-Recurring Funding	\$ 8,000,000	\$ -	\$ 8,000,000
<b><u>ECIDS<sup>1</sup></u></b>			
Internal Service	\$ 2,098,752	\$ 242,537	\$ 1,856,215
<b>GDAC Total</b>	<b>\$ 19,200,007</b>	<b>\$ 4,410,945</b>	<b>\$ 14,789,062</b>

<sup>1</sup> ECIDS is funded from the North Carolina Race to the Top Early Learning Challenge federal grant.



## Appendix

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**G.S. 143B-426.38A Government Data Analytics Center; State data-sharing requirements** created the GDAC initiative to conduct comprehensive evaluations of the State data analytics projects and plans to identify data integration and business intelligence opportunities across State agencies, departments, and institutions, including The University of North Carolina.

The GDAC was established and directed to: continue and coordinate ongoing enterprise data integration efforts, including; the Criminal Justice Law Enforcement Automated Data System (CJLEADS), the North Carolina Financial Accountability and Compliance Technology System (NCFACTS), individual-level student data and workforce data from all levels of education and the State workforce and other the capabilities developed as part of the initiative. The GDAC duties include the review of business intelligence technologies which support the State's efforts, to ensure they are properly supported, cost effective and that the data integration and sharing is performed in a manner that preserves data privacy and security.

The GDAC initiative includes the implementation of the Enterprise-Level Business Intelligence Initiative in a phased approach. Phase I requires the inventory of existing State agency business intelligence projects, determine if consolidation of licenses is appropriate for the enterprise, if on-going projects support the enterprise-level and if they are scalable for multiple State agencies. Further it outlines the development of a plan of action, which includes program management responsibilities and the development of a privacy framework. Phase II includes the identification of redundancies, potential capabilities, and where gaps may exist. Phase III supports the incorporation or consolidation of projects, where appropriate, elimination of redundant business intelligence projects, application or software, and the continuation of the protection of privacy.

The State CIO, with the assistance of the Office of State Budget and Management, shall identify potential funding sources for expansion of existing projects or development of new projects. Further no GDAC project shall be initiated, extended, or expanded:

- a. Without the specific approval of the General Assembly unless the project can be implemented within funds appropriated for GDAC projects.
- b. Without prior consultation to the Joint Legislative Commission on Governmental Operations and a report to the Joint Legislative Oversight Committee on Information Technology if the project can be implemented within funds appropriated for GDAC projects.

**Session Law 2014-244, SB 74** G.S. 143B-426.38A amended G.S. 143B-426.38A to include a definition of "Business Intelligence" (BI) to mean the collection, organizing, sharing and analyzing data through integrated data management, reporting and visualization, and advanced analytics to discover patterns and other useful information that will allow policy makers and State officials to make more informed decisions. BI was further defined to include; broad master data management capabilities to include data



integration, data quality, data governance, and master data management and self-service query and reporting capabilities delivered through a variety of interfaces, devices, or applications. Session Law 2014-244, SB744 expanded the GDAC responsibilities to include all State agency business intelligence activities, including planning and development associated with creating BI capability, and master data management efforts. Further it directed the State Chief Information Officer to ensure that State agencies use the GDAC for all agency business intelligence requirements.

