

› White Paper



Powering Change in NC Through Analytics

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Data: Stretching Its Value Across the State

In 2014, North Carolina significantly expanded the vision of how the state should use data and analytics. What sparked the overhaul? State leaders recognized the valuable role analytics and data sharing could play in making government more efficient.

Seven years earlier, the state had established the initial components of the Government Data Analytics Center (GDAC). GDAC was the nation's first enterprise data management program focused on using data analytics to tackle a state's business problems. The idea was a common sense, business-minded one: that an intimate understanding of business information is a powerful tool for executives, and the business of the state should be no different. Based on GDAC's success with public safety and fraud detection, state leaders directed that all state agency business intelligence initiatives be coordinated through GDAC.

So, in 2014, GDAC moved to the office of North Carolina's State Chief Information Officer (SCIO). The goal was to integrate data analytics more deeply into state agencies' business strategies via collaboration with cabinet secretaries, agency heads and agency CIOs.

GDAC originally centered on integrating criminal justice data across more than 100 local, state and federal agencies. But today, GDAC manages all of North Carolina's data sharing and integration initiatives. It promotes goals like cross-agency data sharing, streamlined and efficient development of analytic capabilities, and a common user experience.

Using SAS® Analytics technologies and services, the state cost-effectively transformed its data assets. Notable, immediate successes quickly emerged. For example, North Carolina improved service delivery to its citizens, enhanced public safety and gained assurance that leaders were providing the best possible stewardship of state resources. The state also identified new opportunities for becoming even more efficient.

Users and criminal justice stakeholders statewide quickly touted the program as an invaluable tool because of its coordinating capabilities and ability to save lives.¹ But these successes were just the tip of the iceberg. It took a paradigm shift in leadership to recognize GDAC's full potential.

Making the Case for Analytics in State Governments

Every year, US governors and administrations work tirelessly to develop budget and policy proposals that will improve their communities and make them stronger, safer and better places to live and work. To do it, they seek out the most insightful research and thought leadership available. They comb through policies, they appoint task forces, and they explore innovative concepts colleagues in other states have tried.

But when it comes to reforms and efficiencies, one of the most valuable things they can do is demand up-to-date data from inside their own agencies. Applying advanced analytics to this data, leaders can pinpoint its underlying value. They can bring it all together in a unified fashion and see connections across agencies. Then they can get an eye-opening, big-picture view that crosses agency boundaries. They can understand not only what happened in the past, but also why it happened and what is likely to happen next. They can understand what they need to do to repeat positive results. They can finally get a full, accurate picture of the way their agencies do business.

To make the case for analytics – and convince other government leaders of the need to change traditional business models, share data and update IT infrastructures – governors must be able to show tangible evidence of status quo shortcomings. It's not easy to detect issues beneath surface-level reporting or outdated business processes that seem to affirm everything is fine like it is. Governors must be able to explain exactly how and why investment in analytics can save money, improve lives, avoid unnecessary future costs, and enhance operational efficiency and compliance.

¹ See Testimonials from North Carolina State Highway Patrol, Sheriff's Departments, Municipal Police Departments, Moore County Sheriff's Department and Raleigh Police Department. cjleads.nc.gov.

Fighting Fraud, Waste and Improper Payments

Traditional government approaches to combating fraud and waste are insufficient. One reason is that fraudsters use highly sophisticated methods - and those methods can change in an instant. Keeping up with these tactics is problematic for state governments. How can you do it?

Using predictive analytics, you can detect even highly sophisticated fraud schemes in state programs such as Medicaid, unemployment insurance, workers' compensation, and income and trust taxes. And with an enterprise approach that combines information from multiple, existing state resources, you can get more accurate information while protecting your state's data in a secure, flexible environment.

Identifying Fraud, Reinforcing Public Trust

As part of GDAC, the North Carolina Financial Accountability and Compliance Technology System (NC FACTS) helps ensure compliance while detecting and preventing fraud, waste and improper payments. By integrating data from across the state, analytics can detect questionable payment issues in an automated, proactive way.

- **Unemployment insurance analysis** effectively identifies employer tax and wage reporting compliance, as well as fraud and improper payments for benefit claims. Relying on GDAC, the Department of Employment Services added extra cross-checks to identify fictitious employers; then it shut down this fraudulent scheme. This saved the state an estimated \$5.2 million.²
- **Workers' compensation insurance coverage analysis** identifies businesses operating in North Carolina that fail to comply with insurance coverage requirements. Initial enforcement efforts issued noncompliance charges against employers within the first three months.
- **The Department of Revenue** recently began a visionary effort within GDAC's enterprise fraud initiative that will use advanced analytics to bolster North Carolina's investigatory tax audit and recovery abilities.

Solutions for Overcoming Barriers to Using Data and Analytics Effectively

- **Data silos.** For years, agencies have provided unique programs and services to the public, setting up a multitude of built-in data silos that can't communicate with each other and are hard to break down. Sharing data across agencies supports the vision of breaking down government silos and operating as a statewide enterprise rather than a collection of agencies.
- **Lack of resources.** North Carolina is reinvesting in IT after years of underfunding, and is seeking to develop a pipeline of IT talent. While the state works to modernize IT capabilities, it will face the same challenges as all government technology operations: limited budgets, outdated technologies and difficulty competing with the private sector for skilled IT professionals.
- **False perceptions.** Some see IT as an afterthought to the "real" work that needs to be done - without realizing that effective use of data management and analytics will get the work done better and cheaper. With an enterprise approach to analytics, you can elevate IT from the backroom to the boardroom and make it part of key agency business decisions.

² wral.com/nc-jobless-fraud-drops-but-still-costly/14242307

Executive-Level Management for Government

In the business world, most CEOs struggle to maintain a vision for the future while keeping an eye on the day-to-day issues that need attention. In the state of North Carolina, it's up to the GDAC team to gather the information key decision makers need. Armed with this data, government leaders have program analytics to use for monitoring, outcomes management and reporting. It's clear that analytics is an invaluable tool for government leaders, agencies and citizens across the state of North Carolina.

Analytics in the State of North Carolina - Some Examples

- The **analytics reporting repository for the State Health Plan of North Carolina** helps manage and report on health plan programs to give insight into costs, services, membership and program effectiveness.
- The **Department of Health and Human Services Division of Social Services** is undertaking a child welfare pilot program to support front-line personnel. The program will provide front-line workers with relevant data and analytics to help ensure child safety. The vision is to give the department greater insight into factors that increase a child's safety risk and to show how family, education, health and social services play key roles in a child's well-being.



Keeping Citizens Safe by Improving Criminal Justice

Public leaders often wonder if they're doing everything possible to keep citizens safe. Many turn to the heads of public safety, corrections, highway patrol, state investigative units, and probation and parole offices to get the answer.

An affirmative answer requires that public leaders share their data to create a comprehensive, integrated offender profile. In North Carolina, authorized law enforcement personnel at the state and local levels can securely access these profiles - which contain photos, legal background and other personal information - through a single web-based, user-friendly application. The solution is named Criminal Justice Law Enforcement Automated Data Services, or CJLEADS.

CJLEADS

CJLEADS, working in conjunction with GDAC, integrates state-wide criminal justice data from seven different North Carolina agencies and organizations to develop a comprehensive, integrated offender profile in a single system.

- The single profile allows courts, corrections and law enforcement personnel to access an individual's criminal background and take action based on accurate, complete information. Users have access to specific types of information, while sensitive criminal justice and law enforcement information is protected.
- More than 27,000 state, federal and local public safety officials rely on CJLEADS every day. They can securely access the information from their desks, their cars, their smartphones or tablets.
- To date, CJLEADS has saved more than \$20 million annually in time efficiencies and has been invaluable at improving the safety of North Carolina citizens.³

³ Report of North Carolina State Controller to North Carolina General Assembly. Feb. 20, 2014.

Data Security and Governance

Data privacy and protection are critical components of enterprise analytics programs. GDAC establishes stringent governance and security policies to protect and ensure the integrity of North Carolina's data assets. Comprehensive access and use agreements outline the data being shared, and there are regulatory and security requirements regarding who can access data and for what purposes. The technical environment employs robust physical and virtual security protocols, as well as enterprise user authentication and role-based authorization, to control access to specific data and functionality.

Putting Analytics to Work: Lessons Learned by the State of North Carolina

In North Carolina, state leaders learned many lessons as they began to build and expand GDAC. These lessons can create a best-practices approach for other state governments that want to expand their use of analytics.

Nurture Buy-In and Build a Common Vision

As you begin a new analytics project, make sure you know where you want to go and what you want to accomplish; in other words, have a clear vision. Then you can get commitment from everyone involved in the different branches of government - because they believe that your vision will work. It helps to have a champion - someone well respected who can support you by saying, "Here's where we're going."

Work to build a common vision among all government branches, getting buy-in from key people as you go. You may have to work hard to overcome resistance. Be sure to show tangible ways your vision can help. For example, if you can show that combining data from different sources and using sophisticated analytics will reduce the number of automobile accidents on a highway, you'll get the attention of people concerned about that issue.

Start Small

Change rarely happens all at once. In state governments, not every agency will be willing to jump on board when you propose a new idea. Instead, you should start small but build for the enterprise.

There's no need to wait until you reach the ideal starting point, either. For example, CJLEADS began as a pilot supporting one North Carolina county. Government leaders had a large wish list when they first discussed the concept of CJLEADS, but they didn't wait to build the pilot until everything was ready.

A good way to get off the ground quickly is to start with a small project that's a great investment and stirs passion. It's easier to get startup funding for these types of projects; then you can use your success from that project to build momentum. The state of North Carolina is still expanding CJLEADS because stakeholders and policymakers know that it works. They recognize the value of expanding a project that has proven its worth.

Find Ways to Keep It Affordable and Effective

Need to rein in the costs? There are ways to keep the costs down with any analytics project. You always have to weigh the cost versus the benefit of spending more money.

Consider data latency as an example. Look at each situation to decide if you must have real-time data (which is relatively costly). As you make this determination, you'll see that different data sources have different latencies. Some is updated weekly, some monthly. For key information, you may need real-time data, but each situation is different. Your goal should be to refresh the data as often as needed to address the issue at hand.

Don't forget about the cost of storage. You'll need to adhere to any requirements you have for handling and storing data. But not all data has the same value. Know what is important to keep versus what you can toss.

Get Help From a Trusted Expert: Consider a Center of Excellence

Some states have found that outsourcing certain aspects of a project to a skilled business partner is a more effective approach than trying to do it on their own.

To take full advantage of all the latest technologies - like high-performance analytics designed to rapidly process and deliver insights from big data - you may need to work with a trusted business partner. An expert business partner that specializes in sophisticated analytics can help you unite data silos to deliver better services. And they can help you determine the most cost-effective way to do it, whether that involves hosting, phased rollouts or creating an analytics center of excellence.

To be efficient, you may want to consider pooling analytical talent in a central location, like a center of excellence. That prevents individual departments from needing to independently develop their own unique solutions. You can start by building a common solution that works for one agency; then you can expand it to work with others. This nurtures analytics expertise and efficiency going forward.

Discover What Analytics Can Do for You

To keep your state's analytics efforts moving forward, focus on the many ways analytics can address your needs. Discover how analytics has helped many states save money, break down silos for better efficiency and collaboration, improve citizen services, strengthen homeland security and protect sensitive data.

For most state governments, cultural change is needed to take full advantage of analytics. But over time, and with the right approach, analytics can become a central part of your processes - one that can help you run all your programs and services better. And one that can deliver life-changing payoffs.

SAS stays abreast of current research to take advantage of the latest methods and algorithms, and uses real-life industry experts to help solve your unique problems. Our goal is to find the best ways to enrich the lives of citizens and transform the way government is run. All while keeping your data safe, secure and in compliance.

Learn More

Find out more about the **NC GDAC**: gdac.nc.gov

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