ANNUAL STATE IT REPORT FY 2017





Annual State Information Technology Report



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From the State Chief Information Officer



Statement by Calvin Rhodes, Chief Information Officer, State of Georgia

I often talk about the disruptive power of technological change and how fast that change is happening. Right now, we are likely experiencing the slowest rate of change that will occur in our lifetime. Technology continues to advance at an ever increasing speed and so Georgia must accelerate its pursuit of innovative ways of using emerging technologies to better serve constituents and ensure operational efficiency.

The General Assembly has charged GTA with collecting and analyzing information about the technology investments made by executive branch agencies and reporting our findings. With comprehensive and accurate information, state leaders can make fact-based decisions about the allocation of limited state resources to support technology.

The FY 2017 edition of the Annual State IT Report from GTA looks at how much executive branch agencies spent on infrastructure, network services, applications, and other IT-related activities in FY 2017. But we don't stop at reporting dollar amounts and various categories of expenditures. Real-life examples show how these investments are making a difference in operational efficiency and the way services are delivered to constituents.

One example is a pilot program that makes state information and services available through Amazon's Echo devices. Need to know what documents are accepted when renewing your driver's license, simply ask Alexa.

Another example is a mobile app from DHS's Division of Child Support Services that lets a non-custodial parent quickly and easily make childsupport payments with a smartphone. The app was honored with a coveted first-place award from the National Association of State Chief Information Officers.

You'll learn about other accomplishments throughout this report.

As technology advances, unfortunately so do the threats from cybercriminals and hostile nations, and we're strengthening our cyber defenses in significant ways. You'll learn about many of our initiatives in the Cybersecurity section, including the Hull McKnight Georgia Cyber Innovation and Training Center. It's currently under construction in Augusta and represents the largest single investment in a state-owned cybersecurity facility in the nation to date.

As you read this report, I think you'll agree that we must always recognize why the state embraces new and evolving technologies. The end result must be to better support the efficiency and effectiveness of the services offered by state agencies. This is extremely important because of the people we serve.

For a comprehensive overview of this year's report, please see the Executive Summary on page 11.

I want this report to be a resource you can turn to throughout the year. If you have any questions or suggestions for future reports; don't hesitate to contact me.

Calvin Rhodes



Purpose

The Annual State IT Report conveys the current state of technology in Georgia state government as assessed by the State Chief Information Officer (State CIO). The report is also a requirement in the enabling legislation of the Georgia Technology Authority. It provides information to state leaders to help them make informed decisions about the state's investments in technology.

The report represents IT for the state's executive branch agencies only, i.e. those reporting to the Governor. It does not include information regarding IT matters in the legislative branch, judicial branch, statewide constitutionally elected officeholders, or the University System of Georgia. The data used to create the report come directly from executive branch agencies and enterprise systems of record. The data is compiled by GTA and reflect the efforts of the State CIO to improve the use of technology in supporting state government operations. The report contains the following major sections:

- Executive Summary
- Cybersecurity
- IT Vision and Strategy
- IT Investment Management
- Technology Services
- Digital Services Georgia
- Stakeholder Value
- Appendix

Executive Summary

This section summarizes the contents of the Annual IT Report. The state of Georgia continued to make significant progress in FY 2017 in strengthening and expanding the technology services state agencies rely on to provide information and services to their constituents.

Among the major accomplishments was breaking ground on the **Hull McKnight Georgia Cyber Center for Innovation and Training in Augusta**. The \$95 million Center represents the single largest state government investment in a cybersecurity facility in the nation to date. A primary focus is workforce development, helping to fill the current and growing shortage of cybersecurity talent in the state and nation. Information about the new center can be found on page 13.

GTA also launched the **Georgia Cybersecurity Workforce Academy** in January 2017 to provide cybersecurity awareness, training, and education to information security officers in Georgia state agencies. It is an important new component of Governor Deal's initiative for responding to the growing threats from cyber criminals, and its establishment is one of the recommendations from the Senate Study Committee on Data, Security, and Privacy. Information about the academy can be found on page 14.

Cybercrime has been steadily rising in recent years, and cybersecurity incidents and data breaches are becoming both inevitable and expensive. Many entities across the country now view cyber insurance as a necessary cost of doing business. Accordingly, state agency budgets for FY 2018 included funding for **cyber insurance**. A total of \$2.8 million was allocated across agencies, based on the number of employees, to cover the premium for a \$100 million cyber insurance policy for the executive branch effective July 1, 2017. Information about the state's cyber insurance efforts can be found on page 15.

One of GTA's highest priorities is to provide policies and other guidance to state agencies in the area of cybersecurity, including but not limited to awareness, defense, and response procedures. To assess the state's current cybersecurity risk posture, four vendors were selected to conduct assessments in 11 agencies. These agencies where selected because they operate applications that rely on highly sensitive data, as determined by guidelines of the Federal Information Security Management Act (FISMA). The work spanned 10 months, beginning in October 2016 and ending in August 2017. Vendors conducted meetings and workshops with agency stakeholders and GTA, reviewed documentation for cybersecurity systems and processes, and analyzed control evidence (where available) that supports these systems and processes. More information about the **cybersecurity assessments** can be found on page 15.

The Statewide Cybersecurity Review Board continues to oversee the cybersecurity activities of the state. With the State CIO as the chair, the board conducts periodic reviews to assess the security posture of state agencies and to identify risks. Information about the Cybersecurity Board can be found on page 16.

Georgia's vision for its use of technology in the future is captured in the **Georgia Enterprise IT Strategic Plan 2025,** the latest update to the state's assessment of issues influencing which technology solutions agencies will deploy in the years ahead. The plan was published in May 2017 and is intended to assist Georgia government leaders in making

informed technology decisions for their agencies. It establishes IT focus areas and goals and sets the technology direction for the state's IT enterprise. More information about the state's IT strategic plan can be found on page 19.

The state spends large sums of money each year on technology, and **tracking IT expenditures** is one of GTA's statutory responsibilities. In FY 2017, 43 executive branch agencies, or 96 percent, reported spending \$700 million on IT infrastructure services, network services, application development and support, and related activities. The IT Investment Management section, starting on page 25, looks at these expenditures and the various ways in which the state manages its technology investments.

The **Technology Services** section, starting on page 33, details an innovative procurement process called **Market Test and Rebid.** It seeks to match agency business needs to the best-suited technology services available and uses a five-stage process. Employing the five-stage process, GTA initiated competitive rebids of Mainframe, End User Computing, Print-to-Mail, and Server services.

The Technology Services section also addresses new GTA service offerings called **GETS Ready** and made available to all agencies. GETS Ready features "a la carte" services that agencies can purchase directly from technology providers. GTA acts as a service broker by pre-qualifying service providers and offering contracts with price ceilings. Information on GETS Ready can be found on page 34.

The state's official web portal, www.georgia.gov, and enterprise web-publishing platform are making it easier for Georgians who want convenient, secure access to state services and information. See the **Digital Services Georgia** section on page 35.

The state's **investments in innovative technologies** are resulting in reallife benefits to Georgians.

- The Georgia Division of Child Support Services Mobile App offers a range of self-service options and makes it possible for noncustodial parents to submit child support payments on their mobile devices.
- The Technical College System of Georgia deployed a comprehensive mobile platform across all its colleges that enables students to:
 - \circ $\;$ Register for classes using a shopping cart.
 - \circ $\;$ View and accept financial aid.
 - Manage schedules.
 - Check calendars.
 - Receive notifications.
- The Fulton County Magistrate Court broke new ground in its use of technology when it became the first Magistrate Court in Georgia to implement mandatory e-filing for civil cases.

The Stakeholder Value section on page 39 offers a glimpse into these efforts and others.

As this report demonstrates, GTA is committed to working in partnership with state agencies to take full advantage of technology's potential and to respond to the challenges it presents.

Cybersecurity

Governor Deal makes bold move to address cybersecurity for Georgia.

Hull McKnight Georgia Cyber Center for Innovation and Training

The state of Georgia strengthened its position as a national leader in cybersecurity when it broke ground in 2017 on the Hull McKnight Georgia Cyber Center for Innovation and Training in Augusta. The \$95 million Center represents the single largest investment in a state cybersecurity facility in the nation to date. It will help to fill the current and growing shortage of cybersecurity talent in the state and nation.

The global cybersecurity labor shortage is predicted to hit 3.5 million unfilled jobs by 2021, up from one million openings in 2016. The U.S. alone is on pace to hit a half-million or more unfilled cybersecurity positions by 2021. (Source: Cybersecurity Ventures report, June 2017)

GTA is overseeing construction and operation of the Center, which will be housed in two adjacent buildings. It represents a unique public/private partnership that includes Augusta University, Augusta Technical College, the University System of Georgia's research institutions, the City of Augusta, the Georgia Bureau of Investigation, the Georgia Department of Defense, and other state, federal and private-sector partners working together to meet workforce demand.

The state-of-the-art Center is located in Augusta's growing cybersecurity corridor, which is also home to the U.S. Army Cyber Command and Cyber School of Excellence at Fort Gordon. Situated on the downtown campus of Augusta University, the Center will include the university's School of Computer and Cyber Sciences.

The Center features:

- 2 buildings, one containing 167,000 square feet and the other containing 165,000 square feet
- Controlled building access to meet the high-security needs of government and government-related contractors
- Secure briefing space
- Cutting-edge Cyber Range, one of the nation's few state-owned ranges
- 340-seat auditorium for public and private events
- Incubator/Accelerator to foster innovative and entrepreneurial cybersecurity companies
- Ample spaces for collaboration
- Classrooms equipped for virtual and on-site training
- Adjacent parking deck
- Access to the Augusta Riverwalk

Cyber collaboration is the future. Combatting the growing number and complexity of cyber attacks will require combined, focused efforts. The Center will bring together state and federal government, academia, law enforcement and the private sector to innovate, train and strengthen defenses.

21st Century Workforce Training

In partnership with Augusta University and Augusta Technical College, the Center will be linked to certificate programs as well as undergraduate- and graduate-level programs in cybersecurity and cyber sciences. Offerings will include both on-site and virtual courses. The Georgia Cybersecurity Workforce Academy will offer training for state and local government information security professionals.

Cyber Range

The Cyber Range will provide a virtual environment for cyber training and cyber technology development. It will include tools to help strengthen the stability, security and performance of cyber infrastructures and IT systems. It will be available to students, industry and government professionals in education and training, product development, offensive activity and competition, detection and defensive competition, response and recovery, and evaluation and benchmarking.

GBI Cyber Crime Unit

The Center will house the Georgia Bureau of Investigation's new cyber crime unit, which will enable law enforcement professionals to take advantage of the GBI's expertise in digital forensics.

Partner Space

Build-to-suit space will be available in both buildings for lease to industryrelated companies. Companies within the Center can benefit from the facility's resources and the convenience of co-location with state, federal and industry-related partners.

Incubator/Accelerator

The Georgia Cyber Center Incubator/Accelerator will provide support to innovative and entrepreneurial cybersecurity companies in developing new product and service solutions to strengthen defenses.

Georgia's Research Universities Demonstration Space

The Center will feature demonstration space to highlight cyber research activities under way across Georgia's university system, including basic and applied research activities at Augusta University.

The Center is named in honor of Augusta natives James M. Hull and William D. McKnight.

Architectural renderings and photos are available on GTA's website at https://gta.georgia.gov/gallery/georgia-cyber-innovation-and-training-center.

Daily construction photos and a time-lapse video can be viewed at <u>https://gta.georgia.gov/daily-photos-construction-georgia-cyber-center</u>.

New training options are being offered in Cybersecurity.

Georgia Cybersecurity Workforce Academy

GTA launched the Georgia Cybersecurity Workforce Academy in January 2017 to provide cybersecurity awareness, training, and education to information security officers in Georgia state agencies. It is an important new component of Governor Deal's initiative for responding to the growing threats from cyber criminals, and its establishment is one of the recommendations from the Senate Study Committee on Data, Security, and Privacy.

Cybersecurity Workforce Academy courses will be offered through the Hull McKnight Georgia Cyber Innovation and Training Center when the facility opens in Augusta in 2018.

Twelve courses were offered in 2017 as online virtual instructor-led training through the GTA Learning Center. The courses were taught by Stanton S. Gatewood, the state's chief information security officer. Students who completed all 12 courses were eligible for state certification. The courses included:

- Introduction and Basic Cybersecurity
- Information Security Officer in the Public Sector
- Building an Information Security Program in the Public Sector
- Cybersecurity Strategic Planning
- Cybersecurity Policy Management
- Cybersecurity Incident Management
- IT and Information Security Risk Management
- Security Awareness, Training, Education, and Professional Development
- Cybersecurity Maturity
- Continuity of Operations Planning/Cyber Resilience
- IT and Cybersecurity Leadership

Georgia Agencies Covered by Cyber Insurance

Cybercrime has been steadily rising in recent years, and cybersecurity incidents and data breaches are becoming both inevitable and expensive. Many entities across the country now view cyber insurance as a necessary cost of doing business. Accordingly, state agency budgets for FY 2018 included funding for cyber insurance. A total of \$2.8 million was allocated across agencies, based on the number of employees, to cover the premium for a \$100 million cyber insurance policy for the executive branch effective July 1, 2017.

The decision to purchase cyber insurance came after a two-year collaborative effort by the Department of Administrative Services (DOAS) and GTA to analyze market offerings, meet with insurers, and review other states' experiences. DOAS Risk Management Services provides primary coverage while XL Capital, along with an array of commercial insurance markets, provides additional coverage.

First-party coverage insures agencies for direct losses and out-of-pocket expenses incurred from damage to data, information systems, or income. Third-party coverage insures agencies against defense and liability expenses.

GTA's responsibilities relating to cybersecurity for all state agencies, as mandated by the Georgia General Assembly, can be found in SB 117, which is in Appendix C.

Cyber Assessments

Introduction

One of GTA's highest priorities is to provide policies and other guidance to state agencies in the area of cybersecurity, including but not limited to awareness, defense, and response procedures. The first stated goal in the

Georgia is now able to offer agencies cybersecurity insurance.

> Agencies work with cybersecurity vendors to assess their risk posture.

Georgia Enterprise IT Strategic Plan 2025 is to build a culture of information security awareness, preparedness, and resilience and to mature the state's information security program. Near-term, mid-term, and long-term cybersecurity milestones are set out to achieve this goal.

To assess the state's current cybersecurity risk posture, four vendors were selected to conduct assessments in 11 agencies. The work spanned 10 months, beginning in October 2016 and ending in August 2017. Vendors conducted meetings and workshops with agency stakeholders and GTA, reviewed documentation for cybersecurity systems and processes, and analyzed control evidence (where available) that supports these systems and processes.

The results of these assessments were consolidated to create an overall picture of the state's cybersecurity maturity and to develop recommendations for closing gaps. Because of the sensitive nature of the findings, no detailed information is provided in this report. Cybersecurity information is protected from disclosure by O.C.G.A. 50-18-72(a)(25)(A)(i)(2013).

Approach

Each of the four vendors used slightly different approaches and scopes of work in conducting their assessments. However, the framework underpinning the assessment methodology is known as the National Institute of Standards and Technology (NIST) Cyber Security Framework ("CSF" or "Framework"). It is a set of industry standards and best practices intended to help organizations manage cybersecurity risks. The Framework provides a common language for understanding, managing, and expressing cybersecurity risk both internally and externally. The Framework is not a checklist of actions to perform, but instead it presents key cybersecurity outcomes identified by industry as helpful in managing cybersecurity risk.

Five functions make up the core of the NIST Framework:

- 1. **Identify** Develop the organizational understanding to manage cybersecurity risk to systems, assets, data, and capabilities.
- 2. **Protect** Develop and implement the appropriate safeguards to ensure delivery of critical infrastructure services.
- 3. **Detect** Develop and implement the appropriate activities to identify the occurrence of a cybersecurity event.
- 4. **Respond** Develop and implement the appropriate activities to take action regarding a detected cybersecurity event.
- 5. **Recover** Develop and implement the appropriate activities to maintain plans for resilience and to restore any capabilities or services that were impaired due to a cybersecurity event.

Varying levels of cybersecurity maturity were observed across agencies participating in the assessments. Some agencies were noted for having strengths in an area while their peers were found to be lacking in maturity. This dynamic creates an opportunity for agencies with strengths to serve as aspirational benchmarks for less mature agencies.

Statewide Cybersecurity Review Board

The Statewide Cybersecurity Review Board (SCRB), created in 2015 by Executive Order of Governor Deal, continued to meet on a quarterly basis in

FY 2017 and oversee the activities mentioned above. The board consists of the heads of the following agencies:

- Georgia Technology Authority, Chair
- Georgia Emergency Management and Homeland Security Agency
- Georgia Department of Defense
- Georgia Department of Administrative Services

Below is one of the other activities steered by the SCRB.

Cybersecurity Risk Register

The Cybersecurity Risk Register provides a framework for categorizing and recording cybersecurity risks affecting Georgia state government. The framework helps ensure that agencies handle cybersecurity risks in the same way. The registry will continuously evolve and allow the state to develop ever higher levels of maturity in responding to cybersecurity threats.

Agencies submit a Risk Register to GTA's Office of Information Security and provide monthly updates of their register.

IT Vision and Strategy

The Strategic Plan 2025 was created to guide agencies' technology decisions. Georgia's vision for its use of technology in the future is captured in the **Georgia Enterprise IT Strategic Plan 2025,** the latest update to the state's assessment of issues influencing which technology solutions agencies will deploy in the years ahead. The plan was published in May 2017 and can be accessed at https://gta.georgia.gov/it-strategic-plan-2025.

The plan is intended to assist Georgia government leaders in making informed technology decisions for their agencies. It establishes IT focus areas and goals and sets the technology direction for the state's IT enterprise.

The plan does not replace the business-oriented plans of individual state agencies but serves as a secondary planning document to help them align their technology with the direction established for the state's IT enterprise.

In developing the plan, GTA collaborated with technology leaders in Georgia state agencies, other states, and the private sector to review priorities from the previous Enterprise IT Strategic Plan and revise them as warranted. Their work identified the following as the state's current long-term IT concerns:

- Ensuring cybersecurity for Georgia's agencies, citizens, and businesses.
- Managing a growing pool of data to support state decision makers.
- Taking advantage of proven technologies to improve interactions between government agencies and state government's constituents.
- Evolving state government's portfolio of shared technology services to ensure agency access to the best services at competitive prices.
- Partnering with the private sector to bring the latest innovative technologies to bear on the state's business problems.

Strategic Planning

The goal of IT strategic planning in Georgia is to understand agencies' business objectives and help them use appropriate technology to meet those objectives.

Agencies are guided in their business objectives by Governor Nathan Deal's policy priorities, which set specific goals in the areas of jobs and the economy, education, transportation and infrastructure, criminal justice reform, health care, and natural resources. (More information about Governor Deal's policy priorities is available online at http://gov.georgia.gov/priorities.)

Georgia's IT Strategy Cycle

The IT strategy cycle is a framework for ensuring that Georgia agencies use available technology effectively and efficiently to achieve the Governor's

Georgia has developed a strategic planning process that it follows each year to ensure technology investments match up with business goals. vision for Georgia. A key to success is a collaborative environment where agencies recognize shared objectives and work together to achieve greater benefits for the enterprise. GTA serves as a facilitator in identifying common needs, as a technology guide in identifying strategies that have proven successful in other organizations, and as an advocate for agency solutions that show promise for the enterprise.

The Strategy Cycle is comprised of the following five components:



1. Technology Scanning

Technology scanning is a continuous process of gathering information about how technology is helping organizations like Georgia state government achieve their objectives. It identifies what is relevant for state agencies and shares appropriate findings through periodic reports and presentations. When targeted to business needs, this information helps agencies make more effective use of proven technology.

GTA relies on numerous sources for information about new business uses of technology. A sampling of those sources includes Gartner, a leading technology research and advisory firm; the National Association of State Chief Information Officers (NASCIO); the Center for Digital Government and its biennial Digital States Survey.

In addition, we monitor a broad range of publications, such as Government Technology, CIO, and Public CIO magazines.

2. Agency Business Needs

GTA recently shifted from hosting a strategic planning session for agency business and technology leaders to gathering intelligence about agency IT needs through surveys and one-on-one interactions.

GTA continues to place high value on understanding agency business needs and will continue to review agency strategic plans, conduct agency surveys, and hold regular meetings with agencies to ensure that we have a clear picture of the business objectives that drive agency technology needs. Strategic planning information is gathered through the State Technology Annual Report Register (STARR).

3. Georgia Enterprise Information Technology Strategy

The Georgia enterprise IT strategy establishes focus areas and goals for the state's IT enterprise in a multi-year look ahead. In doing so, it guides

executive branch agencies in aligning their technology solutions with the direction established for the state's IT enterprise.

The first Georgia Enterprise IT Strategic Plan, published in 2014, set goals through 2020. The second edition of the plan, published in May 2017, extends the timeline to 2025. In addition, GTA now publishes an addendum to the enterprise strategic plan every year to document the state's progress in achieving its goals. The 2025 plan and the 2017 addendum are available at https://gta.georgia.gov/it-strategic-plan-2025.

4. Innovation Review

The Georgia Innovation Program works closely with the Governor's Office of Planning and Budget and the Governor's Office to identify agency and statewide business needs and set priorities for addressing them.

GTA also continues to recognize agency successes in using technology to deliver services in new and better ways. Examples of these successes can be found in the Stakeholders secton.

5. Technology Strategy Summit

GTA's annual Technology Strategy Summit, first launched in 2012, explores ways agencies can collaborate more effectively to improve operations and meet new business needs. The summit is directed toward both business leaders and technology professionals in state agencies and features presentations by subject matter experts from leading technology companies.

More than 200 state employees and vendors attended the 2017 summit, which took place May 15 at the Georgia Tech Global Learning Center and examined the impact of disruptive technologies. The various presentations challenged state agencies to embrace digital innovation and capitalize on the resulting changes in order to better serve the public.

Attendees could chose sessions from four topic tracks: cybersecurity, leadership, digital presence, and purchasing IT services. Keynote addresses took an in-depth look at the dark web and effective change management.

More detailed information about the 2017 summit is on GTA's website at <u>https://gta.georgia.gov/technology-summit-2017</u>.

Strategic Planning Survey

In 2017, we continued our annual survey of agency CIOs to better understand how agencies depend on IT to meet their strategic objectives. We carefully analyze the data from agencies and use the findings to inform our efforts at leveraging innovations in a rapidly changing technology environment and ensuring better support for state operations. Agency data is also used to update the Georgia Enterprise IT Strategic Plan.

The first part of our strategic planning survey focused on the following areas related to enterprise IT objectives. The number of agencies showing completed activities has increased in all areas over last year.

• Providing mobile devices

This section reports on the annual survey of agencies about their strategic objectives.

- Using Office 365
- Adopting an agency teleworking policy
- Encouraging remote meeting participation
- Improving citizen access to services
- Using mobile-enabled service delivery

A total of 58 agencies responded to the first part, and their responses are summarized in the following bar graph.



The second part of the survey focused on individual agencies' strategic objectives. It asked agencies to rate technology's importance in supporting their activities in the following areas:

- Automating business processes
- Analyzing data for decision support
- Supporting citizen transactions
- Enabling mobility in the workforce
- Improving the security of sensitive information
- Sharing information with other agencies
- Improving citizen access to services
- Providing mobile apps for citizens

A total of 26 agencies responded to the second part with 112 IT-dependent strategic objectives. The top three uses of technology in enabling agency strategic plans remained unchanged from 2016: process automation, data analytics, and improved security. Responses are summarized in the following bar graph.



IT Investment Management

The State Annual Report Register collects data about IT expenditures in five different categories. The state of Georgia spends a large sum of money every year on information technology, including services, equipment, applications, personnel, software licensing, development, and maintenance. However, determining exactly how much is spent, where the money goes, and what taxpayers are getting in return can be difficult to report on in the aggregate. Coupled with this challenge is the need to better understand whether Georgia is receiving or could receive greater value for the dollars invested in information technology. This is likely to be a continuing challenge due to the rapid changes in technology each year.

The General Assembly has charged the Georgia Technology Authority (GTA) with compiling information from executive branch agencies about their IT expenditures and presenting a report to state leaders every year (O.C.G.A. 50-25-7.10). With comprehensive and accurate information, state leaders can make facts-based decisions about the allocation of limited state resources to support technology.

GTA uses the State Technology Annual Report Register (STARR) to collect data about IT expenditures from executive branch agencies. Information is requested in the categories of application, infrastructure, network, IT management, and project management.

The state has a more comprehensive understanding of the cost of infrastructure and network services than it does for applications. Infrastructure and network services are provided through the Georgia Enterprise Technology Services (GETS) program. Under GETS, Georgia can measure consumption and value through detailed reporting for all agency users of infrastructure and network services.

Enterprise IT Spend

The following graph depicts the most comprehensive summary available of IT expenditures by infrastructure, network, application, and other IT costs in FY 2015, FY 2016, and FY 2017.



Agency Participation in IT Expenditure Reporting

Agency compliance with requirements for reporting IT expenditures decreased from FY 2016 to FY 2017. A total of 43 out of 45 agencies submitted a report, or 96%, which compares to 98% in FY 2016.

A complete listing of the agencies reporting and the expenditures are in **Appendix A** and **Appendix B**. The agencies listed in Appendix A with NR in the "Reported 2017" column did not submit reports because:

- They no longer exist.
- Their expenditures were included in the report from an agency to which they are administratively attached.
- They are attached to one of the state's constitutional agencies, which are exempt from filing the report.

In addition to constitutional agencies, other state entities with large IT budgets are not required to report their IT expenditures, including the University System of Georgia.

Did IT expenditures increase in FY 2017?

Participating agencies spent over **\$700 million** on technology in FY 2017, more than the **\$683 million** reported in FY 2016. The difference is attributable to:

- More accurate application costs captured in the application inventory.
- More accurate reporting due to a change in requirements and use of the STARR tool.

GTA continues working with agencies to increase both the quantity and quality of data received.

IT Investment Support

Georgia continues to mature its Governance Support model by working with agencies during the planning phases of new information technology investments. As technology continues to transition to service-based solutions, we have begun to see an increasing number of technology purchases conducted outside the confines of traditional IT organizations. In 2017, we expanded our established investment-support processes to address this emerging trend.

Annual Investment Strategy Sessions:

In addition to technology leaders, attendees at investment strategy sessions in 2017 included agency decision makers in business, operations, and finance. The agenda was targeted to increase awareness of the challenges associated with technology investments while also providing tools and best practices for a variety of investment scenarios. Executive leaders were given an Investment Checklist to help them navigate any compliance issues with existing Statewide Policies, Standards and Guidelines in a challenging IT environment.

Procurement Reviews:

GTA enhanced the procurement review process to provide more proactive support as agencies plan for large investments. A Procurement Review Checklist is provided at the initiation of the process so agencies are aware of key elements to include in procurement documents, including recommended language for technology requirements, terms, and conditions. The checklist has shortened the time its takes GTA to review procurements and allowed for better collaboration during development of Requests for Proposals (RFPs), thereby ensuring Georgia receives the best value possible.

Collaboration with State Purchasing:

GTA and DOAS have both recognized the need for increased awareness of best practices across the enterprise. The two agencies partnered in 2017 at Georgia's first State Purchasing Conference to educate procurement officers about the unique challenges of technology investments and the value of cross-functional collaboration to ensure quality results. Feedback was so positive that GTA and DOAS are hoping to expand the content into a training course to include in certification programs for state procurement and project management.

Accountability, Change Management and Process Improvement Act of 2015 (HB 676):

GTA provides guidance and resources to assist agencies in complying with the legislative requirements of HB 676. A template and content checklist have been developed for agencies to use when writing a business case for a technology investment; HB 676 requires the submission of a business case to OPB along with a request for project funding. In addition, GTA has established a contract with five pre-qualified providers of Organizational Change Management (OCM) services; agencies can use the contract to obtain the services they need to effectively manage change. GTA has collaborated with Prosci, a global leader in OCM research and training, to make OCM training and certification available to agencies so they can develop their own internal resources.

IT Application Portfolio

The state's IT Application Portfolio included 662 applications in FY 2017, an increase of 93 since FY 2013. The following graph shows the number and percentage of applications by type.



Applications by Category (662 Applications) The following graph shows the number of applications by category.



Planned New Investments by Agency

The FY 2017 total project portfolio of \$1.23 billion shows a significant increase since FY 2015, primarily due to the growing number of IT projects undertaken in the healthcare sector. The FY 2017 portfolio is tracking over 48 active projects in 18 agencies. The projects total over \$562 million and span multiple years. In addition to the active projects, several large projects totaling \$671 million are in the planning phase.

The following graph depicts each agency's percentage of the total budget for all active projects.



Department of Human Services (DHS)	\$385,412,466	69%
Department of Revenue (DOR)/Department of Drivers Services (DDS)	\$81,970,438	15%
Department of Community Health (DCH)	\$52,787,500	9%
Department of Transportation (DOT)	\$13,100,000	2%
Georgia Vocational Rehabilitation Agency (GVRA)	\$4,462,698	1%
Georgia Department of Corrections (GDC)	\$4,231,254	1%
Department of Public health (DPH)	\$3,775,264	1%
Georgia Bureau of Investigation (GBI)	\$3,669,265	1%
State Road and Tollway Authority (SRTA)	\$3,294,900	1%
Criminal Justice Coordinating Committee (CJCC)	\$2,574,721	< 1%
Department of Banking and Finance (DBF)	\$2,500,000	< 1%
Department of Education (DOE)	\$1,627,000	< 1%

State Accounting Office (SAO)	\$1,571,820	< 1%
Office of Planning and Budget (OPB)	\$469,400	< 1%
Department of Administrative Services (DOAS)	\$424,000	< 1%
Georgia Emergency Management Agency (GEMA)	\$125,000	< 1%
Georgia State Financing and Investment Commission (GSFIC)	\$8,844	< 1%
	\$562,004,570	



Department Community Health (DCH)	\$ 595,000,000
Department of Public Health (DPH)	\$ 38,100,000
State Roadway and Tollway Authority (SRTA)	\$ 16,000,000
Department of Drivers Services (DDS)	\$ 10,000,000
Georgia Bureau of Investigation (GBI)	\$ 10,000,000
Georgia Department of Early Care and Learning (DECAL)	\$ 1,000,000
Georgia Student Finance Commission (GSFC)	\$ 500,000
Department of Natural Resources (DNR)	\$ 250,000
	\$ 670,850,000

The following projects are represented in the graph above.

Investments remaining in the pipeline since the FY 2016 Annual State IT Report:

• Department of Community Health (DCH) – Enterprise Data Solution

- Department of Community Health (DCH) Planning Phase for MMIS Replacement
- Department of Driver Services (DDS) Driver's License Card Production
- Department of Public Health (DPH) Enterprise Systems Modernization

New planned investments:

- Department of Community Health (DCH) Electronic Visit Verification
- Department of Community Health (DCH) Third Party Liability
- Georgia Department of Early Care and Learning (DECAL) Fraud, Waste and Abuse
- Department of Natural Resources (DNR) Reservation and Point of Sale System
- Department of Public Health (DPH) At-Home HIV Testing
- Georgia Bureau of Investigation (GBI) LEMS Replacement
- Georgia Student Finance Commission (GSFC) HOPE GPA Calculation
- State Roadway and Tollway Authority (SRTA) Back-Office System

Project Delivery Effectiveness

Large IT Project Board

GTA has utilized its Critical Project Review Panel as the primary governance body for complex and risky projects in the state's portfolio. However, for projects costing over \$10 million, the panel continues to see a variety of situations that could be addressed with even closer oversight and direction. The new Large IT Project Executive Decision-Making Board policy was enacted by GTA, the Governor's Office of Planning and Budget (OPB), and the Georgia Department of Administrative Services (DOAS) at the start of 2017. It specifies new top-level management of the state's large, multifaceted and lengthy IT projects. The policy establishes a governing board whose permanent members are the Commissioner of the Department of Administrative Services, the State CIO and GTA Executive Director, and the State Budget Officer, along with agency heads who rotate on and off the board based on the project under evaluation. The board meets on a regular basis to review and make business decisions affecting selected large, critical projects.

Critical Project Review Panel

The monthly reviews of the Critical Project Review Panel continue to have a positive impact on the success of the monitored projects. The panel limits its reviews to the most critical projects in the state's portfolio. For FY 2017, the Critical Project Portfolio was valued at \$402 million and encompassed 11 projects in 10 agencies.

The information below puts into perspective the value and benefits of portfolio management and oversight.

Applying industry statistical information (based on the Standish Group's 2016 CHAOS Report) to our current active and approved portfolio of critical projects yields the following projected results:

• 22% of projects would be cancelled = \$88.4 million

- 54% would cost 189% of the original estimate = \$217 million
- 24% would be successful with no cost increase = \$96.5 million

Without disciplined project, program, and portfolio management, the current portfolio of \$402 million would deliver only 78% of the functionality originally planned.

The chart below displays how the state of Georgia compares to government and industry metrics compiled for the Standish Group's 2016 CHAOS Report for technology projects. It measures only critical IT projects that were completed in each fiscal year. The chart indicates a decrease in challenged projects from FY 2016 to FY 2017. Of the 11 projects in the Critical Project Portfolio, five were completed during FY 2017.



Project Delivery Effectiveness (by % of \$) FY 2017

Technology Services

Georgia's enterprise IT environment continues to evolve by matching agency business needs to the best-suited technology services available. GTA continued to evolve technology services for state agencies in FY 2017. The state's successful partnership with technology leaders in the private sector, known as the Georgia Enterprise Technology Services (GETS) program, has received a great deal of attention from other states and demonstrated a viable alternative to states' developing and delivering technology services themselves. Over 100,000 workers spread across 1,400 state and local government locations received managed network services through GETS in FY 2017. In addition, GETS provided IT infrastructure services to 58,000 state workers and hosted 47,000 e-mail accounts, and the state's primary data center offered 1.5 petabytes of storage space. A petabyte is defined as one quadrillion bytes.

Market Test and Rebid

A new phase of the state's technology services began in FY 2017 with an initiative called Market Test and Rebid (MTR). It seeks to match agency business needs to the best-suited technology services available and uses a five-stage process.

- MTR begins with the **Needs Assessment** stage. GTA facilitates exercises in which stakeholders from numerous state agencies identify shared business needs.
- In the Market Opportunity Validation stage, vendors are invited to preview opportunities for improving or adding to the state's portfolio of technology services.
- 3. For the **Prioritized Improvement Plan** stage, agency stakeholders participate in selecting and ranking opportunities for new or enhanced services.
- 4. GTA is responsible for the **Procure and Contract** stage, which involves conducting a formal procurement and involving state agencies in evaluating vendor proposals.
- 5. The final stage is **Transition and Integration**, during which GTA oversees managed changes in service offerings and providers.

Using the five-stage process, GTA initiated competitive rebids of Mainframe, End User Computing, Print-to-Mail, and Server services.

By the time the 2017 Annual State IT Report was published, GTA had completed the rebid of Mainframe services, awarding the new contract to Atos. The selection resulted in a change in service providers and the need for a dedicated transition team. With a target date of December 1, 2017, for Atos to assume responsibility for Mainframe services from IBM, the transition team was charged with making the change happen without disrupting services that state agencies depend on.

The shift from one GETS service provider to another doesn't happen with the flip of a switch. It takes careful coordination among all participants, including state agencies, GETS program managers, and incoming and outgoing service providers. The transition team for Mainframe services made knowledge transfer a high priority and met regularly with representatives from state agencies to keep them fully informed about the transition's progress. Even with the transition to Atos, mainframe processing will continue at the state's North Atlanta Data Center, storage and virtual tape systems will be updated, and the backup environment for mainframes will be established in Austin, Texas. Farther into the future, mainframe hardware is slated to be refreshed

and resized to fit the changing needs of state agencies. This resizing will result in a much smaller footprint, thereby saving the state significant dollars.

Meanwhile, the transition to a new provider of End User Computing services was expected to be completed by March 2018. Print-to-Mail services were scheduled to be awarded in December 2017, and Server services were expected to be awarded in May 2018.

GETS Ready

GTA also rolled out the GETS Ready program in FY 2017. It offers "a la carte" services that agencies can purchase directly from technology providers. GTA acts as a service broker by pre-qualifying service providers and offering contracts with price ceilings. Many of the contracts include multiple providers with whom agencies can negotiate directly to obtain standard, commercial services. Agencies can easily compare offerings from different providers and are responsible for managing their relationships with providers. GTA is available to help agencies navigate the entire process and to provide continued management for these services.

Three categories of services were initially available to agencies:

- Hosted contact center
- Wireless
- WAN, LAN, and voice

Planned services include:

- Server hosting
- Cloud services
- End user computing
- Storage
- Print
- Mainframe
- Disaster recovery
- Managed security

Information about current contracts is available on GTA's website at https://gta.georgia.gov/services-contracts.

Digital Services Georgia and the State Portal

In response to evolving technology and consumer trends, GeorgiaGov Interactive adopted a new, digital services model and changed its name to Digital Services Georgia. GTA's GeorgiaGov Interactive team began transitioning to a digital services model in 2017 and changed its name to Digital Services Georgia. The team manages the state's web portal, <u>www.georgia.gov</u>, and its enterprise web-publishing platform, which supports 83 state agency websites. The shift to an updated business model and a new name came in response to the changing consumer landscape, which relies less on websites and applications and more on the use of multiple devices and channels.

Amazon's Echo devices exemplify the changing landscape. The devices feature Alexa, a voice-activated, always on, personal digital assistant, and in a pilot program, Digital Services Georgia is making state information and services available through Amazon's conversational platform. The average user of GeorgiaGov and other state websites is getting younger, and the devices they use are growing more diverse. A conversational user interface keeps pace with the changing expectations of an ever-evolving constitutent base and allows those with a range of disabilities to more easily access key information and services. To learn more about the Alexa pilot program, visit https://digitalservices.georgia.gov/blog/2017-04-18/beyond-screen-futurism-meets-inclusion.

In adopting innovative technologies like a conversational user interface, Digital Services Georgia has always put the user first. That focus is one of the major factors leading to Georgia receiving the **2017 Government Experience Award** from the Center for Digital Government. To learn more about the award, visit https://gta.georgia.gov/press-releases/2017 Government Experience Award from the Center for Digital Government. To learn more about the award, visit https://gta.georgia.gov/press-releases/2017 Government Experience Award from the Center for Digital Government. To learn more about the award, visit https://gta.georgia.gov/press-releases/2017-09-18/state-georgia-receives-2017-government-experience-award.

Security Upgrade: HTTPS Only

Digital Services Georgia implemented a major security upgrade for the state's enterprise web publishing platform in FY 2017. The upgrade better protects online interactions with state agencies by encrypting all communications between a user's web browser and state websites. The encryption was made possible by migrating all state websites on the enterprise platform from Hypertext Transfer Protocol (HTTP) to Hypertext Transfer Protocol Secure (HTTPS). HTTP is the foundation for data communication on the World Wide Web. The shift to automatic encryption is in keeping with the federal government's migration to an HTTPS-only protocol for its websites. The benefits include:

- 1. **Better security** It should go without saying, but the state needs to protect users when they visit its websites. Without the encrypted protocol, the state could be putting constituents' information at risk.
- 2. Map geolocation Agencies with multiple offices around the state to serve constitutents often use a geolocation feature on their websites. The feature automatically determines the user's general location and then displays the office closest to them on a map. The feature typically lets the user get driving directions from their exact location to the agency's office. To protect the user's privacy, the feature only works with the HTTPS protocol.
- 3. **Standardization** With more organizations migrating to HTTPS and more users expecting it, HTTPS will soon be the standard protocol of the internet

A security upgrade on the state's web publishing platform better protects online interactions with state agencies. and the baseline for all websites. The World Wide Web's (W3C) Technical Architecture Group found that the web should "actively prefer secure communication" and encourage the use of HTTPS rather than HTTP.

- 4. **Improved performance** Even though encryption requires additional computation, some websites actually perform better using the encrypted protocol.
- 5. **Government leadership** As the internet community moves to HTTPS as the standard, government should be among those leading the way. Georgia is adapting to the changing landscape and helping set HTTPS as the standard for state government and internet contributors worldwide.

Content Specialist Certification

The GeorgiaGov Interactive team supports agency content managers with extensive training materials and technical guides. While technical training covers the "how to" of managing a website, the team recognized the need for training to address the "why." Unless Georgia content managers understand the reasoning behind every step of managing content, they have only half the tools needed to do the job.

GeorgiaGov Interactive established the Content Specialist Certification program to address the "why" of content management. While the courses leading to certification are geared towards Georgia's content managers, they can benefit anyone who is looking to learn the "why" of content management and strategy.

Achieving Content Specialist Certification involves successfully completing 18 hours of courses that focus on understanding website users, understanding how users navigate the website, writing simple and accessible content, and creating and implementing a content strategy. More information is available on the **State Certified Content Specialist Course** webpage at

https://digitalservices.georgia.gov/state-certified-content-specialist-course.

GOVTalks

GOVTalks helps content managers in state agencies make their websites more user-centric. GOVTalks is a one-day conference offered twice a year for anyone who is responsible for their organization's website or applications. Dedicated to helping state agencies in Georgia create a top-notch web presence, GOVTalks focuses on best practices for creating and managing user-centric content.

GOVTalks Fall 2016: Digital Ecosystems

On November 16, 2016, GOVTalks attendees heard a variety of talks ranging from structured content and digital ecosystems to data and content. More information can be found at https://digitalservices.georgia.gov/govtalks-fall-2016-digital-ecosystems.

GOVTalks Spring 2017: Reaching Your Users

On May 15, 2017, GeorgiaGov Interactive hosted the 9th GOVTalks conference. It differed from previous conferences because it was held as one of four tracks at GTA's 2017 Technology Summit. The focus was on how state agencies reach their constituents online. More information can be found at https://digitalservices.georgia.gov/govtalks-spring-2017-reaching-your-users.

certification program focuses on "how to" as well as "why" of managing content on state websites.

New professional

Digital Services Georgia added new state websites to the enterprise platform and worked with DDS on a major redesign of its website.

Agency Websites Added

The GeorgiaGov Interactive team onboarded six agency websites in FY 2017, bringing the total number of state agency websites hosted on the enterprise platform to 83. Each website design and redesign went through a citizen-centric review and restructuring of information architecture and content.

One of the highlights was the Department of Driver Services (DDS) website, <u>https://dds.georgia.gov</u>. The team and DDS launched the redesigned website in March 2017 to resolve a range of usability, functionality, and accessibility issues. DDS collaborated with the team to research user behavior and redesign the website in accordance with these findings. The design incorporated the latest standards for accessibility to make sure content is easily available to people with a range of disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity, and combinations of these. In addition, the redesigned website includes responsive design technology, which automatically adjusts its display to optimally fit any device – whether a desktop, tablet, or smartphone – and ensure a consistent experience across all platforms.

Three of the six agency websites that were added in FY 2017 were for the Environmental Protection Division of the Georgia Department of Natural Resources:

- Georgia Project Wet, <u>https://projectwet.georgia.gov</u>
- Rivers Alive, <u>https://riversalive.georgia.gov</u>
- Georgia Adopt-A-Stream, <u>https://adoptastream.georgia.gov</u>

The Office of the Consumer Advocate was moved to the Office of Attorney General and a new consumer education site was created at <u>https://consumered.georgia.gov</u>.

The sixth site, for the Georgia Vocational Rehabilitation Agency at https://gvs.georgia.gov, was rebranded and moved to a new domain name. Several related sites were also consolidated into the main site.

Stakeholder Value

During FY 2017, numerous IT projects were implemented that added value to Georgia government at both the state and local levels. The Stakeholder Value section highlights a small sampling of these projects. One of the projects – Child Support Services Mobile App – received top honors in an awards program sponsored by the National Association of State Chief Information Officers (NASCIO). In addition, two other projects – GenTax Fraud Management Solution and the WebEOC app – were recognized as finalists. It constituted Georgia's best showing in the 17-year history of NASCIO's award program and reinforced our position as a leader among states in the innovative use of technology.

GenTax® Fraud Management Solution

Georgia Department of Revenue (DOR)

Tax refund fraud has emerged as a major form of identity theft in recent years, and it's led to an intensive crackdown by federal and state tax officials, including DOR. To strengthen their efforts at combating fraud, DOR leaders implemented the GenTax® Fraud Management Solution (FMS) from Fast Enterprises. The GenTax® FMS was seamlessly incorporated into DOR's Integrated Tax Solution, which consolidates 23 disparate tax systems into a single platform and provides DOR agents with instant access to a taxpayer's total tax picture. The GenTax® FMS provides DOR's Fraud Business Team with the ability to systematically manage fraud rules, which determine whether a tax return should be held on suspicion of fraud, along with real-time reporting and data analytics, which help enhance fraud-management business practices.

DOR completed installation of the GenTax® FMS by the start of the 2015 tax return season, and it resulted in a 100 percent increase in tax and identity theft detections, thereby saving the state \$98 million in fraud prevention.

The GenTax® FMS was named a finalist in NASCIO's 2017 State IT Recognition Awards program in the category of Improving State Operations.

Child Support Mobile Application

Department of Human Services (DHS)

Division of Child Support Services (DCSS)

The GA DCSS Mobile App offers a range of self-service options and makes it possible for noncustodial parents to make child support payments on their mobile devices. The app allows users to review their payment history; view scheduled appointments, case activities, and details of child support orders; chat with a DCSS representative; and receive notifications and alerts about important information regarding their cases. The document- and signature-capture features allow users to provide necessary signatures and documents without visiting a child support office.

DCSS uses awardwinning mobile technology to make it easier to pay child support.

DOR's GenTax system

saved \$98 million by

preventing tax fraud.

The DHS Office of Information Technology developed the app in-house and worked closely with other state agencies whose services and functions often overlap with DCSS. One example involves the Georgia Department of Driver Services (DDS). Falling behind in child support payments could result in the suspension of a noncustodial parent's driver's license. The app provides information about child support issues affecting driver's licenses and links to DDS webpages with instructions for addressing such issues.

Since the app's launch, child support payments have increased, and calls to the DCSS Customer Contact Center have decreased along with constituent visits to local child support offices. Besides helping increase financial support for Georgia's children, the app results in DCSS staff having more time to focus on case management.

The DCSS Mobile App received top honors in NASCIO's 2017 State IT Recognition Awards program in the category of Digital Government – Government to Citizen.

BANNER Mobile

Technical College System of Georgia (TCSG)

TCSG's BANNER

Mobile makes it easier for students to interact with their technical college. Students today access the internet and perform many transactions primarily on their smartphones. But institutions of higher education most often rely on paper forms and electronic transactions that require the use of a desktop or laptop computer. TCSG sought to bridge the gap between its embedded systems and the technology that students use most frequently.

TCSG deployed a comprehensive mobile platform across all its colleges that relies on Ellucian's BANNER mobile app. The app is available for iOS and Android devices and enables students to:

- Register for classes using a shopping cart.
- View and accept financial aid.
- Manage schedules.
- Check calendars.
- Receive notifications.

Maps, directions, and notifications are also available on Apple Watch.

The app, which has been downloaded by more than 35,000 students, provides a way to send messages to students who don't regularly check email or even traditional mail.

Following a pilot phase, TCSG used in-house resources for deployment and became one of the first systems of higher education in the country to use a comprehensive mobile platform.

The app has reduced the number of students waiting in line for traditional services, and admissions and advisement personnel are experiencing reduced call volumes during peak times.

GDC on the Go – Offender Count

Georgia Department of Corrections (GDC)

The Office of Information Technology at the GDC implemented a mobile app that automates the process of counting and reconciling the number of offenders in each state prison.

By law, offenders much be counted and verified eight times every day. GDC on the Go replaced manual counting with RFID-based counting. Automatically counting and reconciling offenders from different housing units and activity locations ensures a more accurate and faster process. The app instantly identifies any missing offenders and alerts correctional officers and security personnel through emails and text messages. The app was engineered to work without cellular or Wi-Fi signals, which are prohibited in most state prisons for security reasons. It decreased the time to complete the counting and reconciliation process by 70 percent, thereby giving correctional officers more time to perform other key functions and reducing the need to hire more personnel.

Adult Education Chatbot

Technical College System of Georgia (TCSG)

An estimated 1.1 million adults in Georgia do not have a high school diploma. The Adult Education Program at the TCSG sought a way to reach these adults with information about the availability of free adult education classes in their communities. Reaching them through the digital devices they frequently use was considered critical to the effort's success.

In partnership with OneReach, TCSG's IT team developed an automated, self-service chatbot that allows prospective students to request information about nearby classes by SMS, or text messaging, on their smartphones at any time. Using OneReach's workflow system, TCSG-IT developed a database-driven backend to map every Georgia ZIP code to a service area and an adult education program. An awareness campaign using print and digital media, commercials, billboards, and rack cards encourages potential students to text a keywood — such as MyGED, MyLife or MyJob — to 70700. In response, the chatbot initiates a two-way conversation and, based on the user's ZIP code, delivers details about adult education and English-as-a-second-language programs. The user can provide contact information so TCSG staff can follow up with more detailed and personalized information during regular business hours.

Inmate Re-entry Project

Georgia Department of Corrections (GDC)

Georgia Department of Driver Services (DDS)

An important component of an offender's successful transition from confinement back into society is the ability to obtain identification, particularly a driver's license or a state identification card. The departments of Corrections and Driver Services collaborated on a project

TCSG's Chatbot allows prospective students to easily obtain information about the availability of free adult education classes.

Mobile technology

helps Corrections keep

track of offenders in state prisons.

Two state agencies collaborated on a solution that helps offenders obtain credentials to re-enter the workforce. to facilitate the issuance of driver's licenses and identification cards based on an offender's REAL ID status with DDS.

The IT solution involves a four-step process.

- 1. Offender records from Corrections are compared to DDS' driver's license database to determine who has previously been issued a license or identification card that complies with REAL ID requirements and has photographic and signature images on file.
- 2. For eligible offenders, Corrections sends data and scanned images of identification documents to DDS. An electronic image exchange between the two agencies allows scanned documents to merge with DDS' document imaging system.
- 3. DDS examiners verify the documents.
- 4. DDS' card factory prints the driver's license or ID card, which is then delivered to Corrections and placed in the offender's file to await his or her release.

The agencies offer assistance to offenders who need Social Security and/or residential address documentation and to those who do not have an existing record with DDS.

Offenders with state-issued credentials upon release are more prepared to enter the workforce, which leads to less recidivism.

WebEOC application

Georgia Department of Transportation (GDOT)

GDOT's WebEOC (Emergency Operations Center) application provides real-time data to support daily operations and emergency management, and along with transportation telematics, it's become GDOT's cornerstone during inclement weather.

During an ice or snow storm, GDOT's Road Weather Information System provides critically important data about the temperature of road surfaces that guides decisions about deploying resources such as brine trucks. GDOT shares the information with news media. A tracking device and a sensor on each brine truck connect to WebEOC and its GIS map, and each truck can be viewed in real time on a GIS map on any web-enabled device.

The truck is represented by an icon that starts green but turns yellow when the truck is dispensing brine. By following the icon, GDOT managers know the truck's exact location, and by clicking on the icon, they know the rate at which brine is being dispensed and the amount of brine remaining on the truck. Other sensors let managers know the height of the blade.

Anyone in Georgia can dial 511 on a mobile phone to report a serious accident, road closure, or other incident to GDOT's Traffic Management Center. GDOT dispatches a responder to the scene, and the WebEOC app on the responder's smartphone begins automatically populating

GDOT uses leadingedge technology to improve the state's traffic management. geolocation information so it's instantly available to the Traffic Management Center, GDOT's District Office EOCs, any GDOT personnel with WebEOC access, the Georgia Emergency Management and Homeland Security Agency, and others.

The geolocation information is taken from the smartphone's GPS app and GDOT's data warehouse and includes the name and number of the road or the number of the interstate highway and more precise measures of the incident's location based on highway mileposts. A responder is not distracted by having to manually enter information. The location of an incident is identified by a small icon on a GIS map of the state, which can be viewed on a smartphone, tablet, or desktop computer. A responder updates the status of the incident as the situation changes. By clicking on the incident icon, GDOT managers can view a responder's updated status reports.

GDOT's WebEOC application was named a finalist in NASCIO's 2017 State IT Recognition Awards program in the category of Information Communications Technology.

Local Government Projects Receiving Recognition

Electronic Case Filing

Fulton County

The Fulton County Magistrate Court broke new ground in its use of technology when it became the first Magistrate Court in Georgia to implement mandatory e-filing for civil cases in April 2016.

The Magistrate Court handles monetary claims of less than \$15,000 and is often called the People's Court because over 75 percent of the litigants do not have legal counsel and represent themselves. The e-file system can be easily accessed on the court's website at www.magistratefulton.org; it guides litigants through a series of questions and prompts them to enter the information that's necessary for their particular type of claim.

The e-file system's real-time processing affords court clerks access to filings as soon as they are submitted. Litigants are no longer required to wait in line for assistance or to have filings hand-stamped, and court clerks can more quickly review filings and either accept them or request additional information when needed.

Civil cases represent the highest volume of filings for the Atlanta Judicial Circuit. With an estimated 348,000 transactions annually, the e-file system has dramatically reduced initial processing from 60 days to 48 hours. Because these claims are typically filed by Fulton County residents who have little experience with the judicial system, the e-file system is expanding access, especially to those who lack the financial means to seek legal counsel. Data quality is also improved because of the e-file system's use of interview questions.

Fulton County Magistrate Court dramatically reduces the time it takes to process filings by implementing e-filing.

Journey to Procurement Excellence

DeKalb County

DeKalb County streamlines accounts payable with new procurement tool. DeKalb County implemented modules from Oracle's Advanced Procurement Suite to allow for online collaboration with suppliers through the procure-to-pay lifecycle. The county replaced paper processes with electronic processes, thereby increasing procurement productivity while streamlining accounts payable processing.

The system includes a self-service tool that allows new suppliers to register online and submit all necessary paperwork electronically. Suppliers can maintain their profile information themselves, and they can submit bids online as well as electronic invoices and proof of work completion for complex services. The system supports electronic signatures for all county contracts, and it gives suppliers real-time access to important information, including their purchasing, receiving and payment transactions. Since suppliers have access to the same procurement-related information as county departments, the county is experiencing fewer calls to the Procurement and Accounts Payable offices. County workers can collaborate online with procurement and contracts staff on writing solicitations and contracts, bid evaluations, and awarding and executing contracts.

How GIS Web Applications Improved the Elections Process

Fulton County

Fulton County implemented several improvements to its election system in preparation for the November 2016 presidential election, including the launch of specialized GIS web and mobile apps to help voters find nearby polling locations and learn about current wait times at each one.

First, the ArcGIS Collector mobile app was customized so each poll manager could enter the current wait time on an hourly basis.

Then a web-mapping app was customized for use by voters during the early voting period. To find the closest polling location, a user could enter an address, and the app would display polling locations within a five-mile radius. If a user then selected one of the listed locations, the app would display the current wait time, and the user could also access routing information on a map.

Another web-mapping app was customized for use on Election Day. Based on a voter's registered address, it would display the appropriate precinct, polling location, current wait time, and routing directions.

A third web-mapping app was customized for county staff so they could view a list of polling locations based on current wait times. They could then distribute staff and equipment as needed.

Fulton County deployed multiple applications to improve the elections process for voters. Appendix

Appendix A – Participation by Agencies

Exhibit 1 – Agencies Reporting IT Expenditures

	Agency Name	Reported	Reported	Reported
		2015	2016	2017
1	Administrative Office of Georgia Courts	NR	NR	NR
2	Brain & Spinal Injury Trust Fund Authority	✓	✓	✓
3	Composite State Board of Medical Examiners	NR	NR	NR
4	Criminal Justice Coordinating Council	✓	✓	✓
5	Department of Administrative Services	✓	✓	✓
6	Department of Banking and Finance	✓	✓	✓
7	Department of Behavioral Health and Developmental Disabilities	✓	✓	✓
8	Department of Community Affairs	✓	✓	✓
9	Department of Community Health	✓	✓	✓
10	Dept of Community Supervision	N/A	✓	✓
11	Department of Corrections	✓	✓	✓
12	Department of Defense	✓	✓	✓
13	Department of Driver Services	✓	✓	✓
14	Department of Early Care and Learning	✓	✓	✓
15	Department of Economic Development	✓	✓	✓
16	Department of Human Services	✓	✓	✓
17	Department of Juvenile Justice	✓	✓	✓
18	Department of Natural Resources	✓	✓	✓
19	Department of Public Health	✓	✓	✓
20	Department of Public Safety	✓	✓	✓
21	Department of Revenue	✓	✓	✓
22	Department of Transportation	✓	✓	✓
23	Department of Veterans Services	NR	NR	NR
24	Employees' Retirement System	✓	✓	✓
25	Georgia Board for Physician Workforce	NR	NR	NR
26	Georgia Bureau of Investigation	✓	✓	✓
27	Georgia Commission on Equal Opportunity	NR	NR	NR
28	Georgia Commission on the Holocaust	NR	NR	NR
29	Georgia Council for the Arts	NR	NR	NR
30	Georgia Drugs and Narcotics Agency	NR	NR	NR
31	Georgia Emergency Management Agency	✓	✓	✓
32	Georgia Firefighter Standards and Training Council	✓	✓	✓
33	Georgia Forestry Commission	✓	✓	✓
34	Georgia Professional Standards Commission	NR	NR	NR
35	Georgia Public Broadcasting	1	✓	✓
*	Cost data through GETS			

		Reported	Reported	Reported
	Agency Name	2015	2016	2017
36	Georgia Public Safety Training Center	✓	✓	✓
37	Georgia Public Telecommunications Commission	NR	NR	NR
38	Georgia Real Estate Commission & Appraisers Board	NR	NR	NR
39	Georgia Seed Development Commission	NR	NR	NR
40	Georgia State Financing and Investment Commission	✓	✓	✓
41	Georgia Student Finance Commission	√	✓	1
42	Georgia Technology Authority	1	✓	✓
43	Georgia Vocational Rehabilitation Agency	N/A	✓	1
44	Governor's Office of the Child Advocate	NR	NR	NR
45	Governor's Office of Highway Safety	*	✓	1
46	Governor's Office of Student Achievement	*	✓	✓
47	Nonpublic Postsecondary Education Commission	NR	NR	NR
48	Office of Inspector General	*	*	*
49	Office of Planning and Budget	1	✓	√
50	Office of State Administrative Hearings	✓	✓	✓
51	Office of State Treasurer	1	✓	1
52	State Accounting Office	1	✓	✓
53	State Board of Pardons and Paroles	1	✓	*
54	State Board of Workers' Compensation	✓	✓	✓
55	Nonpublic Postsecondary Education Commission	NR	NR	NR
56	State Properties Commission	1	✓	✓
57	State Soil and Water Conservation Commission	1	✓	1
58	Subsequent Injury Trust Fund	✓	✓	✓
59	Teachers' Retirement System	1	1	1
60	Technical College System of Georgia	1	✓	1
*	Cost data through GETS			

	Agencies NOT required to report			
	Agency Name	Reported 2015	Reported 2016	Reported 2017
1	Board of Regents of the University System of Georgia	NR	NR	NR
2	Council of Juvenile Court Judges	NR	NR	NR
3	Court of Appeals	NR	NR	NR
4	Department of Agriculture	1	✓	*
5	Department of Audits and Accounts	*	*	*
6	Department of Education	1	✓	✓
7	Department of Insurance	1	✓	✓
8	Department of Labor	1	*	✓
9	Department of Law	*	*	*
10	Georgia Agricultural Exposition Authority	NR	NR	NR
11	Georgia Agrirama Development Authority	NR	NR	NR
12	Georgia Building Authority	✓	1	✓
13	Georgia Development Authority	NR	NR	NR
14	Georgia Environmental Facilities Authority	NR	NR	NR
15	Georgia Housing and Finance Authority	NR	NR	NR
16	Georgia Lottery Coorporation	NR	NR	*
17	Georgia Ports Authority	✓	✓	✓
17	Georgia Regional Transportation Authority	✓	1	*
18	Georgia World Congress Center Authority	✓	✓	✓
19	Lake Lanier Islands Development Authority	NR	NR	NR
20	Office of the Governor	NR	NR	*
21	OneGeorgia Authority	NR	NR	NR
22	Georgia Military College	NR	NR	NR
23	Public Service Commission	NR	NR	*
24	Secretary of State	✓	✓	✓
25	State Ethics Commission	NR	NR	NR
26	State Road and Tollway Authority	✓	✓	*
27	Superior Court	NR	NR	NR

Appendix B – Spending by Agencies

Exhibit 1 – Agency IT Expenditures

	Agencies Required to Report	
	Agency Name	Total IT Spend for FY2017
1	Brain and Spinal Injury Trust Fund Commission	\$22,790
2	Criminal Justice Coordinating Council	\$1,079,788
3	Dept of Administrative Services	\$10,623,127
4	Dept of Banking and Finance	\$1,920,287
5	Dept of Behavioral Health	\$31,154,220
6	Dept of Community Affairs	\$2,936,573
7	Dept of Community Health	\$118,877,409
8	Dept of Community Supervision	\$9,402,876
9	Dept of Corrections	\$31,657,199
10	Dept of Defense	\$4,646,216
11	Dept of Driver Services	\$34,167,674
12	Dept of Early Care and Learning	\$6,721,677
13	Dept of Economic Development	\$813,107
14	Dept of Human Services	\$101,346,558
15	Dept of Juvenile Justice	\$17,675,388
16	Dept of Natural Resources	\$13,585,626
17	Dept of Public Health	\$21,422,500
18	Dept of Public Safety	\$19,939,121
19	Dept of Revenue	\$45,735,775
20	Dept of Transportation	\$42,946,530
21	Employees' Retirement System	\$2,801,312
22	GA Bureau of Investigation	\$12,325,288
23	GA Emergency Management Agency	\$1,638,728
24	GA Firefighter Standards and Training Council	\$81,300
25	GA Forestry Commission	\$799,403
26	GA Public Broadcasting	\$2,235,131
27	GA Public Safety Training Center	\$1,394,934
28	GA State Financing and Investment Commission	\$1,885,333
29	GA Student Finance Commission	\$5,134,266
30	GA Technology Authority	\$27,968,006
31	GA Vocational Rehabilitation Agency	\$1,855,000
32	Gov Office of Highway Safety	\$64,802
33	Gov Office of Student Achievement	\$1,980,388
34	Office of Inspector General	\$11,780
35	Office of Planning and Budget	\$1,943,737
36	Office of State Administrative Hearings	\$726,787
37	Office of the State Treasurer	\$940,000
38	State Accounting Office	\$24,441,194
39	State Board of Pardons and Paroles	\$72,007
40	State Board of Workers' Compensation	\$3,390,416
41	State Properties Commission	\$68,238
42	State Soil and Water Conservation Commission	\$379,360
43	Subsequent Injury Trust Fund	\$25,616
44	Teachers' Retirement System	\$52,174
45	Technical College System of Georgia	\$33,044,823

	Agencies Not Required to Report	
	Agency Name	Total IT Spend for FY2017
1	Dept of Agriculture	\$1,919,227
2	Dept of Audits	\$25,953
3	Dept of Education	\$18,439,199
4	Dept of Insurance	\$1,385,566
5	Dept of Labor	\$22,763,508
6	Dept of Law	\$230,355
7	GA Building Authority	\$1,673,238
8	GA Lottery Corporation	\$225,358
9	GA Ports Authority	\$287,099
10	GA Public Defender Council	\$37,327
11	GA Public Service Commission	\$67,352
12	GA Regional Transportation Authority	\$470,415
13	GA World Congress Center Authority	\$1,660,020
14	Office of the Governor	\$442,162
15	Secretary of State	\$7,380,654
16	State Road and Tollway Authority	\$1,214,129
	Total Spend	\$700,156,026

Appendix C – State Information Technology Legislation

Exhibit 1 – Senate Bill 117

Senate Bill 117

By: Senators Martin of the 9th, Miller of the 49th, Walker III of the 20th, Thompson of the 14th, Dugan of the 30th and others

AS PASSED A BILL TO BE ENTITLED AN ACT

1 To amend Chapter 25 of Title 50 of the Official Code of Georgia Annotated, relating to the

2 Georgia Technology Authority, so as to change the definition of the term "agency"; to

3 provide for the establishment of certain policies and standards to be used by all agencies; to

4 provide for waivers under certain circumstances; to provide for related matters; to repeal

5 conflicting laws; and for other purposes.

6

BE IT ENACTED BY THE GENERAL ASSEMBLY OF GEORGIA:

7

SECTION 1.

8 Chapter 25 of Title 50 of the Official Code of Georgia Annotated, relating to the Georgia

9 Technology Authority, is amended by revising paragraph (1) of subsection (b) of Code

10 Section 50-25-1, relating to the establishment of the Georgia Technology Authority, as 11 follows:

12 "(1) 'Agency' means every state department, agency, board, bureau, commission, and

13 authority but shall not include any agency within the judicial or legislative branch of state

14 government, the Georgia Department of Defense, departments headed by elected

15 constitutional officers of the state, or the University System of Georgia and shall also not

16 include any authority statutorily required to effectuate the provisions of Part 4 of Article

17 9 of Title 11."

18

SECTION 2.

19 Said chapter is further amended by revising subsection (a) of Code Section 50-25-4, relating 20 to the general powers of the Georgia Technology Authority, as follows:

21 "(a) The authority shall have the following powers:

22 (1) To have a seal and alter the same at its pleasure;

23 (2) To make and execute contracts, lease agreements, and all other instruments necessary

24 or convenient to exercise the powers of the authority or to further the public purpose for

25 which the authority is created;

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17

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26 (3) To acquire by purchase, lease, or otherwise and to hold, lease, and dispose of real or

27 personal property of every kind and character, or any interest therein, in furtherance of 28 the public purpose of the authority;

29 (4) To apply for and to accept any gifts or grants or loan guarantees or loans of funds or30 property or financial or other aid in any form from the federal government or any agency

31 or instrumentality thereof, or from the state or any agency or instrumentality thereof, or

32 from any other source for any or all of the purposes specified in this chapter and to

33 comply, subject to the provisions of this chapter, with the terms and conditions thereof;

34 (5) To contract with state agencies or any local government for the use by the authority

35 of any property, facilities, or services of the state or any such state agency or local

36 government or for the use by any state agency or local government of any facilities or

37 services of the authority; and such state agencies and local governments are authorized

38 to enter into such contracts;

39 (6) To fix and collect fees and charges for data, media, and incidental services;

40 (7) To deposit or invest funds held by it in any state depository or in any investment

41 which is authorized for the investment of proceeds of state general obligation bonds; and

42 to use for its corporate purposes or redeposit or reinvest interest earned on such funds;

43 (8) To establish policies and standards for agencies to submit information technology

44 plans to the authority. Standards Such policies and standards shall include without

45 limitation content, format, and frequency of submission;

46 (9) Reserved To establish technology policies and standards for all agencies, including,

47 but not limited to, the role and responsibilities of chief information officers and chief

48 information security officers within such agencies;

49 (10) To set technology policy for all agencies except those under the authority,

50 direction, or control of the General Assembly or state-wide elected officials other than

51 the Governor;

52 (11)(10) To establish and maintain official employee purchase programs for technology

resources facilitated by and through the authority for state employees and public schoolemployees of county or independent boards of education;

55 (12)(11) To provide oversight and program management for all technology resources for

56 projects exceeding a cumulative investment of \$1 million to accomplish goals of 57 technology portfolio management;

58 (13)(12) To develop such plans and reports as are deemed necessary and useful and to

59 require agencies to submit periodic reports at such frequency and with such content as the

60 board shall define;

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61 (14)(13) To prepare fiscal impact statements relating to necessary modifications and

62 development of technology to support policies required by proposed legislation;

63 (15)(14) To establish architecture for state technology infrastructure to promote efficient

64 use of resources and to promote economic development;

- 65 (16)(15) To provide processes and systems for timely and fiscally prudent management
 66 of the state's financial resources to include, without limitation, cash management;
- 67 (17)(16) To establish advisory committees from time to time, including, without
- 68 limitation, a standing advisory committee composed of representatives from agencies
- 69 which shall make recommendations to the authority concerning such matters as policies,
- 70 standards, and architecture;
- 71 (18)(17) To coordinate with agencies, the legislative and judicial branches of
- 72 government, and the Board of Regents of the University System of Georgia, regarding 73 technology policy;
- 74 (19)(18) To coordinate with local and federal governments to achieve the goals of the 75 authority;
- 76 (20)(19) To identify and pursue alternative funding approaches;
- 77 (21)(20) To establish technology security <u>policies</u>, standards, and services to be used by
 78 all agencies;
- 79 (22)(21) To conduct technology audits of all agencies;
- 80 (23)(22) To facilitate and encourage the conduct of business on the Internet;
- 81 (24)(23) To expand and establish policies necessary to ensure the legal authority and
- 82 integrity of electronic documents;
- 83 (25)(24) To provide and approve as part of the state technology plan an implementation
- 84 plan and subsequent policies and goals designed to increase the use of telecommuting85 among state employees;
- 86 (26)(25) To create a center for innovation to create applications of technology that will
 87 yield positive, measurable benefits to the state;
- 88 (27)(26) To contract through the Department of Administrative Services for the lease,
 89 rental, purchase, or other acquisition of all technology resource related supplies,
 90 materials, services, and equipment required by the state government or any of its agencies
 91 and designate such contracts as mandatory sources of supply for agency purchases or to
- 92 authorize any agency to purchase or contract for technology;
- 93 (28)(27) To establish and enforce standard specifications which shall apply to all 94 technology and technology resource related supplies, materials, and equipment purchased 95 or to be purchased for the use of the state government or any of its agencies, which 96 specifications shall be based on and consistent with industry accepted open network 97 architecture standards;

98 (29)(28) To establish specifications and standards for technology resources, which shall

99 apply to all technology to be purchased, licensed, or leased by any agency;

100 (29) To provide a waiver for any agency as to the use of any policies, standards,

101 specifications, or contracts developed by the authority, when it is determined by the

102 authority that such should not be applicable to such agency or that it will promote the best

103 interests of the state to grant such a waiver.

104 (30) To exercise any power granted by the laws of this state to public or private 105 corporations which is not in conflict with the public purpose of the authority; and

106 (31) To do all things necessary or convenient to carry out the powers conferred by this

107 chapter."

108

SECTION 3.

109 All laws and parts of laws in conflict with this Act are repealed.

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Appendix D – Technology Services Model

Exhibit 1 – Technology Services Model

Technology Services Model Sample Non-GETS Agencies Sample GETS Agencies DHS DOR GBI DPH DOT Agency Agency Managed & Run Application Managed & Run GTA Managed, Agency Vendor Run Infrastructure & Servers Managed & Run GTA Managed, GTA Managed, **Network & Voice** Vendor Run Vendor Run

Appendix E – GETS Services Model

Exhibit 1 – GETS Services Model



What we deliver Who we serve (agencies, users) Phone Service Network 1,200+ At Will 100,000+ users 1,200+ Policies & Phone Service Network standards Mainframe 86 Executive Security 86 Branch Servers 58,000+ users Phone Service Policies & standards Network 14 GETS Desktops & Mainframe 40,000 laptops Security users Disaster 14 Servers Recovery

Customers and services

Georgia Technology Authority

1



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