

**Department of Information Technology**

**STRATEGIC PLAN**

**and**

**INFORMATION TECHNOLOGY PLAN**

**2017 – 2019 Biennium**



By

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# 1. DIT Strategic Plan Executive Summary

The purpose of IT in the Executive Branch is to enable agencies to efficiently, effectively, and securely carry out their missions. The establishment of DIT and the resulting consolidation enables the State to be more efficient and customer-service oriented through improved management, governance, and oversight of technology. The driving force behind DIT is our focus on efficiency and customer service, which are the foundation of our vision, mission, and goals.

DIT’s vision, mission, values, and goals are as follows:

<b>OUR VISION</b> A performance-driven, transparent and secure IT organization with an unyielding commitment to connecting people, resources and partners		<b>OUR MISSION</b> To lead, partner and facilitate in order to provide easy, cost-effective government services to the citizens of North Carolina		
<b>VALUES</b>				
<b>ACCOUNTABILITY &amp; INTEGRITY</b>	<b>INGENUITY &amp; INNOVATION</b>	<b>CUSTOMER FOCUS</b>	<b>COLLABORATION</b>	
<b>GOALS</b>				
				
<b>OPTIMIZE</b>	<b>UNITE</b>	<b>REVITALIZE</b>	<b>INVEST</b>	<b>TRANSFORM</b>
<b>Optimize</b> the state’s IT investment to operate more efficiently.	<b>Unite</b> business and IT to meet the needs of the citizens through the innovative use of technology.	<b>Revitalize</b> our IT workforce by attracting and developing a diverse community of IT professionals who are engaged and motivated to push boundaries to foster positive change.	<b>Invest</b> in the security of the state’s applications and infrastructure to mitigate risk and protect citizen data.	<b>Transform</b> the way the state conducts business through the delivery of reliable and accessible technology and data services.



The following plan outlines some of the primary objectives for DIT over the next five (5) years, including modernizing the State’s data center profile, IT portfolio management, enterprise resource planning (ERP), enterprise data management, and enhancing cybersecurity. While this plan is intended to begin with the 2017-19 biennium, there are several current initiatives that we also highlight.

Our business is IT. As a result, our business goals and IT goals outlined in this plan are the same. Our IT plan shows the technical implementations needed to meet our business goals. DIT empowers the State to meet the needs of the citizens through the innovative use of technology. Innovation is a key component of driving the state forward, and is a consistent thread throughout our plan. A large part of

our job is to set the enterprise direction for IT, so many of our objectives will be similar to those seen in the State IT Plan which will be submitted in conjunction with the Governor's budget.

In previous years, DIT has considered the Statewide IT Plan its agency IT plan, focusing on the business of IT at the enterprise level rather than for DIT specifically. This is the first time in recent history that we have looked inward to create an agency-level plan.

DIT continues to mature in its ability to plan strategically. Over the last two years we have built a team of people devoted to assisting both DIT and other State IT organizations in their planning efforts. We will update our strategic plan as DIT continues to evolve and as additional agencies' IT functions are centralized. We believe in continuous improvement and have embraced the idea that the strategic plan is a living document that should be continuously updated.

## 2. DIT Overview

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Historically, the State Chief Information Officer (SCIO), now the Secretary of DIT, was responsible for providing technical services to State agencies and local entities, and for overseeing IT across the enterprise. Over the years, that role has expanded. Today, DIT is a dynamic organization with wide-ranging responsibility.

In the 2015 long session, the General Assembly established the Department of Information Technology, centralizing IT resources for the participating<sup>1</sup> agencies into one unified organization. To date, IT for seven (7) agencies/offices have moved under DIT. Over the coming months, IT for the remaining participating agencies will be centralized. This will dramatically change the way we conduct the business of IT across the State. The details of the centralization are outlined in individual plans for each participating agency. This strategic plan primarily focuses on how DIT will function internally and will be updated as we continue to centralize and solidify the future-state operating model.

DIT's responsibilities include everything from service delivery to master data management, to developing applications, to ensuring compliance with state law. DIT also has multiple citizen-facing responsibilities, including developing the state portal/website, and working with local governments to encourage broadband adoption. Below are DIT's main functional areas.

**Enterprise Strategy:** The Enterprise Strategy division is comprised of three units: Strategy and Process, Enterprise Architecture, and the Enterprise Project Management Office. The division was established to take a holistic and proactive approach to assisting the Secretary in setting the strategic direction for State IT. The division is responsible for managing the State's IT portfolio through Enterprise-wide strategic planning, establishing an enterprise architecture, overseeing the delivery of IT projects, and facilitating business process improvement both at DIT and in State agencies. Through collaboration and governance, this division establishes, articulates and guides the vision and direction of IT across the State in order to optimize our IT investments. By establishing standards, roadmaps, frameworks, and an enterprise engagement model, Enterprise Strategy works to ensure State agencies are able to effectively leverage people, processes, information, and solutions to meet business and citizen needs.

**Service Delivery:** The Service Delivery division provides a wide range of information technology services to State agencies, local governments, and educational institutions across North Carolina. Our ever-expanding catalog of services includes hosting, network, telecommunications, desktop computing, and unified communications such as email and calendaring. Providing IT Service Excellence through our service delivery across agencies allows the State to realize efficiencies and cost savings through economies of scale.

**Solution Delivery:** The Solution Delivery division provides project management, solution design, business analysis, quality assurance and application/web design and development services for executive branch agencies and local governments. These services cover project and solution lifecycles

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<sup>1</sup> [§ 143B-1325. Transition to Department of Information Technology.](#)

from business concept to gathering of requirements through design, development, testing, implementation, and operational release management. Solution Delivery personnel work with the customer to implement IT solutions that meet the needs of the customers.

**Enterprise Security and Risk Management Office:** The Enterprise Security and Risk Management Office (ESRMO) works with State agencies, federal and local governments, citizens and private sector partners to manage and mitigate risk to our citizens and their data. It works to ensure that information technology services across the State's IT portfolio are secure and sustainable.

**Strategic Sourcing Office:** The Strategic Sourcing Office (SSO) develops and manages statewide IT contracts that can be used by all State agencies and governmental entities, and approves contracts that enable agencies to meet their business needs. Each year, the SSO reviews hundreds of solicitations and authorizes government organizations to award technology goods and services contracts that help them serve the citizens of North Carolina. This process helps organizations get the best value for their purchases, allows the State to aggregate demand, and supports vendors in competing for business opportunities. The SSO also provides training to government procurement professionals on IT procurement laws and best practices to help them perform their job duties in keeping with all related rules, policies and procedures.

**Data Division:** The Data division strives to be the trusted partner and leader for enabling the sharing and analysis of data assets statewide. The division works across the enterprise to transform data into information to increase operational efficiencies and improve outcomes for the citizens of North Carolina by integrating and sharing data assets. The division functions as the Chief Data and Innovation Office for the State and is comprised of the Government Data Analytics Center (GDAC), the Center for Geographic Information and Analysis (CGIA), the Innovation Office, the Health Information Exchange Authority and staff (HIEA), NC 911 Board and staff, and Criminal Justice Information Network Board and staff (CJIN). The teams are strategically aligned to support the data and analytical needs of the State.

The division encourages collaboration, innovation, and promotion of a data-driven government, partnering with the agencies to understand their business needs and how data, analytics, and technology can be leveraged to support decision-making.

**Broadband Infrastructure Office:** The Broadband Infrastructure Office (Broadband IO) was established by the SCIO in 2015 as a statewide resource for broadband access, first responder communications and classroom connectivity initiatives led by the State of North Carolina. In 2016, the Broadband IO published the [State Broadband Plan](#).

Broadband IO aligns NC Broadband, the statewide effort to expand high-speed Internet access, with the FirstNet public safety initiative for improved resource-sharing across State agencies. The centralized and streamlined Office provides the opportunity to work across agencies and identify infrastructure development needs across North Carolina.

Broadband IO's mission includes creating the nation's first giga-state by 2020, expanding broadband access to underserved communities, and supporting digital learning by extending Wi-Fi access to every

classroom in the state. The office also provides policy recommendations and guidance to government leaders and key stakeholders to foster digital infrastructure expansion, adoption, and use.

**Internal Support Functions (Finance, Human Resources, General Counsel, Communications/Legislative Affairs, Internal Audit, Facilities Management):** There are six primary support functions that keep DIT up and running: finance, human resources, general counsel, communications and policy, internal audit, and facilities. These groups primarily focus on the internal operations of DIT and are critical to the successful operation of the organization as a whole.

**Transition Program Management Office:** The new Department of Information Technology succeeds the Office of Information Technology Services. The Transition Program Management Office works across the DIT organization and with participating agencies to determine how resources, finances and assets will function in the future, organizing, planning, developing, and communicating all deliverables related to the transition. DIT will, over time, become responsible for the day-to-day management of the participating agencies' information technology needs. This is a complex exercise that will take multiple years. DIT is in the midst of transitioning IT for the cabinet agencies, NC Community College System, and the State Board of Elections. This transition will allow the state to unite IT resources in order to optimize the delivery of IT services.

### 3. DIT Quick Reference Guide

The following is a roadmap of the DIT strategic plan.

<b>Goal 1 – Optimize the State’s IT investment to operate more efficiently.</b>		
<b>Objective 1.1</b> – Create a competitive rates model where 85% of our rates are at or below the market benchmark in the next 5 years.		
<b>1.1.1</b> – Percentage of DIT rates at or below market benchmark	<b>Strategy/Initiative</b>	Develop and implement a process for collaborative consumption forecasting with DIT service owners.
<b>Objective 1.2</b> – Modernize the State’s data center profile.		
<b>1.2.1</b> – Number of data centers decommissioned, hosting rates (reduction), State data center utilization rates, cloud service utilization rates	<b>Strategy/Initiative</b>	Complete the proof of concept on the next generation data center by Q4 FY2017.
	<b>Strategy/Initiative</b>	Consolidate existing agency data centers into the State data centers.
	<b>Strategy/Initiative</b>	Adopt a cloud service model.
<b>Objective 1.3</b> – Reduce duplication across the State’s IT landscape.		
<b>1.3.1</b> – Number of duplicative solutions consolidated	<b>Strategy/Initiative</b>	Reduce duplicative applications identified through the Application Portfolio Management process.
<b>1.4 Objective</b> – Reform procurement to more effectively leverage State resources		
<b>1.4.1</b> – Cost avoidance, cost savings	<b>Strategy/Initiative</b>	Reduce duplication in IT contracts.
	<b>Strategy/Initiative</b>	Expand the staff and skillsets of the Strategic Sourcing Office.
<b>1.5 Objective</b> – Operate the business of DIT more efficiently.		
<b>1.5.1</b> – Cycle times of key internal processes, number of internal processes documented, internal audits scheduled vs. executed	<b>Strategy/Initiative</b>	Audit internally to provide insight on the effectiveness and efficiency of governance, risk management, and internal control processes.
	<b>Strategy/Initiative</b>	Optimize and right-size staffing as needed for key internal functions.
	<b>Strategy/Initiative</b>	Document and prioritize improvements of key internal processes.
	<b>Strategy/Initiative</b>	Decrease cycle times associated with key internal processes.
<b>1.6 Objective</b> – Oversee and maintain participating agency IT funding.		
<b>1.6.1</b> – Percent of agencies who have created fund codes	<b>Strategy/Initiative</b>	Work with OSBM and participating agencies to establish IT fund codes.

## Goal 2 – Unite business and IT to meet the needs of the citizens through the innovative use of technology.

### 2.1 Objective – Build trusted partnerships with our customers through collaboration and governance

<b>2.1.1</b> – Number of enterprise strategies created, number of working groups created, number of COPs created, number of COEs created	<b>Strategy/Initiative</b>	Use cross-agency collaboration to develop 3 enterprise strategies by the end of FY2017.
	<b>Strategy/Initiative</b>	Create governance for the development of IT strategies and standards.
	<b>Strategy/Initiative</b>	Establish a Center of Excellence for process improvement by the end of FY2017.
	<b>Strategy/Initiative</b>	Establish a Center of Excellence for architecture by the end of FY2017.
	<b>Strategy/Initiative</b>	Establish a Center of Excellence for project management by the end of FY2017.
	<b>Strategy/Initiative</b>	Establish Centers of Excellence for Solution Delivery core capabilities.
	<b>Strategy/Initiative</b>	Establish a cybersecurity Community of Practice.

### 2.2 Objective – Work with agencies to establish enterprise solutions and services

<b>2.2.1</b> – Number of enterprise opportunities identified, number of cross-agency workgroups established to develop enterprise strategies	<b>Strategy/Initiative</b>	Develop a process for identifying and documenting the need for enterprise solutions with other agencies.
	<b>Strategy/Initiative</b>	Develop repeatable processes for gathering requirements for establishing enterprise services.

### 2.3 Objective – Improve IT planning and management

<b>2.3.1</b> – Number of agencies participating in the portfolio management practice, percentage of projects included in agency strategic plans	<b>Strategy/Initiative</b>	Create an IT portfolio management practice.
	<b>Strategy/Initiative</b>	Establish a business process management (BPM) framework.
	<b>Strategy/Initiative</b>	Update on an annual basis the planning guidance and procedures available for agencies to follow.

### 2.4 Objective – Improve IT planning and management

<b>2.4.1</b> – number of unique site visits per month, number of processes documented and published	<b>Strategy/Initiative</b>	Continually update DIT's website in a user-focused approach to make it easier for agencies and citizens to find critical information. This may include a reorganization of the service catalog which integrates more seamlessly with a service procurement tool.
	<b>Strategy/Initiative</b>	Track metrics related to visitors to the DIT website, as well as social media impressions, and adjust communications accordingly to ensure DIT is best meeting stakeholder needs.
	<b>Strategy/Initiative</b>	Prioritize, document, and publish key DIT processes - particularly those which are customer facing - for easy consumption.
	<b>Strategy/Initiative</b>	Provide more visibility into customer requests and transactions, including but not limited to, the service help desk, exception process, and procurements.

**Goal 3 – Revitalize our IT workforce by attracting and developing a diverse community of IT professionals who are engaged and motivated to push boundaries to foster positive change.**

**3.1 Objective – Create a culture of employee collaboration and empowerment**

<b>3.1.1 – Employee retention rates, number of cross-team collaborations</b>	<b>Strategy/Initiative</b>	<i>Recognize milestones and achievements.</i>
	<b>Strategy/Initiative</b>	<i>Provide cross-training opportunities.</i>

**3.2 Objective – Attract, recruit, and hire highly skilled professionals**

<b>3.2.1 – Number of recruitment activities conducted, type of recruitment activities conducted, number of "first choice" applicants accepting offers, number of times a position is reposted</b>	<b>Strategy/Initiative</b>	<i>Expand our recruitment methods to reach appropriately qualified candidates.</i>
	<b>Strategy/Initiative</b>	<i>Partner with local colleges to develop internship and mentoring programs, including working with the Community Colleges to increase participation in the National Security Agency (NSA) Centers of Excellence Program.</i>
	<b>Strategy/Initiative</b>	<i>Create a job-specific onboarding process.</i>

**3.3 Objective – Invest in the professional development of DIT employees**

<b>3.3.1 – Number of staff who participated in job-specific training, number of staff who received additional certifications</b>	<b>Strategy/Initiative</b>	<i>Develop agency in-service training programs.</i>
	<b>Strategy/Initiative</b>	<i>Support professional certification development and training.</i>
	<b>Strategy/Initiative</b>	<i>Develop a Cyber Workforce plan in concert with academia and the private sector by December 2017.</i>
	<b>Strategy/Initiative</b>	<i>Grow and enhance the Disabled Veterans Cyber Apprenticeship Program.</i>

**Goal 4 – Invest in the security of the State's applications and infrastructure to mitigate risk and protect citizen data.**

**4.1 Objective – Manage risk to improve agency security posture and sustainability of operations by increasing the State's cybersecurity maturity level from level 2 to level 3 by 2020.**

<b>4.1.1 – Accuracy of agency-reported incidents, cloud vendor compliance, accuracy of our data inventory</b>	<b>Strategy/Initiative</b>	<i>Develop and publish governance for National Institute of Standards and Technology (NIST) Risk Management Framework (RMF) by December 2016.</i>
	<b>Strategy/Initiative</b>	<i>Operationalize the reporting of high-value data using the privacy threshold and impact analysis process by the end of calendar year 2016.</i>
	<b>Strategy/Initiative</b>	<i>Develop a DIT privacy policy by December 2018.</i>
	<b>Strategy/Initiative</b>	<i>Enhance cyber exercises to provide realistic training and increase speed to identify, detect, and respond to cyber breaches by December 2017.</i>
	<b>Strategy/Initiative</b>	<i>Complete the transition to NIST risk management framework (RMF) by December 2019.</i>
	<b>Strategy/Initiative</b>	<i>Work with private, public, and academic organizations to modernize State cyber laws and develop a State Cyber Disruption Plan by June 2017.</i>

<b>4.2 Objective – Ensure adequate testing of application software</b>		
<b>4.2.1 – Utilization/penetration (#/% of mission critical applications) of the SQA Service across agency/department applications from both a project perspective and an operational change/release perspective, number of security risks identified in application code (static and dynamic), number of native mobile and mobile-responsive applications tested utilizing the SQA Service, percentage of projects verifying/validating scope implementation utilizing the SQA Service and related quality assurance processes</b>	<b>Strategy/Initiative</b>	<i>Eliminate the key reasons agencies/departments do not utilize the SQA Service.</i>
	<b>Strategy/Initiative</b>	<i>Establish the SQA tools and related processes (i.e. business requirements review (BRR), system requirements review (SRR), preliminary design review (PDR), critical design review (CDR)) as the standard for managing requirements through the entire project lifecycle - requirements traceability.</i>
	<b>Strategy/Initiative</b>	<i>Establish project criteria to specify which projects must establish a formal quality assurance plan along with the use of the SQA Service.</i>
	<b>Strategy/Initiative</b>	<i>Establish the capability (solutions and testing regimens) to help identify vulnerabilities and weaknesses in all custom source code applications.</i>
	<b>Strategy/Initiative</b>	<i>Establish the capability for SQA customers to test native mobile and mobile-responsive applications.</i>
<b>4.3 Objective – Maintain a safe environment for DIT employees</b>		
<b>4.3.1 – ADA compliance</b>	<b>Strategy/Initiative</b>	<i>Ensure that DIT facilities on Wake Forest Road are ADA compliant by the end of FY2019.</i>
	<b>Strategy/Initiative</b>	<i>Establish a lifecycle planning process for DIT facilities by the end of FY2017, implement by the end of FY2018.</i>
<b>4.4 Objective – Maintain a secure and sustainable environment for State data centers</b>		
<b>4.4.1 – Percentage of ID/access badges updated, percentage of background checks completed</b>	<b>Strategy/Initiative</b>	<i>Update employee ID and facility access badges by the end of FY2017.</i>
	<b>Strategy/Initiative</b>	<i>Expand background checks to include all participating agency transitioning staff and grandfathered personnel as needed.</i>
<b>4.5 Objective – Increase cybersecurity visibility by consolidating and leveraging cybersecurity assets across State agencies</b>		
<b>4.5.1 – Percentage of agency security tools providing automatic reporting to the DIT enterprise solution</b>	<b>Strategy/Initiative</b>	<i>Enhance incident reporting and management capabilities via a new web-based tool by the end of FY2017.</i>
	<b>Strategy/Initiative</b>	<i>Improve the operational speed for information sharing between agencies and the private sector in order to facilitate the rapid implementation of security/network blocking of compromised devices.</i>
	<b>Strategy/Initiative</b>	<i>Implement Phase 1 of the Continuous Diagnostic and Mitigation (CDM) program and processes by the end of 2017.</i>
	<b>Strategy/Initiative</b>	<i>Build cyber capabilities within the State's Fusion center in order to facilitate information sharing between State, Local, Tribal, and Territorial (SLTT) entities.</i>
	<b>Strategy/Initiative</b>	<i>Ensure all Executive Agency security logs are reporting to a consolidated infrastructure, e.g. Security Incident Event Management (SIEM) for detection and are analyzed for indicators of compromise (IoCs).</i>

## Goal 5 – Transform the way the State conducts business through the delivery of reliable and accessible technology and data services

### 5.1 Objective – Continuously improve services to stay competitive and allow our customers to meet their business needs

5.1.1 – Utilization rates for next generation identity management service, number of enterprise applications identified and replaced, percentage of DIT rates that are at or below market rates	Strategy/Initiative	Evaluate the hosting/storage and desktop processes and services of participating agencies in conjunction with the DIT Transition program.
	Strategy/Initiative	Complete the migration to the next generation identity management service by the end of 2020.
	Strategy/Initiative	Design and implement the next generation end user device models by the end of FY2017.
	Strategy/Initiative	Identify and replace enterprise applications, beginning with content management, followed by e-signature (to be complete by the end of FY2017) and licensing and permitting (to be complete by Q2 FY2018).
	Strategy/Initiative	Establish a mobile device management (MDM) contract.
	Strategy/Initiative	Add an additional telephony offering by the end of FY2017.

### 5.2 Objective – Foster a culture of continuous improvement

5.2.1 – Number of maturity assessments completed, number of formalized documents, procedures, and instructions developed	Strategy/Initiative	Establish a common language through formalized documents, procedures, and work instructions.
	Strategy/Initiative	Develop a formalized and consistent approach to continuous improvement that teaches DIT employees that the system is foundational to how our agency operates.
	Strategy/Initiative	Implement maturity assessments for service delivery, with at least three pilot services done by the end of calendar year 2016.

### 5.3 Objective – Improve the customer experience

5.3.1 – Number of unique portal site visits per month, customer survey ratings	Strategy/Initiative	Support and grow the State portal, NC.Gov, based on assessment of agency and end-user needs by the end of FY2017.
	Strategy/Initiative	Expand the customer satisfaction survey program throughout the enterprise by the end of 2016.

### 5.4 Objective – Improve decision-making through analytics

5.4.1 – Adoption rates for CJLEADS, SBI and DPS participation rates for the law enforcement case management solution, participation/use of federal data	Strategy/Initiative	Integrate federal data through a phased approach.
	Strategy/Initiative	Develop a modern CJLEADS interface and integrate multifactor authentication.
	Strategy/Initiative	Implement a law enforcement intelligence-based case management for the State of NC by Q1 calendar year 2017, with increasing participation throughout SBI and DPS.
	Strategy/Initiative	Integrate data and applications to support children and juvenile safety and well-being.

### 5.5 Objective – Integrate and share data more efficiently and effectively

5.5.1 – Adoption rates for data governance practices, number of agencies participating in GDAC projects,	Strategy/Initiative	Develop an enterprise data management strategy and plan (phase 1) to continue standardization and increase adoption of data governance practices across the enterprise by Q4 calendar year 2017.
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<i>number of agencies sharing data as a result of GDAC projects, percentage of state orthoimagery updates completed</i>	<b>Strategy/Initiative</b>	<i>Deliver AddressNC (master address) Phase 1 by Q2 calendar year 2017.</i>
	<b>Strategy/Initiative</b>	<i>Update the aerial imagery for the State's orthoimagery data layer on a 4-year cycle.</i>
	<b>Strategy/Initiative</b>	<i>Deliver the Early Childhood Integrated Data System (ECIDS) Phase 2 by Q1 calendar year 2017.</i>
	<b>Strategy/Initiative</b>	<i>Deliver P020W (SchoolWorks) Phase 1 by Q2 calendar year 2017.</i>
	<b>Strategy/Initiative</b>	<i>Deliver Common Follow-Up System Phase 2 by Q4 calendar year 2017.</i>
<b>5.6 Objective – Expand Solution Delivery capabilities</b>		
<b>5.6.1</b> – <i>SQA utilization rates, percentage of projects on time and on budget</i>	<b>Strategy/Initiative</b>	<i>Establish a Solutions Delivery organization and supporting processes based on industry best practices and insights of leading solutions delivery providers.</i>
	<b>Strategy/Initiative</b>	<i>Enhance staff knowledge and expertise to build a leading solutions delivery capability, including the creation of an application and web development unit and additional focus on Software Quality Assurance (SQA) and customer relationship management (CRM) capabilities.</i>
	<b>Strategy/Initiative</b>	<i>Develop and implement practices to manage the agencies' needs for new solutions.</i>
<b>5.7 Objective – Improve the deployment and adoption of high-speed Internet access in NC</b>		
<b>5.7.1</b> – <i>Percentage of broadband infrastructure and/or increase speed offerings in the state, number of counties reached/engaged, number of counties assisted with financing, number of research projects completed, number of objectives developed and policy changes recommended through the NCBIG initiative</i>	<b>Strategy/Initiative</b>	<i>Research, inform, and assist communities in obtaining funding for broadband access.</i>
	<b>Strategy/Initiative</b>	<i>Analyze and develop recommendations, including a Digital Literacy plan, to incent and increase adoption across the state.</i>
	<b>Strategy/Initiative</b>	<i>Lead the NC Broadband Interagency Group (NCBIG) to include other State agencies in planning and policies around private sector deployment in the public sphere.</i>
	<b>Strategy/Initiative</b>	<i>Expand outreach efforts, beginning initiatives in twice as many counties or communities in FY2018, ultimately reaching out to all 100 counties to work on broadband expansion.</i>
<b>5.8 Objective – Enhance our rates development process to further the transparency and accuracy of our rates</b>		
<b>5.8.1</b> – <i>Number of refunds required, dollar amount of refunds required, number of budget revisions required</i>	<b>Strategy/Initiative</b>	<i>Develop and implement a process for collaborative consumption forecasting with DIT service owners.</i>
	<b>Strategy/Initiative</b>	<i>Revise the agency impact analysis process.</i>
	<b>Strategy/Initiative</b>	<i>Document existing and automate remaining data feeds to the billing systems and consumption for all the services by the end of calendar year 2020.</i>
<b>5.9 Objective – Establish a statewide ERP practice</b>		
<b>5.9.1</b> – <i>Once a Program Office is established and priorities are documented by the Steering Committee, measures will be created and baselines will be established.</i>	<b>Strategy/Initiative</b>	<i>Establish an ERP Program Office</i>
	<b>Strategy/Initiative</b>	<i>Draft an RFP for the ERP solution</i>

## 4. Enterprise Opportunities

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### 4.1 Collaborative Opportunities

There are many collaborative opportunities across the State, whether enterprise procurement opportunities or streamlining business processes. One of the biggest opportunities is moving to an enterprise resource planning (ERP) solution.

An investment in modern ERP technology will provide a foundation for more standardized and automated processes. Not only will an ERP serve as the foundational toolset for standardizing core processes, it also will enable automation of many manual processes through integrated technology that enables one-time data input and reuse of data across the enterprise promoting cost savings. Providing business functions as shared services will result in a more performance-driven organization.

This and other opportunities, such as time-division multiplexing (TDM) telephony updates, will be covered in more detail in the State IT Plan. DIT will conduct an analysis of the agency IT plans to look for areas for collaboration and potential enterprise opportunities.

## 5. DIT Vision, Mission, and Values

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### 5.1 Vision

DIT strives to become a performance-driven, transparent and secure IT organization with an unyielding commitment to connecting people, resources and partners.

### 5.2 Mission

To lead, partner and facilitate in order to provide easy, cost-effective government services to the citizens of North Carolina.

### 5.3 Values

**Accountability and Integrity:** We strive to always do what is right.

**Ingenuity and Innovation:** We are committed to enabling the State's business through innovative solutions.

**Customer focus:** We are dedicated to delivering services and solutions that provide consistently positive experiences for our customers.

**Collaboration:** We create and support a diverse, yet unified team that works together to serve the citizens of North Carolina.

## 6. DIT Goals, Objectives, and Measures of Success

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### Goal 1 – Optimize the State’s IT investment to operate more efficiently.

Whether it be leveraging the State’s buying power to procure goods and services more cost-effectively, or finding ways to reduce duplication within and between agencies, DIT is focusing on how to leverage resources efficiently across the State’s IT portfolio. The Secretary is responsible for the oversight and maintenance of State agency IT budgets. While cost savings is always a key consideration, and developing competitive rates is critical to the success of the organization, DIT is also focusing on avoiding costs and finding ways to automate business functions to both reduce operating costs for State services and simplify the way we interact with citizens.

**1.1 Objective** – Create a competitive rates model where 85 percent of our rates are at or below the market benchmark in the next five (5) years.

DIT largely operates as a business, where the majority of services provided are receipt-supported. In order to be good stewards of the agencies’ and taxpayer’s money, we must strive to provide these services as cost-effectively as possible, using industry benchmarks where available.

#### 1.1.1 Potential Measures of Success

- New measure: percentage of DIT rates that are at or below market rates

##### Strategies/Initiatives:

- Develop and implement a process for collaborative consumption forecasting with DIT service owners
- Develop a process to evaluate the value of and demand for all services, partnering with the vendor community as needed.

**1.2 Objective** – Modernize the State’s data center profile.

The State currently operates more than 40 data centers, varying in age, capacity, and levels of security. In S.L. 2015-241, the General Assembly directed the Secretary to consolidate agency data centers in the most efficient manner possible. Agencies are required to use State infrastructure for hosting unless granted an exception by the Secretary on the basis of cost, technical ability, or security. This focus on data center efficiency was reiterated in the 2016 budget bill. In order to efficiently and cost-effectively serve the State, DIT must do more than just consolidate existing physical data centers. A modern data center profile includes both physical facilities and cloud options. Consolidating physically while simultaneously introducing cloud options will enable DIT to reduce hosting and storage rates while providing better hosting and storage services.

#### 1.2.1 Potential Measures of Success

- Number of data centers decommissioned

- Reduction of hosting rates
- Utilization rates for the State data centers
- New measure: cloud service utilization rates

**Strategies/Initiatives:**

- Complete the proof of concept on the next generation data center by Q4 FY2017
- Consolidate existing agency data centers into the State data centers
- Adopt a cloud service model

**1.3 Objective – Reduce duplication across the State’s IT landscape.**

Part of optimizing the State’s IT investment is making sure that we minimize duplicative investment and efforts, whether in IT solutions or procurement vehicles. Currently, there is significant redundancy across our IT landscape. Reducing duplication, particularly in applications and systems, will enable DIT to better leverage existing assets, control IT costs, and work towards the optimization of the State’s overall IT investment.

**1.3.1 Potential Measures of Success**

- Number of duplicative solutions consolidated

**Strategies/Initiatives:**

- Reduce duplicative applications identified through the Application Portfolio Management process

**1.4 Objective – Reform procurement to more effectively leverage State resources.**

Currently, individual business owners are responsible for developing complex IT contracting documents and are accountable for contract administration and management post-award. Business owners are not trained for this type of work, and should work through and with DIT procurement staff who are trained and focused on contract management. A redesigned IT Procurement process will enable DIT to negotiate and manage better contracts for the State. In addition to the redesigned process, DIT has created a Strategic Sourcing Office and has re-organized IT Procurement into teams aligned with and dedicated to each agency. These changes will foster a more consistent relationship with our customers and create greater continuity throughout the contract lifecycle.

**1.4.1 Potential Measures of Success**

- New measure: cost avoidance
- New measure: cost savings

**Strategies/Initiatives:**

- Reduce duplication in IT contracts

- Expand the staff and skillsets of the Strategic Sourcing Office

**DIT has requested funding for additional positions in the Strategic Sourcing Office in the FY2017-19 proposed budget.**

### **1.5 Objective – Operate the business of DIT more efficiently.**

In order to effectively fulfill our mission while trying to optimize our limited resources, we must ensure that our internal business operations are as efficient and effective as possible.

#### **1.5.1 Potential Measures of Success**

- Internal audits scheduled vs. executed
- New measure: percentage increase in number of internal processes documented
- New measure: cycle times of key internal processes

#### **Strategies/Initiatives:**

- Audit internally to provide insight on the effectiveness and efficiency of governance, risk management and internal control processes.
- Optimize and right-size staffing as needed for key internal functions.
- Document and prioritize improvements of key internal processes.
- Decrease cycle times associated with key internal processes.

### **1.6 Objective – Oversee and maintain participating agency IT funding.**

#### **1.6.1 Potential Measures of Success**

- Percent of agencies who have created fund codes

#### **Strategies/Initiatives:**

- Work with OSBM and participating agencies to establish IT fund codes.

**DIT has requested appropriations for administrative costs in the FY 2017-19 proposed budget.**

## **Goal 2 – Unite business and IT to meet the needs of the citizens through the innovative use of technology.**

IT exists primarily to enable the business (State agencies) to provide improved services to the citizens of North Carolina. With this in mind, DIT strives to partner with agencies and provide opportunities for agencies to work together to more effectively meet their needs. We must work with both the agencies and our industry partners to find innovative solutions that meet the needs of the citizens of North Carolina.

## **2.1 Objective – Build trusted partnerships with our customers through collaboration and governance.**

Collaborative governance and the creation of partnerships, such as communities of practice (COPs) and centers of excellence (COEs), enables DIT and its customers to share knowledge, leverage best practices, and work together to meet the needs of the citizens. This, along with creating governance boards for key focus areas, will allow us to work together and build trusted partnerships with our key stakeholders.

### **2.1.1 Potential Measures of Success**

- New measure: number of enterprise strategies created
- New measure: number of working groups created
- New measure: number of Communities of Practice created
- New measure: number of Centers of Excellence created

#### **Strategies/Initiatives:**

- Use cross-agency collaboration to develop three (3) enterprise strategies by the end of FY2017.
- Create governance for the development of IT strategies and standards.
- Establish a Center of Excellence for process improvement by the end of FY2017.
- Establish a Center of Excellence for architecture by the end of FY2017.
- Establish a Center of Excellence for project management by the end of FY2017.
- Establish Centers of Excellence for Solution Delivery core capabilities.
- Establish a cybersecurity Community of Practice.

## **2.2 Objective – Work with agencies to establish enterprise solutions and services.**

One of the Secretary's many responsibilities is the establishment and operation of enterprise IT solutions and services. As agencies continue to transition to DIT, inter-agency collaboration becomes increasingly important. Working with agencies to identify, develop, and implement enterprise solutions and services will improve stakeholder buy-in and will enable the State to more efficiently meet the needs of the citizens.

### **2.2.1 Potential Measures of Success**

- New measure: number of enterprise opportunities identified
- New measure: number of cross-agency workgroups established to develop enterprise strategies

### Strategies/Initiatives:

- Develop a process for identifying and documenting the need for enterprise solutions with other agencies.
- Develop repeatable processes for gathering requirements for establishing enterprise services.

### 2.3 Objective – Improve IT planning and management.

Having a better understanding of the State’s IT portfolio will enable the Secretary to more effectively leverage the State’s IT resources and to address historical pain points. This includes inconsistent management and a lack of planning that make it difficult both for DIT to properly serve agencies and for the agencies to properly serve citizens. Better visibility into agency needs, plans, and existing capabilities will enable DIT to work with agencies to reduce duplicative effort and spend, where innovative, unified solutions could better serve the citizens.

Beginning with this planning cycle, the Enterprise Strategy staff will work with the divisions to facilitate the development of an agency-wide strategic plan. Working together to set the vision, mission, goals, and objectives for DIT allows divisions to more clearly understand how they interact and rely on one another to carry out their responsibilities. Similarly, agencies across the State do not have a clear understanding of what other agencies have or are planning to do with regard to IT, which often results in duplicative efforts and missed opportunities for collaboration.

#### 2.3.1 Potential Measures of Success

- Number of agencies participating in the portfolio management practice
- Percentage of projects included in agency strategic plans

### Strategies/Initiatives:

- Create an IT portfolio management practice.
- Establish a business process management (BPM) framework.
- Update on an annual basis the planning guidance and procedures available for agencies to follow.

**DIT has requested funding for additional Enterprise IT Strategists in the FY2017-19 proposed budget.**

### 2.4 Objective – Increase DIT transparency.

In order to more effectively serve our customers and simplify their interactions with us, we must make it easier for customers to understand how our organization operates. We work with agencies in many capacities, from providing hosting services to executing procurements, to approving and monitoring IT projects, all of which impact the ways agencies conduct business. Providing operational transparency will allow us to better set and meet expectations.

### 2.4.1 Potential Measures of Success

- Number of unique website visits per month
- New measure: number of processes documented and published

#### Strategies/Initiatives:

- Continually update DIT's website in a user-focused approach to make it easier for agencies and citizens to find critical information. This may include a reorganization of the service catalog which integrates more seamlessly with a service procurement tool.
- Track metrics related to visitors to the DIT website, as well as social media impressions, and adjust communications accordingly to ensure DIT is best meeting stakeholder needs.
- Prioritize, document, and publish key DIT processes – particularly those which are customer facing – for easy consumption.
- Provide more visibility into customer requests and transactions, including but not limited to, the service help desk, exception process, and procurements.

## Goal 3 – Revitalize our IT workforce by attracting and developing a diverse community of IT professionals who are engaged and motivated to push boundaries to foster positive change.

In order to effectively meet any of our goals we must continue to attract and retain a team of qualified and engaged individuals. This includes improving our hiring methods, team building, and training opportunities, as well as increasing the desirability of our work environment.

### 3.1 Objective – Create a culture of employee collaboration and empowerment.

DIT's culture significantly impacts how its employees align to its strategic plan, how much they support it with their actions, and the degree of DIT's success. Fostering an empowering work atmosphere will enable DIT employees both to function better individually and to achieve common purposes. Promoting problem-solving, interdependent, and customer-driven mindsets will allow employees to own what they do, make decisions and take actions with customers, reinforce quality service and quality effort, continuously improve processes, and gain greater appreciation for fellow coworkers and the larger mission and vision of the organization.

#### 3.1.1 Potential Measures of Success

- Employee retention rates
- New measure: number of cross-team collaborations

### Strategies/Initiatives:

- Recognize milestones and achievements.

DIT will highlight specific employee behaviors, showing how these are tied to and advance the vision and mission of the agency. Recognition of DIT employee contributions can inspire employees to draw together in a common direction. Acknowledging DIT employee contributions at meetings and other activities will make employees feel they fit and belong and that their contributions are valued and make a difference.

- Provide cross-training opportunities.

When employees are cross-trained it provides them with the ability to learn and understand different part of the organization, giving them a well-rounded understanding of how the organization functions. When employees understand how different parts of the organization work together, they are more likely to collaborate with one another.

### 3.2 Objective – Attract, recruit, and hire highly skilled professionals.

Currently, thirty-one percent (31%)<sup>2</sup> of DIT’s workforce is eligible to retire in the next five (5) years. Attracting, recruiting, and ultimately hiring highly skilled professionals is essential to DIT’s ability to deliver customer-valued services and products. Streamlining human resource processes, utilizing effective screening metrics and appropriate interview questions to identify key attributes of potential new hires, and engaging subject matter experts within DIT in the selection process to assist with screening for qualified applicants will make it easier for DIT to consistently recruit and hire skilled professionals.

#### 3.2.1 Potential Measures of Success

- New measure: number of recruitment activities conducted
- New measure: type of recruitment activities conducted
- New measure: number of “first choice” applicants accepting offers
- New measure: number of times a position is reposted

### Strategies/Initiatives:

- Expand our recruitment methods to reach appropriately qualified candidates.
- Partner with local colleges to develop internship and mentoring programs, including working with the Community Colleges to increase

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<sup>2</sup> Based on a BEACON report

participation in the National Security Agency (NSA) Centers of Excellence Program.

- Create a job-specific onboarding process.

DIT will document the onboarding process for each role within the agency, so that new hires are able to be up and running smoothly.

**DIT has requested funding for additional HR positions in the FY2017-19 proposed budget.**

### **3.3 Objective – Invest in the professional development of DIT employees.**

DIT will invest in professional development training so that employees will be well-prepared and well-equipped to succeed in their roles. By investing in employee development, DIT can guide employees at all levels to efficient, cost-effective, and customer-driven processes. This will help to create a problem-solving culture in which employees continuously seek out new training opportunities and better ways to deliver customer-valued services and products. Investments will be made in professional certifications, continuing education, and in developing IT trends (e.g., cybersecurity) that can help bring out the best in employees and develop their skills.

#### **3.3.1 Potential Measures of Success**

- Number of staff who participated in job-specific training
- Number of staff who received additional certifications

#### **Strategies/Initiatives:**

- Develop agency in-service training programs.
- Support professional certification and development training.
- Develop a Cyber Workforce plan in concert with academia and the private sector by December 2017.

A Cyber Workforce plan will help DIT and the address the growing shortage of cyber talent within State.

- Grow and enhance the Disabled Veterans Cyber Security Apprenticeship Program.

**DIT has requested funding for the Disabled Veterans Cyber Security Apprenticeship Program in the FY2017-19 proposed budget.**

**DIT has requested additional funding for cyber exercises and training in the FY2017-19 proposed budget.**

**DIT has requested additional funding for cyber awareness phishing training in the FY2017-19 proposed budget.**

## Goal 4 – Invest in the security of the State’s applications and infrastructure to mitigate risk and protect citizen data.

Ensuring the security of the State’s data and systems, reinforcing information sharing between private, public sector and academia, and providing critical infrastructure protection awareness are critical responsibilities of the Secretary and DIT.

### 4.1 Objective – Manage risk to improve agency security posture and sustainability of operations by increasing the State’s cybersecurity maturity level from level 2 to level 3 by 2020.

Emerging technologies and the evolving cyber landscape require continuous monitoring using a unified security framework that will aid in the management of operational risk. All technology pursuits require an evaluation of security considerations, including governance, risk evaluation, data protection, training, awareness programs, and budget and resource requirements. Business and IT decisions need a more comprehensive framework that provides business decision makers standardization and consistency in risk analysis, remediation and prioritization of IT security expenditures. Additionally, the increase in the use of cloud vendors pose additional risks as 3<sup>rd</sup> and 4<sup>th</sup> party vendors now play a significant role in the management of State data. The State must now ensure that external vendors who store, process, and transmit State data for or on behalf of the State must meet an acceptable level of compliance so as not to increase the overall risk to the State’s critical infrastructure and data.

#### 4.1.1 Potential Measures of Success

- New measure: accuracy of agency-reported incidents
- New measure: cloud vendor compliance
- New measure: accuracy of our data inventory

#### Strategies/Initiatives:

- Develop and publish governance for National Institute of Standards and Technology (NIST) Risk Management Framework (RMF) by December 2016.
- Operationalize the reporting of high-value data using the privacy threshold and impact analysis process by the end of calendar year 2016. This will help DIT improve its data inventory process.
- Develop a DIT privacy policy by December 2018.
- Enhance cyber exercises to provide realistic training and increase speed to identify, detect, and respond to cyber breaches by December 2017.
- Complete the transition to NIST risk management framework (RMF) by December 2019.

- Work with private, public, and academic organizations to modernize State cyber laws and develop a State Cyber Disruption Plan by June 2017. Collaboratively updating State cyber laws and developing a State Cyber Disruption Plan will help DIT increase the resilience of State networks.

**DIT has requested additional funds for a cyber study and the modernization of state cyber laws in the FY2017-19 proposed budget.**

**DIT has requested additional positions for the Enterprise Security and Risk Management Office in the FY2017-19 proposed budget.**

**DIT has requested additional funding for Corporate Executive Board Risk Leadership membership in the FY2017-19 proposed budget.**

#### **4.2 Objective – Ensure adequate testing of application software.**

As part of a software quality assurance (SQA) function, adequate testing of new or updated IT systems is essential for successful deployment and ensuring that applications support and meet the business needs of the agencies.

Currently, many agencies/departments do not adequately test their IT applications or platforms prior to the initial production launch and/or regression test for maintenance or enhancement releases. There are a number of reasons for this, including, but not limited to, a lack of expertise performing software quality assurance (SQA), insufficient test automation tools, lack of sufficient budget, and project delivery time pressures. In addition, the cost and effort to acquire SQA skills and establish a comprehensive testing tool platform is high.

DIT has provided a Software Quality Assurance (SQA) Testing Service (<http://it.nc.gov/sqa>) for nearly a decade. This service offers highly reliable, scalable, secure, and cost-effective testing capabilities (functional, performance, mobile) that State agencies and local government entities (within North Carolina) can utilize for managing their testing efforts to ensure the applications are fit for purpose and use. In ensuring adequate testing of applications, DIT intends to expand the use of the SQA Service, establish quality assurance standards across the enterprise, and expand the capabilities of the service.

With IT applications becoming increasingly complicated, leading to increased deployment risks, adequate SQA capabilities and methods become more essential to the successful implementation of applications. SQA will be an increasingly important service as DIT continues to centralize and the Secretary is accountable for the success of more solutions.

##### **4.2.1 Potential Measures of Success**

- Utilization/penetration (#/% of mission critical applications) of the SQA Service across agency/department applications from both a project perspective as well as an operational change/release perspective
- Number of security risks identified in application code, from static and dynamic perspective

- Number of native mobile and mobile-responsive applications tested utilizing the SQA Service
- Percentage of projects verifying/validating scope implementation utilizing the SQA Service and related quality assurance processes

**Strategies/Initiatives:**

- Eliminate the key reasons agencies/departments do not utilize the SQA Service.
- Establish the SQA tools and related processes (i.e., business requirements review – BRR, system requirements review – SRR, preliminary design review - PDR, critical design review – CDR) as the standard for managing requirements through the entire project lifecycle – requirements traceability.
- Establish project criteria to specify which projects must establish a formal quality assurance plan along with use of the SQA Service.
- Establish the capability (solutions and testing regimens) to help identify vulnerabilities and weaknesses in all custom source code applications.
- Establish the capability for SQA customers to test native mobile and mobile-responsive applications.

**DIT has requested additional funds for SQA in the FY2017-19 proposed budget.**

**4.3 Objective – Maintain a safe environment for DIT employees**

Safety is a top priority for the State of North Carolina and DIT. We care about our employees’ well-being and are committed to creating a safe and secure working environment for all DIT employees.

**4.3.1 Potential Measures of Success**

- ADA compliance

**Strategies/Initiatives:**

- Ensure that DIT facilities on Wake Forest Road are ADA compliant by the end of FY2019.
- Establish a lifecycle planning process for DIT facilities by the end of FY2017, implement by the end of FY2018.

**4.4 Objective – Maintain a secure and sustainable environment for State data centers.**

Ensuring that only approved individuals have access to our facilities is key in maintaining a secure environment for our State data centers. As we consolidate the more than 40 data centers maintained by the State, we must ensure that data and applications are transitioned to a safe and secure environment.

#### 4.4.1 Potential Measures of Success

- Percentage of ID/access badges updated
- Percentage of background checks completed

##### Strategies/Initiatives:

- Update employee ID and facility access badges by the end of FY2017 (through transition).
- Expand background checks to include all participating agency transitioning staff and grandfathered personnel as needed.

**DIT has requested additional funding for background checks in the FY2017-19 proposed budget.**

**4.5 Objective** – Increase cybersecurity visibility by consolidating and leveraging cybersecurity assets across State agencies.

Consolidating and leveraging existing cybersecurity assets, including operationalizing the State’s Cyber Fusion center to facilitate private, public and academia information gathering and sharing throughout the State, will enhance the timely detection and response to cyber incidents.

#### 4.5.1 Potential Measures of Success

- Percentage of agency security tools providing automatic reporting to the DIT enterprise solution

##### Strategies/Initiatives:

- Enhance incident reporting and management capabilities via a new web-based tool by the end of FY2017.
- Improve the operational speed for information sharing between agencies and the private sector in order to facilitate the rapid implementation of security/network blocking of compromised devices.
- Implement Phase 1 of the Continuous Diagnostic and Mitigation (CDM) program and processes by the end of 2017.
- Build cyber capabilities within the State’s Cyber Fusion center in order to facilitate information sharing between State, Local, Tribal and Territorial (SLTT) entities.
- Ensure all Executive Agency security logs are reporting to a consolidated infrastructure, e.g. Security Incident Event Management (SIEM) for detection and are analyzed for indicators of compromise (IoCs).

**DIT has requested additional positions for the Cyber Fusion center in the FY2017-19 proposed budget.**

**DIT has requested additional funding for the CDM program in the FY2017-19 proposed budget.**

**DIT has requested additional positions for the DIT Security Team in the FY2017-19 proposed budget.**

**DIT has requested additional funding for cybersecurity modernization in the FY2017-19 proposed budget.**

## **Goal 5 – Transform the way the State conducts business through the delivery of reliable and accessible technology and data services.**

Historically, IT has been seen as a cost center rather than a business enabler. By providing innovative, high quality, reliable, and accessible technology and data services, DIT can change the way agencies leverage IT, improve the way citizens interact with government, and transform the way services are provided to the citizens of North Carolina.

**5.1 Objective – Continuously improve services to stay competitive and allow our customers to meet their business needs.**

### **5.1.1 Potential Measures of Success**

- Utilization rates for next generation identity management service
- Number of enterprise applications identified and replaced
- New measure: percentage of DIT rates that are at or below market rates

#### **Strategies/Initiatives:**

- Evaluate the hosting/storage and desktop processes and services of participating agencies in conjunction with the DIT Transition program.
- Complete the migration to the next generation identity management service by the end of 2020.
- Design and implement the next generation end user device models by the end of FY2017.
- Identify and replace enterprise applications, beginning with content management, followed by e-signature (to be complete by the end of FY2017) and licensing and permitting (to be complete by Q2 FY2018).
- Establish a mobile device management (MDM) contract.
- Add an additional telephony offering by the end of FY2017.

**5.2 Objective – Foster a culture of continuous improvement.**

DIT intends to maintain a continuous improvement strategy which includes a four-step process, Plan-Do-Check-Act, that will not only help our agency improve our processes and services, but

keep DIT abreast of industry practices to stay competitive. Continuous improvement will be targeted as an internal foundation of our organization.

#### 5.2.1 Potential Measures of Success

- New measure: number of maturity assessments completed
- New measure: number of formalized documents, procedures, and instructions developed

##### Strategies/Initiatives:

- Establish a common language through formalized documents, procedures, and work instructions.
- Develop a formalized and consistent approach to continuous improvement that teaches DIT employees that the system is foundational to how our agency operates.
- Implement maturity assessments for service delivery, with at least three pilot services done by the end of calendar year 2016.

#### 5.3 Objective – Improve the customer experience.

DIT strives to maintain a consistent, quality customer experience. This holds true for all aspects of the organization whether it be agencies receiving services, citizens accessing the State’s portal, or the General Assembly gaining access to information.

#### 5.3.1 Potential Measures of Success

- Number of unique portal site visits per month
- Customer survey ratings

##### Strategies/Initiatives:

- Support and grow the State portal, NC.Gov, based on assessment of agency and end-user needs by the end of FY2017.
- Expand the customer satisfaction survey program throughout the enterprise by the end of 2016.

#### 5.4 Objective – Improve decision-making through analytics.

Data analytics is a key tool used to make more informed decisions. DIT (GDAC) works across multiple business areas to improve public safety, health care, and financial accountability. GDAC strives to provide access to accurate and timely data, promoting the ability to make data driven decisions.

#### 5.4.1 Potential Measures of Success

- Adoption rates for CJLEADS (targeting full adoption by the end of calendar year 2017)

- SBI and DPS participation rates for the law enforcement case management solution
- Increases in participation and use of federal data

#### **Strategies/Initiatives:**

- Integrate federal data through a phased approach.
- Develop a modern CJLEADS interface and integrate multifactor authentication.
- Implement a law enforcement intelligence-based case management solution for the State of North Carolina by Q1 calendar year 2017, with increasing participation throughout SBI and DPS.
- Integrate data and applications to support children and juvenile safety and well-being.

#### **5.5 Objective – Integrate and share data more efficiently and effectively.**

GDAC's primary mission is to promote the ability to leverage state data resources across the enterprise. By doing so, the State can save significant time and money.

An anticipated high priority for this group will be to help meet one of the stated objectives of the recently formed Hurricane Matthew Recovery Committee – to implement a comprehensive strategy for how to rebuild towns and communities in a sustainable way.

##### **5.5.1 Potential Measures of Success**

- Adoption rates for data governance practices
- Number of agencies participating in GDAC projects
- Number of agencies sharing data as a result of GDAC projects
- Percentage of state orthoimagery updates completed

#### **Strategies/Initiatives:**

- Develop an enterprise data management strategy and plan (phase 1) to continue standardization and increase adoption of data governance practices across the enterprise by Q4 calendar year 2017.
- Deliver AddressNC (master address) Phase 1 by Q2 calendar year 2017.
- Update the aerial imagery for the State's orthoimagery data layer on a 4-year cycle.
- Deliver the Early Childhood Integrated Data System (ECIDS) Phase 2 by Q1 calendar year 2017.
- Deliver P-20W (SchoolWorks) Phase 1 by Q2 calendar year 2017.

- Deliver Common Follow-Up System Phase 2 by Q4 calendar year 2017.

**DIT has requested additional funding for data brokerage web services in the FY2017-19 proposed budget.**

**DIT has requested additional funding for an Enterprise Data Management plan consultant in the FY2017-19 proposed budget.**

**DIT has requested additional funding for enterprise data management appropriated positions in the FY2017-19 proposed budget.**

**DIT has requested additional funding for CGIA appropriated positions in the FY2017-19 proposed budget.**

### **5.6 Objective – Expand Solution Delivery capabilities.**

Historically, the former Office of Information Technology Services has been largely a service delivery organization, focusing primarily on infrastructure services. As participating agencies combine their IT functions with the Department of Information Technology, new capabilities are needed. DIT will establish a solutions delivery arm to support these business requirements.

#### **5.6.1 Potential Measures of Success**

- Software Quality Assurance utilization rates
- Percentage of projects on time and on budget

#### **Strategies/Initiatives:**

- Establish a Solutions Delivery organization and supporting processes based on industry best practices and insights of leading solutions delivery providers.
- Enhance staff knowledge and expertise to build a leading solutions-delivery capability, including the creation of an application and web development unit and additional focus on Software Quality Assurance (SQA) and Customer Relationship Management (CRM) capabilities.
- Develop and implement practices to manage the agencies' needs for new solutions.

**DIT has requested additional funding for digital applications positions in the FY2017-19 proposed budget.**

**DIT has requested additional funding for CRM in the FY2017-19 proposed budget.**

### **5.7 Objective – Improve the deployment and adoption of high-speed Internet access in NC.**

The State must better leverage broadband infrastructure to enhance economic development in rural areas, workforce development, and small business adoption.

Broadband IO aligns [NC Broadband](#), the statewide effort to expand high-speed Internet access, with the FirstNet public safety initiative for improved resource sharing across state agencies. The centralized and streamlined office provides the opportunity to work across agencies and with willing communities to identify program and infrastructure development needs across North Carolina.

#### 5.7.1 Potential Measures of Success

- Percentage of broadband infrastructure and/or increase speed offerings in the state
- New measure: number of counties reached/engaged
- New measure: number of counties assisted with financing
- New measure: number of research projects completed (targeting 2)
- New measure: number of objectives developed and policy changes recommended through the NC Broadband Interagency Group (NCBIG) initiative

#### Strategies/Initiatives:

- Research, inform, and assist communities in obtaining funding for broadband access

The Broadband IO will partner with the Rural Division of the Department of Commerce and leverage relationships with the federal government, non-governmental organizations (NGOs), and private foundations to help communities find grant opportunities for broadband access.

- Analyze and develop recommendations, including a Digital Literacy plan, to incent and increase adoption across the state.
- Lead the NC Broadband Interagency Group (NCBIG) to include other State agencies in planning and policies around private sector deployment in the public sphere.
- Expand outreach efforts, beginning initiatives in twice as many counties or communities in FY2018, ultimately reaching out to all 100 counties to work on broadband expansion.

**DIT has requested funding for additional Broadband IO positions in the FY2017-19 proposed budget.**

**DIT has requested funding for additional positions for FirstNet in the FY2017-19 proposed budget.**

**DIT has included a request for TDM in the FY2017-19 proposed budget.**

## 5.8 Objective – Enhance our rates development process to further the transparency and accuracy of our rates.

Rates for services will be calculated using cost accounting methodologies. Establishing a process that includes cost accounting is not simple. As we mature our financial processes, we will refine our forecasting methodology to develop more accurate consumption estimates. As these estimates improve and the organization as a whole matures, the service owners will work with the Finance division to establish base budgets and initial cost allocation plans to meet the agencies' consumption needs. Once new rates are developed, the finance department will conduct agency impact analyses to determine how the rates will affect agency budgets. The result will be a financial model that produces fully transparent rates that account for every dollar that has been budgeted.

At full maturity, DIT will use cost accounting to develop rates and chargebacks. Tracking costs in this manner will provide a clearer picture of what each service actually costs, and will make it easier to determine where costs can potentially be reduced.

### 5.8.1 Potential Measures of Success

- Number of refunds required
- Dollar amount of refunds required
- Number of budget revisions required

#### Strategies/Initiatives:

- Develop and implement a process for collaborative consumption forecasting with DIT service owners.
- Revise the agency impact analysis process.
- Document existing and automate remaining data feeds to the billing systems and consumption for all the services by the end of calendar year 2020.

## 5.9 Objective – Establish a statewide ERP practice.

The General Assembly directed the Department of Information Technology, in coordination with the Office of the State Controller and the Office of State Budget and Management, to conduct the planning and design of an enterprise resource planning system (ERP) for State agencies. An ERP system will provide the technological underpinning that enables efficient coordination of business functions, allowing the State to more effectively serve the citizens.

The SCIO convened a Steering Committee to direct the purchase strategy and process. Its members include the SCIO, State Controller, Secretary of the Department of Administration, State Budget Director, and Office of Human Resources Director. DIT has retained an ERP consultant to assist with the development of a high level strategic plan and roadmap, perform a gap analysis with business units, determine priority initiatives and help write an RFP for either a

long term implementer or the first module of a system. In addition, DIT is in the process of establishing an ERP Program Management Office (PMO) within DIT. The PMO will exist for the life of this multi-year project, and the consultant will help assess the necessary level of staffing for the successful implementation of this key initiative.

Once each business unit assesses their needs and goals, a more detailed plan with corresponding budget requirements will be developed. Each business unit will “own” their module, necessary business process changes, and implementation. Through the PMO, DIT will coordinate and manage the implementation of the ERP. Once implemented, DIT will own, operate, and maintain the technical solution that enables collaboration across agencies and business units.



#### 5.9.1 Potential Measures of Success

- Once a Program Office is established and priorities are documented by the Steering Committee, measures will be created and baselines will be established.

##### Strategies/Initiatives:

- Establish an ERP Program Office.
- Draft an RFP for the ERP solution.

**DIT has requested funding for ERP in the FY2017-19 proposed budget.**

## 7. DIT Information Technology Plan Executive Summary

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DIT's business is information technology, which is reflected in the agency strategic plan section above. As a result, the Information Technology Plan focuses on the technical programs and implementations necessary to make it possible to achieve the business objectives. The initiatives outlined below are needed specifically by DIT internally or for the services it provides. Many of these initiatives, like time tracking and asset management, will allow us to scale as we grow as an agency. The enterprise initiatives that we intend to undertake over the next five (5) years will be documented in the State IT Plan.

In previous years, DIT has considered the Statewide IT Plan its agency IT plan, focusing on the business of IT at the enterprise level rather than for DIT specifically. This is the first time in recent history that we have looked inward to create an agency-level plan.

DIT continues to mature in its ability to plan strategically. Over the last two years we have built a team of people devoted to assisting both DIT and other State IT organizations in their planning efforts. We will update our strategic plan as DIT continues to evolve and as additional agencies' IT functions are centralized. We believe in continuous improvement and have embraced the idea that the strategic plan is a living document that should be continuously updated.

## 8. DIT Information Technology Quick Reference Guide

The following is a roadmap for the DIT IT plan.

Goal	Objective	Initiative	Funding Mechanism	Anticipated Completion Date
<b>Goal 1:</b> Optimize the State's IT investment to operate more efficiently.	<b>Objective 1.1:</b> Reduce duplication in State IT contracts	<b>Initiative 1.1.1:</b> Leverage a contract management system to manage IT contracts more effectively.	Rates	FY2018
	<b>Objective 1.2:</b> Leverage an enterprise time tracking solution to accurately track staff time	<b>Initiative 1.2.1:</b> Implement an enterprise time tracking solution by July 2017.	Expansion	July 2017
<b>Goal 2:</b> Unite business and IT to meet the needs of the citizens through the innovative use of technology.	<b>Objective 2.1:</b> Fully implement portfolio management tools	<b>Initiative 2.1.1:</b> Implement and leverage a new IT portfolio management tool and maintain the existing project portfolio management tool.	Expansion	Phase I complete end of FY2017
<b>Goal 3:</b> Revitalize our IT workforce by attracting and developing a diverse community of IT professionals who are engaged and motivated to push boundaries to foster positive change.	<b>Objective 3.1:</b> Reduce the number of DIT HR files stored on paper	<b>Initiative 3.1.1:</b> Leverage scanning capabilities to convert DIT HR files to electronic formats.	Expansion	Ongoing
	<b>Objective 3.2:</b> Increase collaboration through technology	<b>Initiative 3.2.1:</b> Enable collaboration through tools.	Existing rates	Ongoing
<b>Goal 4:</b> Invest in the security of the State's applications and infrastructure to mitigate risk and protect citizen data.	<b>Objective 4.1:</b> Implement tools that will enable prioritization and protection of the State's critical systems and data	<b>Initiative 4.1.1:</b> Implement the Enterprise Risk and Compliance (EGRC) tool by December 2016.	Expansion	December 2016
		<b>Initiative 4.1.2:</b> Enhance security monitoring capabilities via a 24/7/365 Security Operation Center by December 2017.	Expansion	December 2017
		<b>Initiative 4.1.3:</b> Optimize the State's incident reporting portal by January 2017.	N/A	January 2017
		<b>Initiative 4.1.4:</b> Implement Cloud Access Security Broker (CASB) to monitor vendor compliance by December 2018.	Expansion	December 2018
		<b>Initiative 4.1.5:</b> Consolidate critical services behind Distributed Denial of Service (DDoS) protection by December 2017.	Expansion	December 2017

		<b>Initiative 4.1.6:</b> <i>Ensure all Executive Agency security logs are reporting to a consolidated infrastructure, e.g. Security Incident Event Management (SIEM) for detection and are analyzed for indicators of compromise (IoCs).</i>	Expansion	Ongoing
<b>Goal 5:</b> <i>Transform the way the State conducts business through the delivery of reliable and accessible technology and data services.</i>	<b>Objective 5.1:</b> <i>Improve the accuracy of our asset inventory.</i>	<b>Initiative 5.1.1:</b> <i>Replace current IT Service Management and IT Asset Management solution.</i>	Existing rates	FY2018
	<b>Objective 5.2:</b> <i>Implement a statewide ERP solution</i>	<b>Initiative 5.2.1:</b> <i>Establish an ERP Program Office.</i>	Expansion	FY2017
		<b>Initiative 5.2.2:</b> <i>Draft an RFP for the ERP solution.</i>	Expansion	Pending JLOC IT decision
	<b>Objective 5.3:</b> <i>Improve the accuracy and repeatability of our cost modeling and billing</i>	<b>Initiative 5.3.1:</b> <i>Implement a tool for cost modeling and billing by the end of FY2017.</i>	Current appropriation	FY2017
		<b>Initiative 5.3.2:</b> <i>Reduce or eliminate billing audit findings by the end of FY2018.</i>	N/A	FY2018

## 9. DIT IT Vision, Mission, and Values

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### 9.1 IT Vision

DIT strives to be a performance-driven, transparent, and secure IT organization with an unyielding commitment to connecting people, resources, and partners.

### 9.2 IT Mission

To lead, partner, and facilitate in order to provide easy, cost-effective government services to the citizens of North Carolina.

### 9.3 IT Values

**Accountability and Integrity:** We strive to always do what is right.

**Ingenuity and Innovation:** We are committed to enabling the State's business through innovative solutions.

**Customer focus:** We are dedicated to delivering services and solutions that provide consistently positive experiences for our customers.

**Collaboration:** We create and support a diverse, yet unified team that works together to serve the citizens of North Carolina.

## 10. DIT IT Goals, Objectives, and Measures of Success

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### Goal 1 – Optimize the State’s IT investment to operate more efficiently.

Whether it be leveraging the State’s buying power to procure goods and services more cost effectively or finding ways to reduce duplication within and between agencies, DIT is focusing on how to leverage resources efficiently across the State’s IT portfolio. The Secretary is responsible for the oversight and maintenance of State agency IT budgets. While cost savings is always a key consideration, and developing competitive rates is critical to the success of the organization, DIT is also focusing on avoiding costs and finding ways to automate business functions to both reduce operating costs for State services and simplify the way we interact with citizens.

#### 1.1 Objective – Reduce duplication in State IT contracts.

DIT’s IT Strategic Sourcing office develops and manages statewide contracts that can be used by all State agencies and governmental entities, and approves contracts applicable to individual business needs of the State. Currently, there are 27 State term contracts, with approximately 115 awarded suppliers. Leveraging a contract management system to manage IT contracts will make it significantly easier for the IT Strategic Sourcing office to track existing and new contracts, see where contracts overlap or can be combined, and appropriately plan for resource allocation. An increase in the procurement fee will be needed for this objective.

##### Potential Measures of Success

- Percentage reduction in State IT contracts

**1.1.1 Initiative – Leverage a contract management system to manage IT contracts more effectively.**

#### 1.2 Objective – Leverage an enterprise time tracking solution to accurately track staff time.

One of the primary costs that factors into DIT rates and subscriptions is the personnel that operate our services. As participating agency staff transition into DIT and shift from supporting one agency to many, resource planning and allocation becomes essential. An enterprise time tracking solution will enable DIT to accurately track the time of all DIT personnel at a more granular level than is currently possible. This solution will enable staff to track time spent on projects and/or services provided for specific agencies, rather than just total hours worked, enabling DIT to properly plan and optimize resource allocation and effectively charge agencies for what they use.

##### Potential Measures of Success

- New measure: number of people using the time tracking system

**1.2.1 Initiative – Implement an enterprise time tracking solution by July 2017.**

**DIT has requested additional funds for an enterprise time tracking solution in the FY17-19 proposed budget.**

## Goal 2 – Unite business and IT to meet the needs of the citizens through the innovative use of technology.

Information technology services exist solely to enable the business (State agencies) to provide improved services to the citizens of North Carolina. With this in mind, DIT strives to partner with agencies and provide opportunities for agencies to work together to more effectively meet their needs. To do this, we must work with the agencies and industry partners to find innovative solutions that meet the needs of the citizens of North Carolina.

### 2.1 Objective - Fully implement portfolio management tools.

DIT is working to improve IT planning and management both internally and across the enterprise. A better understanding of the State's IT portfolio will enable the Secretary to effectively manage statewide IT, allowing DIT to more effectively forecast IT spend, reduce duplication, and provide roadmaps for our IT landscape.

#### Potential Measures of Success

- Number of roadmaps developed using the new IT portfolio management tool
- Percentage of agencies using the new tool for application portfolio management

#### 2.1.1 Initiative – Implement and leverage a new IT portfolio management tool and maintain the existing project portfolio management tool

DIT will implement a new IT portfolio management solution that will integrate with the existing TouchDown project portfolio management solution.

**DIT has requested funds for additional operations and maintenance funding for the TouchDown tool in the FY 2017-19 proposed budget.**

## Goal 3 – Revitalize our IT workforce by attracting and developing a diverse community of IT professionals who are engaged and motivated to push boundaries to foster positive change.

In order to effectively meet any of our goals, we must continue to attract and retain a team of qualified and engaged individuals. This includes improving our hiring methods, team building, and training opportunities, as well as developing and promoting a desirable work culture.

### 3.1 Objective – Reduce the number of DIT HR files stored on paper.

Agency human resources records play a vital role in providing the information needed to plan workforce requirements, monitor performance, coordinate recruitment and training efforts, and manage and pay employees. Individual employee records include a complete and comprehensive employment history, salary details, and performance work plans. A records system must support organizational accountability, legal and privacy requirements, and transparency. As the IT segments of agencies begin the transition to DIT, the current paper driven system cannot support these efforts. The adoption of a technology solution will reduce the physical space and administrative activities associated with each current DIT employee and the influx of new employees from participating

agencies. DIT HR and its managers can instead focus on developing strategies to enable human resource planning that aligns with overall business objectives.

#### Potential Measures of Success

- New measure: percentage of DIT's HR files converted to electronic formats

**3.1.1 Initiative** – Leverage scanning capabilities to convert DIT HR files to electronic formats

**The State will require additional funding for a document management/scanning solution in the FY2017-19 proposed budget.**

#### 3.2 Objective – Increase collaboration through technology.

DIT intranet and team sites, project management platforms, online messaging, video conferencing, and public and social media will allow employees across multiple teams and agencies to communicate, collaborate, and share content more effectively. Implementing new technology solutions will help to combine strengths, share responsibilities, and allow employees to learn from each other. By co-creating knowledge, employees will connect in a more engaging and meaningful way. Conversations in more open and participative environments will spark new ideas, innovations, and suggestions and help employees feel a sense of empowerment within the agency.

#### Potential Measures of Success

- Number of SharePoint sites created
- Percentage of SharePoint sites that are cross-agency sites

**3.2.1 Initiative** – Enable collaboration through tools

DIT will continue to leverage SharePoint and other collaboration tools to encourage DIT employees to work together across the organization.

### Goal 4 – Invest in the security of the State's applications and infrastructure to mitigate risk and protect citizen data.

**4.1 Objective** – Implement tools that will enable prioritization, identification and protection of the State's critical systems and data.

DIT is responsible for securing the State's information infrastructure and assets against unauthorized use, disclosure, modification, damage, or loss. Every new and emerging technology also comes with equal responsibility for protecting that technology against exploitation by cyber criminals. The ability to identify deficiencies within systems containing sensitive information, and ensuring prioritization, timely mitigation, or remediation of deficiencies will enable the State to effectively use State funds, align resources to critical systems, and ensure that there is continuous monitoring of risks, compliance and security control implementation.

## Potential Measures of Success

- Percent of applications that have completed a risk assessment
- Percent of high value applications that have completed a risk assessment
- Percent of systems operating within an acceptable level of patch compliance
- Mean time to mitigate weakness
- Number of incidents
- Mean time to incident discovery
- Mean time to incident recovery
- Mean time between incidents

**4.1.1 Initiative** – Implement the Enterprise Governance Risk and Compliance (EGRC) tool by December 2016.

Implementing an EGRC tool will enable DIT to formalize and automate the tracking of governance, risk, and compliance controls.

**4.1.2 Initiative** – Enhance security monitoring capabilities via a 24/7/365 Security Operation Center by December 2017

**4.1.3 Initiative** – Optimize the State’s incident reporting portal by January 2017

**4.1.4 Initiative** – Implement Cloud Access Security Broker (CASB) to monitor vendor compliance by December 2018.

Implementing a CASB will help DIT improve its vendor risk management process.

**4.1.5 Initiative** – Consolidate critical services behind Distributed Denial of Service (DDoS) protection by December 2017.

This consolidation will enable DIT to strengthen, protect and provide continuous monitoring of the State’s critical public facing website services.

**4.1.6 Initiative** – Ensure all Executive Agency security logs are reporting to a consolidated infrastructure, e.g. Security Incident Event Management (SIEM) for detection and are analyzed for indicators of compromise (IoCs).

**DIT has requested additional funding for the EGRC in the FY2017-19 proposed budget.**

**DIT has requested additional funding for the CASB in the FY2017-19 proposed budget.**

**DIT has requested additional funding for DDoS protection in the FY2017-19 proposed budget.**

**DIT has requested additional funding for the State’s SIEM tool in the FY2017-19 proposed budget.**

**DIT has requested additional funding for the Security Operations Center in the FY2017-19 proposed budget.**

DIT has requested additional funding for vulnerability and patch management in the FY2017-19 proposed budget.

DIT has requested additional funding for network boundary/perimeter protection in the FY2017-19 proposed budget.

DIT has requested additional funding for endpoint protection in the FY2017-19 proposed budget.

DIT has requested additional funding for multi-factor authentication in the FY2017-19 proposed budget.

DIT has requested additional funding for third party risk/security assessments in the FY2017-19 proposed budget.

DIT has requested additional funding for SSL certificates in the FY2017-19 proposed budget.

DIT has requested additional funding for SRM maintenance in the FY2017-19 proposed budget.

## Goal 5 – Transform the way the State conducts business through the delivery of reliable and accessible technology and data services.

Historically, IT has been seen as a cost center rather than a business enabler. By providing high quality, reliable, and accessible technology and data services, DIT can change the way agencies leverage IT, improve the way citizens interact with government, and transform the way services are provided to the citizens of North Carolina.

### 5.1 Objective – Improve the accuracy of our asset inventory.

Asset management is critical to the operation of any IT organization. This is particularly true when the IT portfolio is as large and diverse as the State's. Asset management is also fundamental to efficient IT service delivery, allowing us to accurately develop rates and bill customers.

#### Potential Measures of Success

- New measure: inventory accuracy
  - 5.1.1 Initiative – streamline and document inventory management processes
  - 5.1.2 Initiative – Replace current IT Service Management (ITSM) and IT Asset Management (ITAM) solution.

### 5.2 Objective – Implement a statewide ERP solution.

Enterprise resource planning (ERP) systems provide an integrated view of key business functions, including analytics and reporting, asset management, budget, finance, fleet management, grants management, human resources, inventory management, and procurement.

As outlined in the related business objective, DIT will work across the State to identify and implement an ERP system that integrates all critical-to-business functions into a single, automated system, replacing many stand-alone systems of individual business units (such as finance, budget, asset and inventory management, fleet management, and human resource management).

### Potential Measures of Success

- Number of agencies actively participating in the State's efforts to gather requirements for the RFP
- Number of agencies who actively participate in the system implementation

**5.2.1 Initiative** – Establish an ERP Program Office

**5.2.2 Initiative** – Draft an RFP for the ERP solution

**5.3 Objective** – Improve the accuracy and repeatability of our cost modeling and billing.

A new tool for cost modeling and billing will make it easier for DIT to transition to a cost accounting model and to provide fully transparent rates that account for every dollar that has been budgeted.

### Potential Measures of Success

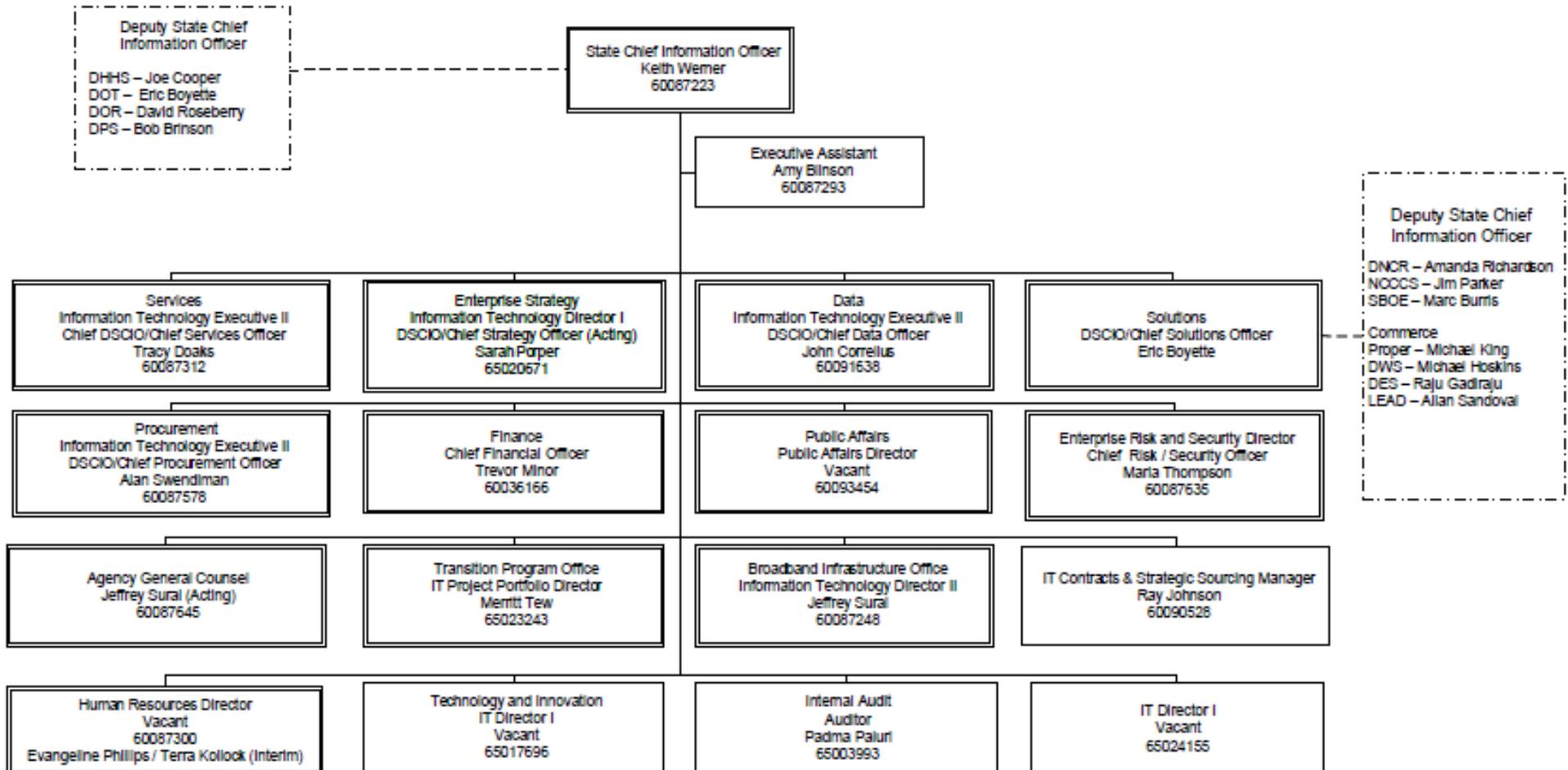
- Percentage of bills and invoices sent electronically (targeting 95 percent by the end of FY2017)
- Number refunds required
- Dollar value of refunds required

**5.3.1 Initiative** – Implement a tool for cost modeling and billing by the end of FY2017.

**5.3.2 Initiative** – Reduce or eliminate billing audit findings by the end of FY2018.

# 11. DIT IT Organizational Structure

## Department of Information Technology



## 12. Enterprise IT Opportunities

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The creation of DIT provides us with better opportunities to collaborate across the enterprise. Agencies are submitting IT plans this Fall to be used in the creation of the State IT Plan that is due in conjunction with the Governor's budget. DIT will use the knowledge gained from the transition of agencies into DIT, as well as the information in agency IT plans, to develop enterprise strategies that will be presented in the State IT Plan.

### 12.1 Collaborative Opportunities

DIT continues to work with agencies to find and develop collaborative opportunities. As agencies transition to DIT, this emphasis will continue to grow. With DIT's implementation of a time tracking tool we will be better able to leverage IT resources to collaborate within DIT and across the enterprise.

There are many collaborative initiatives underway and in the pipeline including, but not limited to, multi-factor authentication, grants management, CRM, ERP, collaboration tools, and licensure and permitting solutions. These and other initiatives will be covered in more detail in the State IT Plan. DIT will conduct an analysis of the agency IT plans to look for additional areas for collaboration and potential enterprise opportunities.

## Appendix A: DIT Major IT Projects

Initiative/ Project	Short Description <i>(indicate if &gt;\$500,000)</i>	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
<b>New Initiatives/Projects</b>					
Mobile Device Management (MDM)	The agencies that DIT serves have expressed a desire to use an MDM solution as they embrace the power of mobile computing in the form of tablets and smartphones as the technology evolves. The State lacks an enterprise-level MDM solution(s). To procure a scalable MDM solution(s) that has the capacity to support a diverse statewide mobile environment, Bring Your Own Device (BYOD) policy, and that meets key needs including, but not limited to: centralized management, multifactor authentication, user profile management, remote functionality (wipe), data protection, etc.	Business: 5.1	Operational budgets and/or project-based funding for agency/department implementations as required	<ul style="list-style-type: none"> <li>Increase accessibility to applications and data.</li> <li>Ability to control, manage, and secure sensitive data and devices, without hindering worker productivity.</li> </ul>	3rd/4th Quarter FY17
Cloud Services Enablement	Enable state agencies/departments via a new contract to leverage cloud services from selected providers of IaaS, PaaS and/or SaaS.	Business: 1.2, 4.1	Operational budgets and/or project-based funding for agency/department implementations as required	Reduce IT costs, modernize systems, and speed up the deployment of new applications and services.	3rd/4th Quarter FY17

Contracts and Vendor Management	Procure and implement an appropriate software-as-a-service solution. The solution will enhance the State's ability to manage the contracts and vendors that provide the equipment, vehicles, materials, supplies and services the State of North Carolina needs to meet its business needs. The current methodologies are all manual and cumbersome. There is no single source for State agencies to access information concerning how reliable and efficient specific vendors are in their dealings with the State. (>\$500K)	Business: 1.4 IT: 1.1	Receipts from e-Commerce Funds	<ul style="list-style-type: none"> <li>• Labor reduction due to improved efficiency.</li> <li>• Improve service to customer agencies by being able to manage contracts more efficiently, which will free up time to provide more service to external customer agencies.</li> <li>• Reutilization of space by digitizing all contract files.</li> <li>• Reduction in use of paper.</li> <li>• Address issues identified by State Auditor.</li> <li>• Identify contract consolidation opportunities resulting in economies of scale.</li> </ul>	4th Quarter FY17/1st Quarter FY18
ERP Planning	Development of a high level strategic plan and roadmap, perform a gap analysis with business units, determine priority initiatives resulting in an RFP to procure a systems integrator.	Business: 5.9 IT: 5.2	State appropriations	Strategic implementation roadmap to enable ERP capabilities for the State.	TBD
ITSM/ITAM Replacement	Migrate DIT and other service desks utilizing the Remedy solution to established enterprise ITSM/ITAM solution.	IT: 5.1	Rates	<ul style="list-style-type: none"> <li>• Standardizes IT Service Management (ITSM) and IT Asset Management (ITAM) processes for the entire Executive Branch</li> <li>• Reduces the overall cost to provide these services</li> </ul>	FY18
Time Tracking	Identify or procure a system that could be used by all DIT employees to track their time as required by project and operationally, minimizing the burden on the employee.	IT: 1.1	State appropriations	<ul style="list-style-type: none"> <li>• Enable a standard time tracking system to capture all time that must be charged back to DIT customers.</li> <li>• Enable agencies to maximize Federal grant funding by having a receipt for DIT time spend on those projects.</li> <li>• Enable demand management to better understand customer's needs and the amount of services DIT needs to provide.</li> </ul>	4th Quarter FY17

				<ul style="list-style-type: none"> <li>Improved demand tracking will help develop more accurate chargeback rates.</li> </ul>	
<b>Existing Initiatives/Projects</b>					
Security Continuous Diagnostic and Mitigation	Acquire technology that will allow the State to replace the home grown vulnerability management system we have for the State's data centers and DIT managed desktops and acquire another solution that will scale to provide a solution to the State with a single vulnerability management system.	Business: 4.3	Existing appropriations, including \$150K recurring appropriated during FY16 session	Identify vulnerabilities to prioritize remediation efforts in order to close down holes in the network, data centers and/or PCs to protect the data of the citizens, business and/or state employees. Potential impacts for not having this function are fines and damage to the State's reputation.	3rd quarter FY17
Security Operations Center Enablement	Procure a service to enable Statewide Cyber Monitoring and Detection, Incident Response, and Threat Coordination under Security Services. These services will be focused on supporting multiple state agencies that share the statewide IT infrastructure. (>\$500K)	IT: 4.1	State appropriations already allocated for this capability	<ul style="list-style-type: none"> <li>Continuous monitoring to be able to catch anomalies and respond in a timely manner.</li> <li>More comprehensive monitoring of websites, databases, servers and networks.</li> <li>Minimize the impact of cybersecurity events and incidents in support of availability and restoration requirements for the State's critical and essential services.</li> </ul>	3rd/4th Quarter of FY17
Upgraded Security Information Event Management (SIEM)	Procure and implement a replacement SIEM solution to cost-effectively deploy threat management, forensics, and compliance capabilities. (>\$500K)	Business: 4.3 IT: 4.1	State appropriations, as well as recurring operational budget funded via receipts	<ul style="list-style-type: none"> <li>Increase service availability for State network users and DIT-hosted applications due to proactive threat management alerting.</li> <li>Ability to monitor and troubleshoot in real time.</li> <li>Faster security incident response.</li> </ul>	2nd Quarter FY17

Multi-Factor Authentication (MFA)	Procure and implement a standards-based MFA service for the State of North Carolina that is integrated with North Carolina Identity Management (NCID), which provides first factor authentication, meets the requirements described in the Federal Bureau of Investigation's (FBI's) Criminal Justice Information Services (CJIS) Security Policy 5.3, PCI DSS, IRS 1075, and FIPS 140-2 standards, and provides secure user login requirements for various state applications. (>\$500K)	Business: 5.4	State appropriations, as well as recurring operational budget funded via receipts	Allows State organizations to comply with state and federal mandates, and contractual obligations by providing a centralized MFA service for multi-factor authentication for their applications.	4th Quarter FY17/1st Quarter FY18
Identity Management (IdM) Service Improvement	Re-architect the existing identity environment to prepare for a new modern statewide IAM service that supports current and future cloud-based technology initiatives and reduces overall IAM costs. Successive remediation and enhancement efforts will be executed. (>\$500K)	Business: 5.1	State appropriations, as well as recurring operational budget funded via receipts	<ul style="list-style-type: none"> <li>• Improve cloud and mobile device IdM integration.</li> <li>• Reduce service operating costs.</li> <li>• Improve management of identities between on and off-premise services</li> <li>• Streamline password processes.</li> <li>• Streamline upgrade process to speed up adoption of identity management product functionality.</li> </ul>	1st Quarter FY18/2nd Quarter FY18
Next Generation Network	Design, build, and put into operation a Next Generation Data Center Network Environment to enhance network monitoring and fault-detection capabilities, modernize the enterprise security model, enhance disaster recovery capabilities, enable data center network virtualization, and enable rapid infrastructure provisioning. (>\$500K)	Business: 1.2	State appropriations, as well as recurring operational budget funded via appropriations and receipts	<ul style="list-style-type: none"> <li>• Improve Data Center security posture.</li> <li>• Highly scalable and flexible network infrastructure that readily adapts to changing business needs.</li> <li>• Reduction in operational cost: 35% reduction in OPEX and about 10% reduction in CAPEX.</li> <li>• Improve operational efficiency, simplify management and enhance recoverability (i.e. 50% fewer primary security zones).</li> <li>• Increase ability to securely and efficiently enable use of additional technologies (ex. BYOD and cloud computing).</li> </ul>	FY19

Security Policy Rewrite based on the NIST standard	Re-write security policies based on the National Institute of Standards and Technology (NIST) standard.	Business: 4.1	State appropriations	Improve security policies by aligning with established Federal standards.	3rd/4th Quarter FY17
Security Risk Management Tool	Procure a solution to provide a visual dynamic network map of network devices and topology, enable policy management and provisioning for firewalls, provide workflow change management, and compliance and audit capabilities.	Business: 4.1	State appropriations	<ul style="list-style-type: none"> <li>• Improve compliance to established security standards/policies related to firewall management.</li> <li>• Identify and alert staff to firewall risks.</li> <li>• Assess security posture based on firewall changes to environment.</li> </ul>	3rd/4th Quarter FY17
Software Quality Assurance (SQA) Expansion	Purchase tools required for DIT SQA testing services business capability to enable more effective scheduling of tests across the customer base and perform both functional and performance testing on mobile apps, mobile responsive websites and software developed within state agencies, including ability to verify performance on 3G and 4G networks across the State of North Carolina. (<\$500K)	Business: 4.2	State appropriations, as well as recurring operational budget funded via receipts	<ul style="list-style-type: none"> <li>• Enables SQA customers to test their mobile applications (native mobile or mobile responsive) taking into account updates from telecommunications industries, including operating systems, screen resolutions, mobile device versions and more.</li> <li>• Enable remote scheduling of tests to run off hours releasing human resource hours, and defect management.</li> <li>• Integrated management console for requirements, testing and defects management.</li> </ul>	3rd Quarter FY17

IT Portfolio Management	Procure and implement an IT portfolio solution that supports application portfolio management (APM) and the State's enterprise architecture program. The initial focus is to implement APM. (>\$500K)	Business: 1.3, 2.3 IT: 2.1	State appropriations	<ul style="list-style-type: none"> <li>• Enable a unified approach with biennial Agency and State IT planning processes, as well as initiation and funding of programs and projects.</li> <li>• One centralized, authoritative source to manage components (Business, Data, Applications, Technical) of State's enterprise architecture.</li> <li>• Ability to manage inventory of IT investments, including applications, data, and infrastructure asset components along with hardware/software lifecycle information.</li> <li>• Enable better financial planning associated with State's IT.</li> </ul>	1st Quarter of FY18
Rate Management and Billing Invoicing Enablement	Procure and implement a rates management and billing/invoicing solution for DIT services. G.S § 143B-1309 states: "DIT CIO shall establish and annually update consistent, fully transparent, easily understandable fees and rates that reflect industry standards for any goods or service for which an agency is charged." (>\$500K)	Business: 1.1, 5.8 IT: 5.3	Receipts	<ul style="list-style-type: none"> <li>• Provide a stable and transparent rate modeling process and rates as mandated by General Assembly.</li> <li>• Provide clear and meaningful invoices to customers.</li> <li>• Ability to calculate rates quickly, consistently and transparently, taking into account service consumption.</li> </ul>	4th Quarter FY18
Data Center Consolidation	Consolidate the current IT infrastructure and application environments across the executive branch into the State data centers.	Business: 1.2	Existing budgets	<ul style="list-style-type: none"> <li>• Enable agencies/departments to focus on business.</li> <li>• Improve security and critical infrastructure protection and reduce risk.</li> <li>• Improve service delivery and availability.</li> <li>• Reduce costs due to economies of scale.</li> </ul>	Ongoing

<p>Early Childhood Integrated Data System (ECIDS)</p>	<p>Develop an integrated data system to aggregate and provide the data from the various data sources to answer critical questions being asked by the requesting researchers and/or other key stakeholders in the early childhood domain.</p>	<p>Business: 5.5</p>	<p>Federal grant and State appropriations for recurring costs</p>	<ul style="list-style-type: none"> <li>• Enable early childhood researchers, analysts and educators to assess the contribution/impact of programs and/or services for children birth to 5 years of age in being successful later on in their adult life.</li> <li>• Maximize child outcomes by seeking to assure that infants and toddlers have the best possible start, with access to a continuum of appropriate and high-quality services along the way throughout the early childhood years.</li> </ul>	<p>3rd/4th Quarter of FY17</p>
<p>Memex – Department of Public Safety Case Management</p>	<p>Acquire an enterprise suite solution that effectively enables Intelligence-Based Law Enforcement.  Provide the NC ISAAC Fusion Center with compressive law-enforcement analytics based on data mined from current internal and external sources as well as data sources that become available in the future.</p>	<p>Business: 5.4</p>	<p>State appropriations</p>	<p>Support DPS with its mission to improve the quality of life for North Carolinians by reducing crime and enhancing public safety by using a more integrated technology solution.</p>	<p>3rd Quarter FY17</p>

# Appendix B: DIT IT Accomplishments and Progress Review

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Last biennium DIT considered the State IT Plan its agency plan, and therefore does not have a table to review.

## Appendix C: Expansion Requests

Expansion Item	Plan Section	Objective
DIT procurement reform staff expansion	Business	1.4
Appropriation of DIT administrative costs	Business	1.6
Enterprise strategists	Business	2.3
HR staff expansion	Business	3.2
Veteran Cyber Apprenticeship Program	Business	3.3
Cyber Exercises and Training	Business	3.3
Cyber Awareness Phishing	Business	3.3
DIT Enterprise Security & Risk Management Office Cyber Support	Business	4.1
Cybersecurity Sub-Committee Cyber Study & State Cyber Laws Modernization	Business	4.1
CEB Risk Leadership Membership	Business	4.1
DIT SQA	Business	4.2
Background checks	Business	4.4
Cyber Fusion Center Support	Business	4.5
DIT Cybersecurity Modernization & Funding	Business	4.5
DIT Security Team positions	Business	4.5
Continuous Diagnostic & Mitigation (CDM) Phase II	Business	4.5
EDM appropriated positions	Business	5.5
Enterprise Data Management plan	Business	5.5
CGIA appropriated positions	Business	5.5
Data brokerage services/web services warehouse	Business	5.5
Customer Relationship Management (CRM) support	Business	5.6
Additional digital applications staff	Business	5.6
Additional staff for Broadband IO	Business	5.7
Funding for FirstNetNC	Business	5.7
TDM	Business	5.7
ERP	Business	5.9
Enterprise time tracking	IT	1.2
EPMO Touchdown	IT	2.1
HR file scanning	IT	3.1
Cloud Access Security Broker (CASB)	IT	4.1
Security Operations Center	IT	4.1
Enterprise Governance Risk & Compliance (EGRC) Support & Maintenance	IT	4.1
Distributed Denial of Service (DDoS)	IT	4.1
SIEM tool	IT	4.1
Vulnerability and patch management	IT	4.1
Network boundary/perimeter protection	IT	4.1
Endpoint protection	IT	4.1

Multi-factor authentication (Phase I)	IT	4.1
Third party risk/security assessments	IT	4.1
SSL certificates	IT	4.1
SRM maintenance	IT	4.1