2017-2019

North Carolina Department of State Treasurer Information Technology Strategic Plan

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Executive Summary

The past two years have been a period of incredible change for the Department of State Treasurer, with no greater change than the relocation of the entire department to new offices on Atlantic Avenue in Raleigh. The Department had occupied the Albemarle Building since the 1970s, and vacating it was no small feat. Over a period of five months in the summer of 2015, the entire IT Division conducted a phased migration of all critical information technology to the Longleaf Building. This migration, which entailed seven weekend shutdowns of business applications, was successfully concluded in September of 2015 **with only three hours of planned outage time during normal business hours**. In the midst of this relocation project, the Department also implemented a major upgrade to the Core Banking Platform, a critical system for Statewide financial operations.

With the relocation complete, the IT Division turned its attention to enhancements and upgrades, virtualizing the database infrastructure of the agency and implementing upgrades to systems used in the Retirement Systems Division and the Financial Operations Division. Work is also being completed on an overhaul of the IT systems of the State and Local Government Finance Division with the rollout of a new Debt Management System in early 2017.

Looking ahead to the next two years, the Department is faced with another period of dramatic change. In 2017, for the first time in eight years, North Carolina will have a new State Treasurer, and with it, new strategic directions. The IT Division expects to continue efforts to improve self-service technologies and data analytics capabilities, but expects new initiatives to emerge with the change in Department leadership. The IT Division is also facing a new technology landscape, with Platform-as-a-Service, Infrastructure-as-a-Service, and hyper-converged systems offering new models for the delivery of IT systems and services. The IT Division must remain focused on completing ongoing projects, respond to new initiatives, and navigate the changing technology landscape in the years ahead.

2017-2019

Department of State Treasurer Overview

Overview

The Department of State Treasurer serves the people of North Carolina through a variety of functions related to the financial health of the state and its citizenry. State Treasurer Janet Cowell serves as the state's banker and chief investment officer, and, as such, she is responsible for more than $100 billion in assets.

The Department administers the public employee retirement systems for more than 900,000 North Carolinians, as well as the 401(k), 457 and 403(b) plans for public employees.

The Department provides fiscal assistance and expertise to local governmental units by assisting them in the sale of local government debt obligations and in maintaining good budgeting, accounting, reporting, and other fiscal procedures.

The Department oversees the State Health Plan, which provides health care coverage to approximately 685,000 teachers, state employees, retirees, current and former lawmakers, state university and community college personnel, and their dependents.

It also administers NC Cash, the unclaimed property database that holds approximately $440 million.

Vision

The vision of the Department of State Treasurer is to create and maintain a fiscally sound and prosperous North Carolina.

We work to achieve this goal by taking utmost care in overseeing the finances of the State.

By striving for excellence in our day-to-day work at the Department, we hope to instill confidence in the state's citizens, customers and financial community.

The Department of State Treasurer is made up of approximately 425 employees, and comprises the following divisions:

Office of the State Treasurer	Retirement Services Division
Financial Operations Division	State Health Plan
Information Technology Division	State and Local Government Finance Division
Investments Management Division	Unclaimed Property and Escheats Division

Departmental Values and Strategic Goals

At the heart of the Department's work are its core values, which are implemented consistently at all levels and across all Divisions:

- **Customer Orientation**

    Focus on our customers, the citizens of the state of North Carolina

- **Long-Term View**

    Maintain a big-picture perspective and strategic approach

- **Transparency**

    Structure and conduct all aspects of our work with an open and transparent policy, promoting both trust and accountability

- **Diversity**

    Recognize and value the benefits of diverse ideas, perspectives, and people

- **Performance-Driven**

    Operate with performance excellence to achieve optimum results

- **Integrity**

    Establish and maintain the highest level of integrity and ethics

Alignment

All departmental initiatives, including those with a technology component, are assessed by the Department of State Treasurer's Strategic Plan Steering Committee to ensure alignment with these goals.

The Strategic Plan provides the vision, mission, strategic goals, and performance measures for ensuring the desired results for the Department of State Treasurer. The plan is a result of the assessment, goal setting, and planning process of the Department, designed to influence future success and achieve departmental goals.

The Department has identified the following strategic goals for the Strategic plan:

- **Providing Public Leadership in Finance, Fiscal and Health Policy**
- **Enhancing Accountability of Department Services**
- **Innovating and Modernizing Operations**
- **Maximizing Talent**

Providing Public Leadership in Finance, Fiscal and Health Policy

The Department of State Treasurer serves as a model for others so as to positively influence legislative, finance, health care and other government agencies in promoting finance, fiscal and health policies that create and maintain a financially sound and prosperous North Carolina.

Consistent with the Department's mission, government agencies have a responsibility of continuously improving the value of the services that citizens receive. The Department recognizes that in order to improve that value, it must continuously increase the standards by which it operates and collaborate and lead in both public and private initiatives that are serving the needs of North Carolinians.

Protecting the Pension Plans

One of the primary responsibilities of the Department of State Treasurer is to provide a safe and secure retirement for North Carolina's 900,000 public employees, including teachers, police officers, firefighters and public servants. These individuals rely on the integrity, knowledge and judgment of the Department of State Treasurer.

The North Carolina pension plans are invested for the long term, and are conservatively managed to protect the full funding status. This keeps our state prepared to pay out obligatory pension benefits.

The combined plans returned 2.3 percent for the fiscal year ending June 30, 2015. Pension plans' assets were valued at $89.575 billion as of that date. The pension plans returned 9.5 percent over the last 5 years; well in excess of the 7.25 percent long-term actuarial assumed rate of return. During a particularly volatile year, the North Carolina pension plans weathered the markets and ended in solid shape. The investments outside of stocks and bonds helped provide a strong buffer.

Maintaining the State's AAA Bond Rating

A triple-A bond rating indicates that North Carolina has followed well-defined financial management policies and demonstrated strong debt management practices. Standard and Poor's, Moody's Investors Service, and Fitch Ratings– three primary bond rating agencies – all reaffirmed the "AAA" rating for North Carolina in the 2014-15 fiscal year.

 While maintaining this strong rating is a good sign of the state's fiscal health, federal budget deficits may present a challenge to sustaining the triple-A rating. Bond ratings are largely dependent on the economic stability and diversity of revenues, conservative debt management, administrative capabilities, fiscal performance and financial condition, including funding of long-term benefit programs such as the retirement systems and health care. At June 30, 2015, the State had a "Triple-A" rating, the highest rating attainable, from all three national rating agencies. Only nine other states enjoyed this distinction. These ratings have enabled the State to sell its bonds at interest rates considerably below the Bond Buyer's Index, thereby providing tremendous savings to North Carolina's taxpayers.

In addition, the Division staffs the State's Debt Affordability Committee and drafts an annual Debt Affordability Study, which provides the General Assembly with an overview of the State's debt load and borrowing capacity. The February 1, 2015, study determined that the State's annual General Fund debt capacity was approximately $698 million in fiscal year 2015. The study also provided an estimate of the annual debt capacity for the transportation funds (the State Highway Fund and Highway Trust Fund) and projected that there is approximately $226 million of new transportation debt capacity.

Improving the Health of Public Employees

NC Health*Smart*, the State Health Plan's healthy living initiative, provides members with tools and services to help them manage their weight, quit tobacco, exercise more, reduce stress, and take easy preventive steps to maintain their health. Resources include healthy lifestyle, maternity and behavioral health coaches, as well as disease and case managers. Many programs are offered to members at no extra cost.

NC Health*Smart* resources include preventive services available to members:

- Covered services such as nutrition visits, flu shots and routine physicals

- Tobacco cessation services through QuitlineNC with the provision of certain tobacco cessation medications for free. During CY2014, 641 members utilized the QuitlineNC multiple-call program. 1,010 nicotine replacement therapies were sent to members which included patches, gum and combination therapy.

- Weight management services including covered medications and procedures as well as minimal cost for participation in the Eat Smart, Move More, Weigh Less program (ESMMWL). In CY2014, 59 online and 27 onsite ESMMWL classes were held for a total of 86 classes. Enrollment for online classes included 1,147 members with a completion rate of 59.4% and average weight loss of 8.1 pounds. Enrollment for onsite classes included 425 members with an average completion rate of 77.6% and average weight loss of 5.9 pounds.

- A 24-hour nurse line to provide quick advice about medical concerns. 2,252 members called the 24-hour nurse line during CY2014.

- An online Personal Health Portal which offers members:

    o A convenient location to keep their health information, including medical and pharmacy claims

    o A secure, online space that provides one-stop access to their health information, tools and other resources:

    o Health Assessment and Health Action Plan to help members gain a full perspective of their current health status

    o Online coaching consisting of self-paced modules to guide members through different health topics

    o Instant messaging with a nurse for quick answers to health and wellness questions

    o Expansive health information library, with text, audio, and video files for many conditions and health topics

o   Email access to health coaches to encourage engagement

o   Condition and activity trackers to help members monitor progress towards their health goals

o   Healthy recipes, a nutritional food grading system and more

Establishing Savings Accounts for Disabled North Carolinians

The Department took the lead in helping enact the North Carolina Achieving a Better Life Experience (ABLE) Act, signed into law in summer 2015. The program means people with disabilities will have the ability to save money in a tax- deferred account for some of their expenses related to health and wellness, employment supports, education, housing, and other costs not covered by Medicaid. A total of $14,000 a year can be contributed to this account from various sources such as friends, family and employment earnings.

The new program will be overseen by the Retirement Systems Division and allows people with disabilities and their family members to save up to $100,000 in a 529(a) account for qualified disability expenses without affecting their governmental benefits.

Pushing for Improved Corporate Governance

Treasurer Cowell believes that well-governed companies perform better, grow in value, and increase the returns for their shareholders. The Department encourages companies to adopt and maintain established, reliable governance practices through the work of the Department's Corporate Governance Committee. These practices help the Department make fully informed investment decisions and maximize returns over the long-term for pension plan members and beneficiaries.

The Corporate Governance Committee has a strategy to reaffirm the principles of long- term perspective, diversity and transparency. The Department acted on each of these principles by asking a Houston-based company called EOG Resources to allow shareholder-nominated directors on the ballot, and the company amended its bylaws accordingly after a majority of shareholders approved this resolution in June 2015. Additionally, Symantec, a cyber-security firm, streamlined the description of its corporate spending on political campaigns after a dialogue with the Department. Meanwhile, the Department underscored its priority on diverse perspectives in the boardroom by hosting a corporate forum in April 2015 and then petitioning the Securities and Exchange Commission for greater transparency about directors' skills and experience. Details about these and other related conversations are available in the Department's 2008-15 Corporate Governance Report, available online at http://www.nctreasurer.com/corporategovernance.

Looking forward, the Department will act on these principles by evaluating ways to institutionalize a longer-term perspective in the marketplace, promoting Treasurer Cowell's ongoing diversity-related efforts to a wider group of potential partners, and raising the bar for corporate disclosures being transparent and easily usable by investors.

Promoting Financial Education

The Department of State Treasurer is committed to helping North Carolina families increase their personal understanding of finances and ability to grow personal wealth. Financial education helps provide citizens of all ages with the information and resources to manage their finances and make financial decisions.

This year was one of renovation, focused on rebuilding the Department's voice and position on specific financial education initiatives. Our financial education outreach touched 15 statewide issue areas through opportunities that were responsive to the Department's strategic goal. The year's highlights included promoting the federal earned-income tax credit and free tax preparation, a press conference to increase awareness around the NC 529 savings plan, and celebrating financial literacy month across the state with conversations with students about managing money wisely.

Future plans include integrating financial education into the Department's operations and member outreach, specifically with the State Health Plan and Retirement Services Division; beginning to plant seeds for future work with the ABLE program; and continuing financial education support for higher education and Department employees.

Enhancing Accountability of Department Services

The Department of State Treasurer strives to manage current operations efficiently and effectively, including providing solid customer service to the citizens of the State. The Department and all government agencies, have a fiduciary responsibility to the citizens we serve to see that their resources are used in accordance with the laws and regulations and to demonstrate that it serves the best interests of North Carolinians. This is necessary to ensure public confidence and maintain public support for needed government services.

Improving Customer Service

Since providing exceptional customer service is one of the primary missions, the Department was fortunate to realize many advantages with the 2015 move of all divisions into one central location at a state-of-the-art facility. In addition to saving taxpayers' money by consolidating four different rent payments into one, it also provided the Department with the opportunity to provide other improvements that benefit our staff and ultimately citizens, including:

- Significantly improved staff communication and collaboration by housing all Department of State Treasurer divisions on one campus for the first time in the Department's history.

- Free, convenient and ample parking, as well as a pleasant new reception area, for members who visit the Department for in-person retirement counseling sessions.

- 24/7 self-service with our new Interactive Voice Response technology that enables our members to get the information they need via telephone without having to wait for a call center representative.

- Improved mail machines with new technology to help the division more quickly and effectively send out checks and other retirement-related communications.

Promoting Wellness to High-Risk Populations

Wellness Wins Pilot Initiative: Wellness Wins is a two-year pilot designed to create a replicable model for influencing member health through the engagement of primary care providers, worksite wellness programs, and community resources. The counties of Greene, Jones, and Lenoir were targeted for this pilot initiative based on high levels of type II diabetes, asthma, chronic obstructive pulmonary disease (COPD), coronary artery disease, congestive heart failure, and stroke. Pilot program planning began in the fall of 2014, and a kickoff event was held in Lenoir County in May 2015.

The objectives of Wellness Wins are to:

- Establish sustainable worksite wellness programs
- Increase member awareness of and engagement in their own health
- Increase member engagement with medical homes/ Primary Care Providers

The State Health Plan will contract with partners including the Division of Public Health through the Obesity, Diabetes, Heart Disease and Stroke Preventions grant received from the Centers for Disease Control and Prevention, Prevention Partners, and Community Care of North Carolina to create environments that support health where Plan members live, work, and receive care.

Wellness Champions Program: The Wellness Champions Program was designed to create a network of wellness advocates throughout the state to support the health of State Health Plan members through the implementation of worksite wellness programs. The Wellness Champions Program will provide wellness advocates with opportunities to earn worksite wellness incentives through the completion of wellness related activities.

The Wellness Champions Program launched on April 1, 2015. The fiscal year ended with a total of 117 Wellness Champions registered from state agencies, universities, community colleges, and school systems covering 41 counties throughout the State.

Gaining New Tools to Return Unclaimed Property

During the 2015 legislative session, the Department was successful in encouraging the General Assembly to enact legislation that clarifies the Unclaimed Property Division's audit authority. Legislation grants the Treasurer the authority to conduct an examination of an unclaimed property holder, and review the holder's records for compliance even if the holder believes it is not in possession of abandoned property.

The Department worked to pass legislation that will assist with identifying and reporting unclaimed property. In an effort to promote efficiency, public safety, and to ensure certain tangible property ends up in the proper hands, the new law allows the Treasurer to direct financial institutions to transfer certain tangible property, like firearms or illegal contraband, contraband, to the proper local, state or federal authority, rather than to the Unclaimed Property Division.

Additionally, the Department successfully advocated for new tools to help reunite citizens with lost life insurance benefits that their loved ones intended for them to have. The new law requires most insurance companies that write life insurance policies in North Carolina to determine semi-annually whether policies match the names of a federal database.

Assisting Local Governments with Finances

The State and Local Government Finance Division monitors fiscal and accounting standards prescribed for local governmental units by State law. Each unit of local government is to have its accounts audited annually by a Certified Public Accountant or by an accountant certified by the Department's Local Government Commission. As a part of its role in assisting local units and monitoring their fiscal programs, the Division provides guidance in following generally accepted accounting principles. Each local government is required to file a copy of its annual audit report with the Division and submit all audit invoices to the Division for approval.

In fiscal year 2014-15, staff issued 18 public memoranda directed to local governments, auditors and the State's public finance community. Topics included the implementation of the new government accounting financial reporting standards, secondary market disclosure requirements, the effects of federal sequestration on certain local government debt instruments, an updated version of discussion of internal controls for small governments, and the annual statistical reports.

Focusing on Small and Emerging Investment Managers

In June 2015, Treasurer Cowell introduced a new program that will focus on selecting small and emerging managers for the North Carolina pension plans' private equity investment portfolio. This new small and emerging managers program will primarily focus on minority and woman-owned firms, funds under $750 million, and first- and second-time funds. "Investing is all about finding new potential and helping to realize that potential," Cowell said. "The first program focusing on public equity has been successful. Expanding the program to private equity allows us to capture higher returns that will benefit pensioners while tapping new talent."

North Carolina's small and emerging manager program will be managed by Neuberger Berman's NorthBound team led by Pat Miller Zollar. The team was chosen based on its proven track record of identifying small investment firms with the potential to achieve above-benchmark results. The capital allocated will target multiple strategies, including Buyout, Growth Capital, Venture Capital and Special Situations. This multi-faceted approach will be achieved through fund investments, co-investments and secondary investments.

In 2013, the Department began a $300 million small and emerging manager program in public equity, which is performing in line with expectations although still in its early stages. Many public funds utilize small and emerging manager programs because of evidence indicating that small, emerging investment firms outperform their larger competitors. The Department of State Treasurer has also made advancing a culture of diversity a strategic objective. The Department is committed to working with historically under-utilized businesses (HUBs) to the extent possible without compromising superior risk-adjusted returns.

Innovating and Modernizing Operations

The Department of State Treasurer works to find new ways to deliver services and value, including expanding or restructuring responsibilities. It is important to balance resource investments in ensuring a stable and reliable business infrastructure while also leveraging new public or private solutions that could have a meaningful impact on the services that are provided to the citizens of North Carolina. Creating and supporting a culture of innovation can also help attract the best talent to the Department.

Investing in Innovation in North Carolina

In April 2015, Treasurer Cowell announced a second North Carolina Innovation Fund (NCIF), a $250 million commitment to North Carolina-centered companies. Joined by former Bank of America Chair and Chief Executive Officer Hugh McColl, Cowell highlighted the first NC Innovation Fund's success and recommitted the North Carolina pension fund to achieving a strong rate of return while also investing in North Carolina's economy and jobs.

The first fund is $232 million, of which $185 million has been committed to eight private equity managers and 12 companies through co-investments alongside private equity managers. Despite the still early age of the Fund, the NCIF portfolio is exhibiting strong performance and a 20 percent internal rate of return (IRR), with three successful exits to date and multiple valuation increases since investment. It is managed by Grosvenor Capital Management's Charlotte office.

The second Innovation Fund of $250 million will designate around two-thirds to co-investments in diverse industries including growth sectors in North Carolina. One-third of the fund will have a Multi-stage focus: venture, growth, buyout and mezzanine.

Continuing the North Carolina innovation theme, Treasurer Cowell proposed a new investment funding source to the legislature. The plan received strong bipartisan support and was enacted in the state budget. The fund would allow the Department to invest a small portion (10 percent, or around $40 million-$45 million) of the state unclaimed property (Escheat) fund with a new Venture Capital Multiplier Fund. The Department would focus on early-stage and smaller private-sector businesses. It frequently takes longer for these investments to generate returns, but those returns can be much larger when they come.

It is the goal of the Department that the annual amount utilized from the Escheat Fund for financial aid will be limited to, or in close proximity to, the annual amount of interest earned annually on the Escheat Fund and will not continue to involve substantial appropriations from the principal. While the Department holds these funds, additional investment authority granted through legislation will now allow the Venture Multiplier Fund to serve as seed money to create the opportunity to spur greater entrepreneurial activity within North Carolina with small, strategic investments.

Streamlining Unclaimed Property Claims

In January 2015, the Department launched a new effort to improve customer service and modernize operations within the Unclaimed Property Division by implementing automated services. The NCCash.com website now provides an automated claims processing service which allows claims that meet certain criteria to be approved through a paperless process. Additionally, the website was enhanced to provide an easy four-step process to allow citizens to claim their funds. A total of 35,664 claims were paid in the 2014-15 fiscal year, totaling $49.8 million. The automated claims approval process allowed 11,545 (32 percent) of those claims to be submitted and approved online, reducing the amount of paper documents to be submitted to the Division and decreasing the turnaround time for payment of those claims to less than 10 business days. In addition to enhanced online services, the Division's outreach program, NC Cash, attended 26 events across the state and looked up more than 33,000 names, resulting in 3,578 matches for $985.2 million.

Encouraging Engagement in Health Care

The State Health Plan periodically conducts pilot programs and other initiatives to determine effectiveness. In 2015, the Plan began the Patient Centered Medical Homes (PCMH) Pilot Project. Patient Centered Medical Homes provide members with a comprehensive health care environment, and assurance that they are receiving optimal care that is both high quality and cost efficient. The State Health Plan, in conjunction with ActiveHealth Management, developed the PCMH pilot to engage physicians in the care of Plan members through alternate payment strategies as well as data driven, coordinated supports to achieve better health outcomes and to improve the member and provider experience in a complex health care environment.

The PCMH pilot looks to test:

- Alternate payment strategy
- Effective communication
- Evolving role of the population health management vendor
- Optimum utilization and sharing of data
- Defining and measuring quality of care
- Determining "total cost of care" in shared risks and savings

Through the PCMH pilot, the Plan will contract with provider groups and provide a per member per month payment to assist them in the management of Plan member health. Throughout the two-year pilot period, practices will work toward selected quality clinical metrics and targets to demonstrate patient care.

Rebranding the Retirement Systems

In support of Treasurer Cowell's efforts to renovate and modernize the Department of State Treasurer, the Retirement Systems Division launched a rebranding campaign to better reflect all of the ways it can help public sector employees prepare for retirement.

At its core, the name change and rebranding signified a philosophical shift that refocused the Department of State Treasurer's mission of helping all public employees achieve a retirement income level that equals at least 80 percent of their pre-retirement income, and have it last them throughout retirement.

Even though the state pension plan provides a solid foundation for retirement income, for many people it won't replace 100% of pre-retirement income. By contributing to a (tax-deferred) 401(k), 457b or 403(b) retirement plan, they can bridge the retirement income gap and get closer to retiring with 100% of their pre-retirement salary. Today, 64.01% of all North Carolina public servants are projected on track to replace 80% of their income by age 62.

The new visual identity for the North Carolina Total Retirement Plans was inspired by the stunning natural scenery of North Carolina and is symbolic of the Retirement Systems bringing together all of the resources employees need to plan and enjoy a successful retirement.

Promoting Awareness of Local Funding Issues

State and Local Government Finance staff members worked with the University of North Carolina School of Government to present the 14th annual State Treasurer's Conference on Local Government

Accounting, Auditing and Financial Management held in May 2015. The conference is intended for both local government auditors and officials. It was conducted at two sites and drew more than 231 participants. Topics covered included a current Governmental Accounting Standards Board (GASB) update, a "pay as you throw" financial model for solid waste disposal, funding resources for capital improvement projects, an update on unclaimed property filing requirements, and other topics of interest to local governments. In addition, staff members spoke at 11 continuing education courses and conferences sponsored by organizations such as the UNC School of Government, various North Carolina finance officer associations, the North Carolina Association of Certified Public Accountants and North Carolina State University.

A Continuing Professional Education class for governmental auditors was offered again in 2015 in collaboration with the UNC School of Government. Held at the UNC campus, the class covered information from the Department of Health and Human Services on compliance issues, how to present the results of the annual audit to an elected board, unclaimed property filing requirements, Local Government Commission approval of local government debt, and new GASB standards. It was well-received with 110 attendees.

2017-2019

Office of the State Treasurer

Overview

The Office of the State Treasurer ("OST") serves the administrative oversight functions of the Department of State Treasurer.

OST is led by the Treasurer's Chief of Staff. The Chief of Staff oversees all operations of all departmental staff.

OST is composed of the following sections:

- Communications
- Financial Education
- Internal Audit and Compliance
- Legal Services
- Legislative Services
- Policy Management
- Human Resources

The Communications and Special Programs Section directs all internal and external communications and manages communication-related programs to support the overall strategy of the Department.

The Financial Education Section helps North Carolina's families increase their understanding of finances and ability to grow personal wealth.

Internal Audit helps the organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, internal controls, and governance processes.

The Legal Services Section is responsible for reviewing policies, procedures, communications, and contracts to ensure compliance with state and federal law.

Legislative Services is responsible for various functions, including coordinating the development of the Department's legislative agenda in line with the Department's vision and mission and helping to develop Departmental policy.

The Policy Management directs the agency's external policy program by managing policy for DST Boards and Commissions. This section also assists Legislative Services with management of the department's legislative agenda and post-legislative initiatives.

The Human Resources Section partners with DST employees and managers to get the right people doing the right work, develops employees for future challenges, and drives a culture of accountability and high performance.

Highlights from 2015-2017

Migration of SHPNC.org

In early 2015, OST Communications, the IT Division, and the State Health Plan migrated SHPNC.org, the public website of the State Health Plan, to the Department's SharePoint infrastructure. Prior to this, the public website of the State Health Plan was series of static HTML pages hosted by DIT. By leveraging the SharePoint publishing platform, communications professionals can update content on the website without IT involvement. In June 2015, the site was incorporated into the Department's WebTrends On Demand web analytics platform. During the 2016 Open Enrollment period for health benefits, the site experienced an average of 40,000 visitors per day in mid-November seeking information on benefits, enrollment, and the online health assessment.

Challenges and Opportunities for 2017-2019

Transition to a New State Treasurer

In January 2017, for the first time in eight years, North Carolina will have a new State Treasurer. In the short-term, this presents a challenge for the Communications section of the Office of State Treasurer.

New messaging and content from the new administration must be prepared to be published on public websites and other communications collateral, and this must take place in the seven weeks between the 2016 election and the inauguration in early January 2017.

- Photographs of the new State Treasurer must be made available to replace photographs of the current State Treasurer immediately following inauguration. These photos are published on websites, correspondence, and official reports of the Department.
- Correspondence templates for a variety of systems, as well as letterhead and business cards must be updated with the name of the new State Treasurer.
- A digitized copy of the new Treasurer's signature must also be captured for use on checks, letters, and official correspondence.
- Any informational pages on websites must also be updated with the biography of the new Treasurer, along with any news items or messaging to be immediately shared after inauguration.

Following the inauguration, the policy preferences of the new State Treasurer will be operationalized and a new strategic direction of the Department will establish priorities within all sections of the Office of State Treasurer and the divisions of the Department. Messaging regarding new priorities and initiatives, as well as news releases and outreach material, will need to be published on public websites and other collateral.

Management of Web Content, Branding, and Social Media

The Department of State Treasurer is in the process of securing vendor services to assist in the development of digital content and marketing and branding for the agency. The vendor will assist in developing the user experience for online functions for retirement self-service and unclaimed property e-Claims, and continues to refine and improve the delivery of content and information from NCTreasurer.com and SHPNC.org. As the Department expands digital self-service offerings, this consultative expertise in design for user experience will continue to be important to the success of these initiatives.

The Department has several key educational initiatives in the areas of retirement readiness, health and wellness, and financial education, and the development of informative content in these areas, along with multi-channel delivery (web, e-mail, social media) will also continue to be important activities. Notably, the Department seeks to expand the strategic use of social media, to reach a broader audience and engage with constituents in new ways, while also maintaining appropriate controls for record retention and confidentiality of communication where appropriate.

Management of Public Records Requests

Public record requests are becoming more frequent and more complex. Typical record requests span multiple years and can draw on e-mail correspondence, physical documents, electronic documents stored in a variety of formats on multiple platforms like file servers, local machines, SharePoint and document management systems. As the frequency and complexity of requests increase, the suitability of current tools to manage these requests becomes strained.

Storage and Collection of HR Data

The Human Resources Section is seeking to digitize records, improve the employee onboarding experience, and improve monitoring of key HR statistics to measure performance. HR is currently managing large volumes of physical records, both applicant files, which include applications, references, and interview notes, and personnel files, which include classification records, documentation of salary and other actions, and letters and memos related to performance.

Additionally, HR presents new hires and existing employees with policies to read and acknowledge and forms and documents to sign ranging from tax withholding documents to department policies on use of data and technology. HR would like to explore methods of providing these materials to new hires and employees electronically, even before the first day of work, as well as capturing acknowledgements and signatures digitally.

Mobility for Boards and Commissions

The Department of State Treasurer, like many State agencies, interacts with a large number of boards and commissions. The Local Government Commission, the Investment Advisory Committee, and the Teachers' and State Employees' Retirement System Board of Trustees are just a few of the boards and commissions for which the agency must prepare volumes of physical documents for each meeting. The preparation process is time-consuming and inefficient, especially as board and committee members have expressed a desire to move to the use of electronic media for meeting material. A strategy for the dissemination of electronic documents for board and commission meetings must be developed. This strategy must include security provisions to protect proprietary or sensitive personnel information not subject to the North Carolina Public Records Act. Ideally, the proposed solution will also incorporate elements of mobile and tablet technology, to permit board members to review documents on a variety of devices, both inside and outside of meetings.

Current System Portfolio and Operational Activities

The Application Portfolio of the Office of the State Treasurer supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 1 - OST - System to Business Process Mapping.* The 2016-2020 Application Roadmap for the division is provided in *Figure 2 - OST - System Roadmap.*

NCTreasurer.com, SHPNC.org, and COMPASS – Microsoft SharePoint

The web content infrastructure of DST is run on SharePoint 2010. The system was implemented in 2011, first for the Department's intranet site, Compass, then in 2012, for NCTreasurer.com, the public website of the agency. In 2015, the state health plan website (SHPNC.org) for teachers and retirees was also implemented within the SharePoint infrastructure. The initial web content management features were developed by Highmark Solutions, in conjunction with i3 Solutions. Since then, the infrastructure has been enhanced and newer features supporting menu systems, lists, calendar and other functionality have been implemented using SharePoint widgets purchased from the open market. The department has implemented a distributed content authoring model, with workflows for content review and approval. DST has also utilized the SharePoint platform's collaborative features such as team sites and document libraries for agency project teams.

ClearPoint - Strategic Plan and Operating Model Compliance

ClearPoint from Ascendant Strategy Management is a strategic plan and project management toolkit with integrated management reporting, scorecards, and dashboards. The Software-as-a-Service (SaaS) solution is used across the Department of State Treasurer for management of the agency's strategic plan and operating model. Key strategic initiatives are tracked in the tool, along with milestones, project timelines, risks, analysis and recommendations, and key performance metrics. Performance measurements for departmental operational activities are also tracked in the tool. The information is presented in a series of scorecards and management reports for further management oversight and analysis by the State Treasurer and her staff.

WebTrends On Demand – Web Analytics

WebTrends is a web analytics package used to monitor activity on the public websites, (NCTreasurer.com and SHPNC.org), of the Department of State Treasurer. DST currently uses WebTrends On Demand, a SaaS offering specifically designed to monitor activity on SharePoint-based websites. The web analytics software is also used by the ORBIT Self-Service application and the SLGFD Financial Dashboard to monitor citizen and constituent utilization.

iContact Pro – Email Marketing System

DST utilizes iContact Pro, a SaaS e-mail marketing solution for bulk e-mail messaging and management of subscription e-mail services. The iContact Pro platform is used across the entire department, for communication campaigns with members of the North Carolina Retirement Systems, members of the State Health Plan of North Carolina, and holders of Unclaimed Property. The system provides features in support of message creation, list management, autoresponders, spam check, reporting, workflow automation, and social media support.

SalesForce.com – Event Scheduling and Contact Management

SalesForce.com is a SaaS-based contact and schedule management tool utilized by the Office of the State Treasurer for the management of public events. Event scheduling, as well as key contact information related to events, are managed by this tool.

CisionPoint – Press Management

CisionPoint is a subscription-based, press management solution, utilized by the OST Communications Section to monitor media coverage, press articles, and analyze the results of communication activities. The software also enables the distribution of press releases and the management of media lists.

AutoAudit – Internal Audit Management

AutoAudit is a software package in the Thomson Reuters Accelus Suite designed for Internal Audit organizations. The Internal Audit section of OST uses AutoAudit to plan and track audit activities and progress, maintain workpapers from audits, and record issues and findings and track follow-up activities. Issue Track, an add-on to Auto Audit, is a web-based tool used by the Department to internally publish findings and collect follow-up activity and responses from agency personnel.

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

OFFICE OF THE STATE TREASURER

| WEBTRENDS ON DEMAND (Hosted) | iCONTACT (Hosted) | NCTREASURER.COM (Vendor Developed In-house supported and maintained) | SHPNC.ORG (Developed, supported and maintained in-house) | COMPASS INTRANET (Vendor Developed In-house supported and maintained) |

| Provide usage metrics for Treasurer's Website, DST Intranet, and ORBIT Self-Service | Mass electronic mailing services for Department of State Treasurer | Public Interface to Retirement Systems, Unclaimed Property, Banking, State and Local Government, Investments, State Health Plan, Job Seekers, and other OST initiatives | Public interface to State Health Plan for Teachers and Retirees | DST Employee interface to HR Forms, News, Job Seekers and other Department related information |

| SALESFORCE.COM (Hosted) | CLEARPOINT (Hosted) | CISIONPOINT (Purchased) | AUTOAUDIT (Purchased) |

| State Treasurer Event and Contact Management | Strategic Plan and Operating Model Management Tool for Department of State Treasurer | Database of print, online, broadcast and social media mentions of the Department of the State Treasurer | Maintain artifacts and records of the Internal Audit section |

Applications   Business Processes

Figure 1 - OST - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

Office of the State Treasurer

	2016	2017	2018	2019	2020
NCTreasurer.com/SHP.org/COMPASS - SharePoint	Maintain	Enhance	Maintain	Maintain	Maintain
ClearPoint	Maintain	Maintain	Maintain	Maintain	Maintain
SalesForce.com	Maintain	Maintain	Maintain	Maintain	Maintain
WebTrends OnDemand	Maintain	Enhance	Maintain	Maintain	Maintain
iContact Pro	Maintain	Maintain	Maintain	Maintain	Maintain
AutoAudit	Maintain	Maintain	Maintain	Maintain	Maintain
Cision	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 2 - OST - System Roadmap

Strategic Technology Initiatives for 2017-2019

Update Web Content Platform

The North Carolina Department of State Treasurer's web infrastructure will be moving to the next generation of the SharePoint platform, SharePoint Server 2016 and Office 365, in 2017. This new infrastructure builds on our existing department wide document management and publishing capabilities while adding extranet support, cloud-inspired infrastructure, compliance and reporting capabilities, and enhanced user experience.

The public-facing sites which include NCTreasurer.com, SHPNC.org, and new departmental extranet will be powered by SharePoint Server 2016 on premise. The IT Division is exploring alternatives for COMPASS, the Department intranet site, and internal team sites, including hosting on the Office 365 platform.

The current infrastructure powered by the SharePoint 2010 platform is now dated and will increasingly become a costly option to maintain moving forward. In addition, the risk of platform inoperability increases with the on-going release of patches to the underlying operating system. There is the present risk of vendor support deterioration with the release of newer platforms. Therefore, a technical goal of this exercise is to switch to the Microsoft SharePoint Server 2016 and Office 365 platform running on 64-bit Windows Server 2016 supported by Microsoft SQL Server 2016.

While the IT Division will be pursuing an upgrade strategy for SharePoint to address immediate, short-term platform supportability, the IT Division and the OST Communications Section will also be exploring the use of the NC Digital Commons resources for the hosting of public web content. The IT Division will engage with DIT resources to facilitate this research; however, no decisions regarding the long-term delivery of public content will be made without the input of the new Treasurer and his team.

HR Document and Data Management

When employees are first hired by the Department of State Treasurer, they are asked to review and sign several policy documents, related to such things as responsibilities for HIPAA compliance, compliance with Insider Trading policies, and data use and non-disclosure. Throughout an employee's tenure with the agency, he/she will be asked to review and re-acknowledge these policies, or be presented with new ones as their job responsibilities progress.

The HR Section has been developing a new onboarding portal to allow new hires to review policies and documentation prior to the first day of work. In conjunction with the IT Division, the Human Resources section would like to implement tools to manage this as a completely electronic process. For some documents, capturing acknowledgement that the document was read is sufficient; however, in some case, signature acknowledge is required and the Department must implement an e-Signature solution to take the place of physical signatures. DocuSign has received broad adoption across state government and is a likely candidate for inclusion in the DST application portfolio; however, integration with SharePoint is also a key consideration, as signed documents could reside in an indexed SharePoint repository to allow for quick retrieval by HR staff.

Ideally, these onboarding documents, along with other personnel-related content, could be housed in a secure and restricted repository of personnel files, eliminating the need to retain physical documents. In a similar fashion, a repository of applicant files could also be developed to house the artifacts of the

hiring process such as applications, interview notes, and references. This would permit HR to maintain both personnel and applicant files electronically, eliminating the need to house physical records.

Lastly, the HR Section needs to institute tools to capture performance data and analyze, monitor and report this data. By capturing data on recruitment, turnaround times, and other key HR functions, staff can institute improvements in operational processes to benefit the agency. Additionally, the HR Section would benefit from housing statistics on the workforce, such as absences, that can be analyzed and shared with management for planning and improved employee engagement. The HR Section has utilized SmartSheet for communication and tracking of processes with OSHR. Adoption of this tool within the agency would allow the HR section to manage information in a similar fashion to OSHR using a familiar technology.

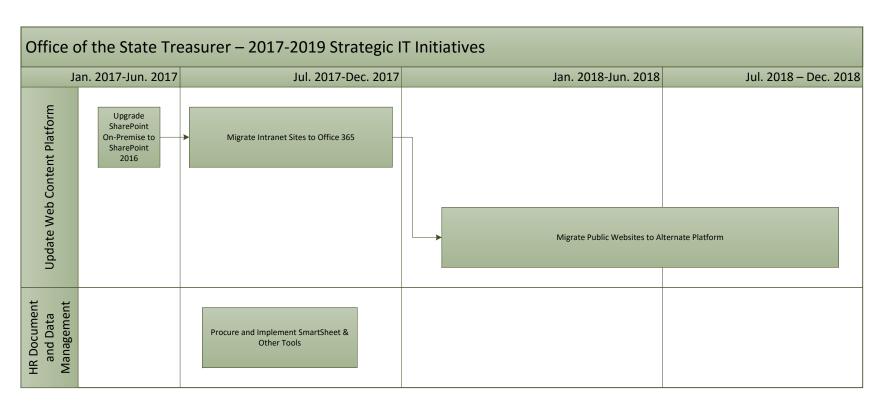| Office of the State Treasurer – 2017-2019 Strategic IT Initiatives			
Jan. 2017-Jun. 2017	Jul. 2017-Dec. 2017	Jan. 2018-Jun. 2018	Jul. 2018 – Dec. 2018
Update Web Content Platform Upgrade SharePoint On-Premise to SharePoint 2016	Migrate Intranet Sites to Office 365	Migrate Public Websites to Alternate Platform	
HR Document and Data Management	Procure and Implement SmartSheet & Other Tools		

Figure 3 - OST - 2017-2019 Strategic IT Initiatives

2017-2019

2017-2019

Financial Operations Division

Overview

The Financial Operations Division (FOD) performs the State Treasurer's role of serving as the State's Banker and ensures that efficient banking services are provided to all State agencies and institutions. FOD is charged with properly accounting for and reporting on all funds that are deposited, invested and disbursed through the Department. There is a centralized Procurement and Contracting function in FOD that is responsible for managing the procurement cycle - from the early stages of a Request-for-Proposal to contract compliance.

The Division comprises five areas:

- Banking Operations
- Bank Reconciliation Unit
- Statewide Accounting Operations
- Departmental Accounting
- Procurement & Contracting

History

In 1925, the General Assembly passed a law stating that all deposits received by the state must be deposited into centralized accounts in the name of the State Treasurer at banks approved by the Treasurer. In 1929, it designated the State Treasurer's office as the centralized office of deposits and disbursements. As such, the position of Treasurer for each state agency and department was eliminated.

This centralized system for managing the flow of moneys collected and disbursed by all State departments, agencies, institutions and universities ensures that the State continues to be the prime beneficiary of the flow of State funds through the commercial banking system in the course of conducting State business.

By 2009, the Department began issuing warrants electronically to vendors, employees, and retirees.

FOD was formed in its current setup in 2001 for the Banking Services and accounting functions. In December 2013, a new centralized Procurement and Contracting section was created to support all of the Department's purchasing and contracting.

Banking Operations

All revenues collected by a State entity on behalf of the State must be deposited with the State Treasurer. Banking Operations maintains correspondent depository relationships with various North Carolina banks and savings institutions in order for State entities to have a convenient location to make their deposits. Relationships are maintained with six major banking institutions that have a statewide branch network (Wells Fargo, Bank of America, PNC, First Citizens, BB&T, and SunTrust), as well as more than 90 other bank accounts across the state. State funds are deposited both at branch locations as well as electronically through Automated Clearing House (ACH) and wires. Banking Operations reviews all incoming electronic payments and ensures that the funds are credited to the account of the agency expecting the funds.

Bank Reconciliation Unit

The Bank Reconciliation Unit is responsible for reconciling all of the State Treasurer's bank accounts as well as reconciling budget code balances between the Office of State Controller and the Department.

Statewide Accounting Operations

This area manages the accounting for all funds that are deposited, invested and disbursed through the Department of State Treasurer including approximately $100 billion of investments. It also maintains the general ledgers for the pension funds, employee benefit trust funds, State Health Plan, and the Escheats Fund, also known as the Unclaimed Property Fund, administered by the State Treasurer. The

accounts for the outstanding General Obligation and Special Indebtedness of the State are maintained by the Statewide Accounting Operations area. Functions include the recording of new debt and the timely payment of principal and interest for the State's debt. The area is also responsible for the financial statements of the NC Supplemental Retirement Income Plan and the North Carolina Public Employee Deferred Compensation Plan.

Highlights from 2015-2017

Core Banking Upgrade

In March of 2014, following almost three years of planning, FOD and the IT Division initiated a project to upgrade the State's Core Banking system. In July of 2015, the Department went live with the upgraded system. Core Banking is now running on the latest supported versions of FLEXCUBE Universal Banking System (UBS) and Direct Banking (DB). All underlying infrastructure and supporting software products, such as Oracle WebLogic and Oracle Database were also upgraded and/or replaced. The new Core Banking System is also now integrated with the North Carolina Identity Management System (NCID) for system authentication. As a part of this effort, most of the application servers used by the Core Banking System were virtualized using VMWare, which both reduced the hardware costs for running this application and created an environment for improved availability and quicker recovery in the event of a problem.

By upgrading, the State is now using the most secure and optimized versions of software produced by Oracle. In addition to improving performance, vendor support is also improved. In the event of an issue with the system, the IT Division has access to more qualified vendor technicians than when running an older version of FLEXCUBE. The IT Division has also been able to adopt a more "hands-off" approach to the management of the system, where previously, manual intervention in overnight batch processing was required. As a result of this and other changes, the IT Division no longer requires overnight operations personnel and moved staff back onto shifts during normal business hours, providing more direct user support. The update also enabled new business functionality to support international wire transfers and account management functions that were not available in the prior system.

In July of 2016, the new Core Banking System had completed one year of successful operation, including the completion of one full fiscal year of activity. The system has been well-received by end-users, in no small part to the attention paid to user training. Staff from FOD Banking Operations, working in conjunction with training staff in DST Human Resources, developed a series of instructional videos on the Direct Banking system. These videos are available on NCTreasurer.com, for new users or for existing users to refresh their knowledge.

Bank Imaging Upgrade

Unisys InfoImage is used by Banking Operations for the long-term storage and retrieval of images of warrants issued by Core Banking. In late 2015 and concluding in May of 2016, the Unisys InfoImage system was upgraded as part of regular maintenance. This upgrade allows for complete virtualization of the system, including database components, and the system is now functional on supported releases of Microsoft Windows Server and Microsoft SQL Server. Bank Imaging is also integrated with Core Banking, and functionality to provide check images through the FLEXCUBE interface has been preserved.

Microsoft Dynamics Upgrade

Microsoft Dynamics is utilized by the Statewide Accounting Section to manage the financial transactions of the retirement systems under the administration of the Department of State Treasurer. In the summer of 2016, FOD along with the IT Division, began an initiative to upgrade the system to Microsoft Dynamics GP 2015. This upgrade will utilize Microsoft SQL Server 2014, consistent with the IT Division's database upgrade and virtualization strategy. The first phase of this initiative will be complete in September 2016. Following the implementation of Dynamics GP 2015, FOD and IT will explore options for a new reporting tool to be integrated with Dynamics. With the implementation of the new reporting

tool, FOD and the IT division will also seek to implement the web-based GP 2015 client, replacing the current desktop/client software in use.

Challenges and Opportunities for 2017-2019

Improve Contract and Procurement Management

Within the Department of State Treasurer, divisions typically contract for goods and services through procurement processes established by the Department of Administration or the Department of Information Technology, for IT-related contracts. At DST, multiple divisions have legislative authority for some independent procurement activities to support program operations. As a result, the Department has numerous workflows and business processes related to the procurement of goods and services and thousands of active or retained contracts and contract-related documents. Additionally, the Department has no consistent process or tools for the management of contract deliverables. Each division has defined their own methods to monitor contract performance, authorize payment for deliverables, and escalate issues of non-compliance.

Purchasing and contact management is centralized within FOD and improving the agency's capabilities in managing procurement documentation, workflows, and contract deliverable management is a key goal for the division. At the same time, the State Health Plan and the Investment Management Division are also exploring new opportunities to improve documentation and contract management for procurements conducted under their independent authority. FODs leadership will be critical in coordinating efforts, standardizing processes and procedures where possible, and guiding the selection of tools and technologies across the department.

Improve Accounting of Department Activities

FOD utilizes the North Carolina Accounting System (NCAS), for accounting activities for the Department of State Treasurer; however, there are ancillary systems utilized for the State's retirement funds, the State's invested funds, State-issued debt instruments, and the State's escheat fund, all of which are under the administration of the Department of State Treasurer.

The Investment Management Division is exploring a strategy of implementing an internally managed public equity index fund. If a new internally traded index fund is developed, new accounting requirements will be placed upon FOD. These new requirements will necessitate the implementation of tools to reconcile transactions, maintain an inventory of holdings, and report index fund activity.

Collaborate with Statewide Initiative for Financial System Replacement

Session Law 2016-94 has directed the Department of Information Technology, 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 by utilizing business process reengineering to identify and organize processes and workflow in order to prioritize and link work activities to realize efficiencies and organize around outcomes. The ERP system shall address, at a minimum, core financial management, grants, assets and inventory, fleet management, and human resource management."

It is anticipated that this comprehensive system will replace NCAS, as well as the State's Cash Management Control System (CMCS), and the Statewide Integrated Budget Information System (IBIS). The Core Banking System is integrated with both CMCS and NCAS, and the customizations necessary to

support these system interfaces make up most of customizations to the Oracle FLEXCUBE product used by FOD to support Statewide Banking Operations.

At a minimum, FOD seeks to engage with this working group to be abreast of planned changes and anticipated timelines so appropriate budgeting and planning can occur to make all necessary changes to Core Banking to support a new statewide ERP system. At the same time, this initiative also represents an opportunity for the State of NC to have a single Statewide financial management platform, as some ERP vendors also offers banking management solutions, notably Oracle and SAP.

Current System Portfolio and Operational Activities

The FOD Application Portfolio supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 4 - FOD - System to Business Process Mapping*. The 2016-2020 Application Roadmap for the division is provided in *Figure 5 - FOD - System Roadmap*.

Core Banking – FLEXCUBE Universal Banking System (UBS) & Direct Banking (DB)

FLEXCUBE UBS is the primary system used in the State's banking operation. It is used by staff in Banking Operations and the Bank Reconciliation Unit. The system manages the accounts used by all State agencies to intake, hold and disperse funds. The system assists in tracking the daily cash balance of the State and provides this information to the Investments Management Division for the short-term investment fund. The system is also used in the consolidation and reconciliation of all depository accounts, cash concentration accounts, collateralization, and the State's account with the Federal Reserve Bank ("FRB"). FLEXCUBE was developed by and is maintained by Oracle Financial Services Software, a division of Oracle Corporation, formerly an independent company called i-Flex.

FLEXCUBE DB is the externally-facing component of the State's Core Banking system, providing customer agencies with an online interface to manage account functions. FLEXCUBE DB provides customer agencies with account balances and account statements, and provides functionality for the stop payment of checks and the use of positive pay to reduce check fraud. The system provides functions for agencies to transfer funds in and out of disbursing accounts and to report and transfer collected payroll and sales taxes to the Department of Revenue.

Business Objects XI

Business Objects XI ("BOXI") is the reporting toolkit currently used with FLEXCUBE. It provides all reports for the system, and also generates some agency notices such as account statements and overdraft notices. BOXI is supplemented with Oracle Business Intelligence Publisher ("BIP").

X9Returns – Check 21

X9Returns from AllMyPapers is used by Banking Operations for Check21 processing compliance. The software receives and processes check files from the Federal Reserve Bank issued by State agencies, imports check image files and provides pay decisions to the FRB based on positive pay records.

Bank Imaging – Unisys InfoImage

Unisys InfoImage is used by Banking Operations for the long-term storage and retrieval of images of warrants issued by Core Banking. The system contains over 11 years of check images which were previously stored on optical platters, then migrated to an EMC Centera Content Addressed Storage unit in 2010. The system is integrated with Core Banking to permit Banking Operations staff and client agencies to retrieve images of issued checks in the FlexCube UBS or FlexCube DB interfaces.

Microsoft Dynamics GP

Microsoft Dynamics GP, formerly Great Plains, is an accounting package used by Statewide Accounting and RSD for general ledger and cash flow management of defined benefit plans. Accounting entries in Dynamics are recorded from ORBIT through a data interchange using Microsoft BizTalk. Dynamics GP is also used for the management of the State's Qualified Excess Benefit Arrangement (QEBA), maintaining information on fund balances and providing payroll services for the payment of pension benefits in excess of IRS regulations for 401(a) plans.

Axway Secure Transport

Axway Secure Transport is a secure gateway used for file exchanges with the FRB. It was originally named Tumbleweeds Secure Transport. This software has a scheduler to trigger watch processes to retrieve clearinghouse cash letter files from the FRB and push return and adjusted cash letters back to the FRB from NCDST.   These files contain check history starting with the bank of first deposit, front and back check images, and financial information for posting. They are processed in the X9Returns system.

FTPManager/ConvManager

These applications manage the FTP processes for the Banking Systems (these are not FTP site managers). FTPManager triggers an FTP process based on field values in the Core Banking Oracle database. Files are exchanged from various locations and IPs in and out of the NCDST network. The ConvManager converts between ASCII format and the mainframe EBCDIC format. To do this it uses a third party product from Greenview Data Inc. named Vedit.

Counter Scanner Application

The Counter Scanner Application runs on a dedicated PC and performs check scanning. It connects to the Counter Scanner, the Banking Oracle database, and the Bank Imaging processing shared folders. Checks are scanned then batched according to responses by the user. Files are written to the imaging system where images are immediately archived, and financial transactions are created for the banking system if desired. Originally used to process agency items at the teller window, financial transactions are now only done for checks that for some reason were not processed by the FRB.   The scanner can also be used to occasionally verify formats for agencies printing their own checks.

Figure 4 - FOD - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

	2016	2017	2018	2019	2020
Financial Operations Division					
Core Banking – FlexCube UBS	Maintain	Maintain	Maintain	Enhance	Maintain
Business Objects XI	Maintain	Maintain	Maintain	Enhance	Maintain
Core Banking - FlexCube DB	Maintain	Maintain	Maintain	Enhance	Maintain
X9 Returns - Check 21	Enhance	Maintain	Maintain	Maintain	Enhance
Bank Imaging - Unisys InfoImage	Enhance	Maintain	Maintain	Maintain	Enhance
Axway Secure Transport	Maintain	Maintain	Enhance	Maintain	Maintain
Microsoft Dynamics GP	Enhance	Maintain	Enhance	Maintain	Maintain
FTPManager/ConvManager	Maintain	Maintain	Maintain	Maintain	Maintain
Counter Scanner Application	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 5 - FOD - System Roadmap

Strategic Technology Initiatives for 2017-2019
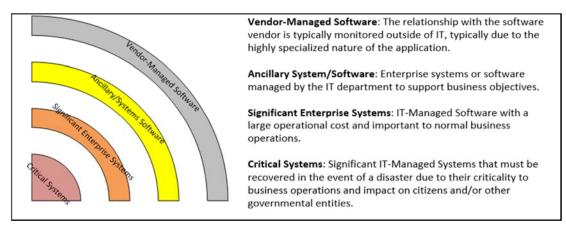
Identify and Implement New Accounting Tools for Index Fund

Initiatives in the Investment Management Division around internal index fund management may necessitate the procurement of integrated suite of back-office tools to provide fund-level accounting, trade management, and trade reconciliation. The accounting component of this package is at the core of this suite of products. If IMD decides to implement and manage an internally traded equity index fund, IMD plans to engage the services of consultants specializing in information technology management for institutional traders. These experts will be providing IMD, FOD and the IT division with information necessary to evaluate and procure appropriate technology to support internal trading efforts. Based upon IMDs project timelines, the procurement of a new investment accounting toolkit with integrated trade and reconciliation management is expected to begin in 2017, with implementation targeted for mid-2018.

Identify and Implement a Procurement and Contract Management Tool

At a minimum, FOD seeks to implement a toolkit for the management of all DST procurements and contracts, including those that are handled through the typical Department of Administration or Department of Information Technology procedures. This toolkit should consist of three distinct, but integrated components.

- Document Management: Collaborative drafting of contract and procurement documents with version control; long-term storage of final documents with archiving and retention policies.
- Workflow: Business process definitions to control routing and approval of pre-procurement documents, such as Requests to Contract, procurement documents (RFx), and contracts and contract amendments and addenda; ad-hoc routing.
- Contract Management: Functions to define lists of deliverables or other contract milestones; functions to record fulfillment of contract requirements; automated rules for notification/escalation of contract non-compliance; notification of key contract or deliverable dates.

Additional functionality could also include elements of a CRM, to maintain information on key personnel, meeting notes, and e-mail correspondence.

While satisfying the requirements of the organization, the IT Division will also seek a tool that leverages existing software solutions already in place. DST already makes extensive use of SharePoint for document management on intranet team sites, as well as utilizes three additional document management systems and two workflow systems across four divisions.

Develop a Long-Term Banking Strategy

The last upgrade of the Banking system took approximately five years from initial conception to final implementation. This timeframe was merely for an upgrade to an existing system for which there was no competitive market of resellers. If FOD had to draft detailed requirements and conduct a competitive procurement among multiple vendors and multiple products, as well as migrate from the existing banking platform to a new platform, this project could have easily taken seven to eight years.

Unless FOD is committed to remain on the Oracle FLEXCUBE platform, work toward the next upgrade or replacement of the existing system must begin within the next two years. While the Oracle FLEXCUBE

platform has performed well since its original implementation in 2002, new products have entered the market and may provide better functionality or less operational expense or burden. At the same time, initiatives underway to replace the State's financial systems with a comprehensive ERP solution may also drive the future direction of the State Banking Platform.

Within the next two years, FOD, with the IT Division, will engage the expertise of external resources to develop and document the requirements of the Statewide Banking platform. These requirements could serve as the foundation of a Request for Information (RFI) to obtain estimates for legislative budget requests or be added to the State's requirements for a new ERP system.

Financial Operations Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018-Jun. 2018	Jul. 2018-Dec. 2018
Procurement and Contract Management Tool	Conduct Procurement and Evaluation	Implement Departmental Procurement and Contract Mgmt. Tool		
New Accounting Tools for Investment Mgmt	Review Findings and Recommendations of IMD Trading Study	Evaluate and Procure New Accounting Tools	Implement New Accounting Tools for IMD Equity Index Trading	
Long-Term Banking Strategy	Monitor Progress and Direction of NCAS Replacement Project	Develop Long-Term Banking Strategy (Product Evaluations, Budgetary Estimates, Needs Assessments…)		

Figure 6 - FOD - 2017-2019 - Strategic IT Initiatives

2017-2019

Investment Management Division

Overview

The Investment Management Division (IMD) serves as the investment arm for the Department of State Treasurer. This Division employs over 30 investment professionals who provide the expertise for state government investing. IMD is responsible for the management of the Short Term Investment Fund, the Pension Fund Investment Program (Pension Fund), and the Ancillary Investment Programs. At the end of the fiscal year ending June 30, 2015, total assets of these programs were $104.67 billion.

The Treasurer is directed by statute to establish, maintain, administer, manage and operate investment programs for all funds on deposit, pursuant to the applicable statutes, including stringent fiduciary standards. The Treasurer has full powers as the sole investment trustee and, with IMD staff and external investment managers, manages the investment programs so assets may be readily converted into cash when needed.

In establishing the comprehensive management program, the State Treasurer, utilizing a professional investment staff, has developed an investment strategy for each portfolio that recognizes the guidelines of the governing General Statutes and provides appropriate diversification. In addition to the Treasurer and IMD- staff managing these programs, the Investment Advisory Committee (IAC) provides independent consultation on policies and general strategy for achieving investment of the Pension Fund, including asset allocation.

Short-Term Investment Fund

The objective of the Short-Term Investment Fund (STIF) is to maximize income consistent with the principles of preservation of capital and liquidity. The STIF is an internally managed portfolio of highly liquid fixed income securities. These securities are primarily money market instruments and short- to intermediate-term U.S. Treasuries and Agencies. STIF serves as the main operating account for state agencies. Because the Treasurer's cash balances are ultimately subject to disbursement upon presentation of valid warrants, the primary consideration in making investments is safety and liquidity; the secondary consideration is income. For the fiscal year 2015, the STIF generated a cash return of 0.49 percent.

Pension Fund Investment Program Review

The Investment Management Division's goal is to maintain the long-term strength of the Retirement Systems by providing a long-term rate of return that approximates the actuarial rate of return while simultaneously managing risk in the portfolio. The Division conducts its activities in accordance with the Investment Policy Statement for North Carolina Retirement Systems, which is approved by the Treasurer in consultation with the Investment Advisory Committee. This policy covers investment objectives, asset allocation ranges, rebalancing processes and other issues.

It is the policy of the Treasurer to invest consistent with the following objectives:

A. Provide investment returns sufficient for the Fund to make timely payment of statutory benefits to current and future members and keep contribution rates at a reasonable level over the long-term. To achieve this, long-term projected investment returns should be generally consistent with the actuarial assumed rate of return, unless otherwise determined by the Treasurer.

B. Avoid excessive volatility in contribution rates over the intermediate-term by maintaining a moderate risk profile and diversifying with respect to economic

and financial risk factors. It is acceptable to limit the use of return-seeking strategies in order to avoid excessive volatility.

C. Additionally:
   1. Achieve cost-efficiency in the overall investment program
   2. Exceed composite benchmark returns for the Fund and broad categories of investments within reasonable risk limits and over market cycles
   3. Ensure sufficient liquidity to meet the Fund's obligations over all time periods
   4. Comply with all governing statutes as consistent with fiduciary obligations.

North Carolina's defined benefit plans are consistently ranked in the top five of state retirement funding ratios.

Operating Policy

Transactions executed for any investment program managed by the State Treasurer, are required to be in the best interest of the beneficial owners of the trusts' assets, which for the Pension Fund are North Carolina's participating public employees, teachers, firefighters, police officers and other public workers.

In order to meet the investment objectives, a "Strategic Asset Allocation" is established through consideration of the Fund's projected actuarial liabilities, liquidity needs, risk tolerance, and the role that different asset categories and strategies are expected to play in the overall portfolio construction. The Strategic Asset Allocation will be reviewed no less than annually and a detailed asset-liability study will be conducted no less than triennially, assuming that benefit design and funding policy is unchanged.

Pension Fund Strategy

A tradition of conservative fiscal management has served North Carolina's public workers and taxpayers well throughout the years. The Pension Fund continues that tradition with a significant allocation in fixed income assets (bonds) combined with reasonable exposure to more volatile growth-oriented assets and an increasingly diversified portfolio. The result of this strategy is a fund that is a top performer in turbulent economic and financial market environments, but obtains lower returns than the typical large public fund peer in bull markets.

Total Pension Fund Structure

As of June 30, 2015, the pension fund maintained a market value of $89.6 billion. IMD is constantly monitoring the overall pension fund in an effort to manage risk. IMD utilizes rebalancing to ensure the overall portfolio weights stay in line with the target ranges. Asset allocation and a disciplined approach to rebalancing are important tools to help control the level of risk that an investment portfolio experiences.

Total Fund Performance

For the fiscal year 2016, the Pension Fund returned 0.8 percent, net of fees. The fund returned an average annual gain of 5.98 percent and 8.53 percent over the last 5 years and 7 years, respectively.

Cost

In order to best maximize returns with limited internal resources, the Investment Management Division utilizes external managers for a portion of the fund.

Over time, the Department, with the counsel of the Investment Advisory Committee, has used a lower risk and lower cost approach to investing the North Carolina Retirement System trust funds. While costs have risen somewhat over time as more diverse external investment

strategies were pursued, our all-in cost of investing the retirement trust fund remains modest and we continue to actively seek out cost-efficiencies in our operations.

The Department receives annual independent cost-effectiveness reports from CEM Benchmarking, a leading independent cost and performance analysis firm. These reports show that our cost structure for investing the Pension Fund was below those of most of our large public pension fund peers. This leads to savings of about $115 million per year compared to the median peer.

Importantly, after deducting all fees, incentives, and expenses for the trust fund we have exceeded our performance benchmarks over long periods, which are a positive for plan beneficiaries, employers, and taxpayers. At the same time, we continue to proactively target improvements in cost-efficiency, transparency, risk management, and compliance.

Highlights from 2015-2017

SAS Risk Management – Project Phase 2 and 3 Completion

Since July 2011, IMD has been working with the SAS Institute on the development of a robust total portfolio reporting and risk analysis tool. The tool assists management in the investment decision making process by creating timely transparency across the entire portfolio via structured data importation, aggregation, reporting, and analysis.

In 2015 and 2016, IMD implemented the vast majority of Phases 2 and 3 of the project. Phases 2 and 3 enhanced the reporting layers and models for Total Plan Management and Private Asset Classes. The tool now provides a customized dynamic reporting solutions via Visual Analytics, and the Managed Data Services function that allows for the ongoing data management within the tool. IMD now has the ability to more accurately assess and monitor exposures to risks, drivers of performance, and forecasted liquidity needs from the private asset classes.

Challenges and Opportunities for 2017-2019

Investment Relationship Lifecycle Management

In recent years, IMD has a spent great deal of effort formalizing policies and processes, and implementing productivity-enhancing technology tools. Backstop CRM, is an example of an investment-specific tool that is a key support to the investment process. Backstop maintains a record of all correspondence and permits the logging of all phone calls, meetings, e-mails, and other interactions between IMD and active and potential investment managers. The system retains copies of all electronic documentation received from an investment manager related to its business with IMD, including, but not limited to, investment strategy, holdings, performance reports, valuations, and contracts and addenda. The system maintains essential data and documents needed to comply with policy and audit requirements. Backstop will eventually maintain information on 400 to 500 business entities with which IMD maintains ongoing relationships and several multiples of that figure representing entities that IMD has or is evaluating for possible relationships.

Similarly, IMD has had an ongoing initiative digitizing records, including documents related to the legal agreements IMD has with external investment managers. This effort yielded tremendous benefit in the Department's relocation to Atlantic Avenue, in that an entire room of file cabinets of physical document did not require space in the new facility. With the digitization of archived records complete, two issues have emerged: how to store the digital records with meaningful metadata and appropriate retention, and how to ensure all future documentation remains in an electronic format.

IMD, working with the IT Division, has evaluated different alternatives to the long-term storage of electronic content in a structured format that would include automated retention policies. Microsoft SharePoint, with and without the Record Center add-in, has been considered, as well as offerings from Hyland OnBase. The introduction of another toolkit into IMD application portfolio creates the issue of integration with existing systems like Backstop.

At the same time, IMD and their partners in the OST Legal Section continue to create new agreements, amendments, side letters, and other documentation related to new and existing relationships with investment managers. The management of this documentation, from drafting to final product, is also

under consideration. Routing documents for review, editing, and approval via e-mail is difficult to manage and fraught with versioning control errors. Ideally, IMD would like to identify a solution that can not only support the archiving of final state legal documents, but manage the workflow of legal documents beginning at inception. In providing these capabilities to IMD and legal counsel, the IT Division can reduce the likelihood that a large accumulation of physical documents will occur again in the future.

Equity Index Internal Trading Project

IMD has started work to set up an internal equity trading desk and move a portion of the passively managed public equity assets in-house. In doing so, IMD will have increased control over the trading volumes with historically underutilized brokers, increase the market expertise of the internal staff, and ultimately may reduce the costs associated with external fund management.

Since late 2015, IMD has engaged the services of Piedmont Investment Advisors, LLC to develop and conduct a knowledge transfer education series on how to build an infrastructure for internally managed index portfolios and how to set up a trading and operations infrastructure to maintain, manage, and support these portfolios. IMD staff has been working with Piedmont to understand the process, interpretation of the data, and the way this information would be used to build portfolios and replicate the selected indices.

In order to setup this equity trading desk, IMD expects to require an integrated set of tools for financial accounting, trade management, and reconciliation that are not currently in place. Due to the criticality of these systems, the IT division will also be exploring new provisions for network redundancy, drawing upon the expertise available from DIT. The selection and implementation of these tools will require the coordinated effort of IMD, the Financial Operations Division (FOD) and the IT division. IMD is seeking additional consultative expertise in back-office technology and internal resource assessment to conduct an analysis prior to the development of the requirements and evaluation criteria that would be necessary to conduct a competitive procurement for these systems.

Management Fee Reconciliation

As a part of conducting business with external investment managers, IMD is charged management fees for the investment work performed on the State's behalf. These fees, which can be based upon combinations of fixed asset based rates and profit sharing, must be evaluated for accuracy and reconciled with transactions reported by the fund's custodian. This is a complex and time-consuming process, and IMD seeks tools and technologies to aid in this process.

Introduction and Integration of New Productivity Tools

Technology to support investment management is a rapidly evolving field. New tools and platforms for research, portfolio modeling, trading, and portfolio analytics are continually being introduced. Additionally, investment due diligence and monitoring has to be conducted at investment managers' locations which increases the importance of mobility-enabled solutions. Finally, collaboration is an increasingly important source of value-added work within IMD that helps to lower costs and risk. Each of these products can provide benefits to IMD, but their introduction also creates new risks and challenges. Data security, user access and management, future costs, potential vendor lock-in, and integration are just a few of the questions that must be addressed when considering the implementation of new technologies.

IMD, working with the IT division, must develop a structured approach to the evaluation and selection of new tools and technologies. IMD has been developing a structure for staff to present tools for consideration and developing further governance structure with the IT division will be an important goal. Any process to evaluate and select new tools must be responsive to IMD's needs and work quickly to address unmet needs, but due diligence must occur before implementing any new technologies. Neither IMD nor the IT division want to create a portfolio of loosely managed tools with high costs, little to no integration, and long-term difficulties with switching vendors and migrating data.

Current System Portfolio and Operational Activities

IMD's Application Portfolio supports the business operations of the division. Unlike most of the other divisions in DST, due to varied asset classes under management, IMD does not have a single line-of-business application. Most of the systems listed below are applications hosted by a financial service provider and made available to the division by virtue of a financial management relationship, as with BNY Mellon Workbench and the State's custodial agreement, or by the very nature of the investment and finance industry, as with Bloomberg and the trading of fixed income securities.

The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 7 - IMD - System to Business Process Mapping.* The 2016-2020 Application Roadmap for the division is provided in *Figure 8 - IMD - System Roadmap.*

BNY Mellon Workbench

BNY Mellon Workbench is the primary interface to BNY Mellon, the custodian of the State's investment portfolio. Workbench provides access to all information on the portfolio, including performance reporting, financial statements, and real-time custodial actions such as client wire transfers, corporate actions, and trade actions. Almost all personnel involved in investment activities, including personnel in Banking Operations and Financial Operations, have access to BNY Mellon Workbench for reporting, reconciliation, and/or analysis purposes.

Bloomberg Research and AIM

Bloomberg Asset and Investment Manager System ("AIM") is a tool used by the Fixed Income team to manage the order execution of securities. Both the Fixed Income team and the Global Equity team use Bloomberg for research purposes. The AIM system enforces a workflow for trade orders that requires different employees to authorize and execute each trade order. The system can also produce historical information on open and completed trades, as well as information on the holdings of the fixed income portfolio. The holdings data from the Bloomberg system can be used to reconcile the holdings information maintained in BNY Mellon Workbench as well as the holdings information stored in PORTIA.

Use of the AIM system requires a special keyboard from Bloomberg, equipped with a biometric thumbprint reader, which authenticates users for access to the order management system. In the absence of the biometric-enabled keyboard, a handheld biometric device supplied by Bloomberg can be used to permit access to the order management system, facilitating remote access to AIM.

PORTIA

PORTIA is a fund accounting system developed by Thomson Reuters. It is used by the Fixed Income team as an alternative method to BNY Mellon Workbench and Bloomberg AIM for tracking fixed income

holdings in the STIF and the LTIF. BNY Mellon Workbench can provide transaction information since BNY Mellon assumed custodial duties for the State; however, PORTIA contains transaction information back to 1997, reflecting periods served by other custodians, such as State Street. PORTIA is also the only tool that can be used to report daily holdings in perpetuity; daily holding information is not available in Bloomberg prior to the AIM implementation.

Each fixed income transaction is entered into PORTIA. Each day, a file of current holdings is generated from PORTIA and uploaded to HubData, a securities pricing data aggregator. The pricing information returned from HubData is loaded back into PORTIA and compared against valuation statements available in Mellon Workbench. Once a month, factor information for mortgage-backed securities in PORTIA is retrieved from the Government National Mortgage Association ("GNMA") and compared to the pricing information provided by BNY Mellon.

In addition to information on fixed-income holdings, PORTIA also contains some historical portfolio data for other asset classes. PORTIA is a traditional client-server application, hosted completely on DST equipment. There are initial plans being made to enhance or replace the PORTIA system within the next 12 months.

CMS BondEdge

CMS BondEdge is a portfolio analytical tool developed by Interactive Data Group and used by the Fixed Income team. BondEdge accepts a feed of data related to holdings, either actual or hypothetical, and permits the user to perform scenario modeling, benchmarking, and cash flow analysis of the portfolio. The client software requires the use of a hardware "dongle", a device that must be plugged into the USB port of the client machine to permit access to the software. The dongle is required when more than one user will access the system; IMD currently uses two hardware dongles permitting two individuals to access the system simultaneously. There are initial plans being made to enhance the CMS BondEdge system with the cloud-based version hosted at the vendor's datacenter.

Grosvenor Capital Management FundCentral

FundCentral is an online tool hosted by Grosvenor Capital Management ("GCM") for the purposes of managing private investments for private equity and real estate. It is used primarily by Operations and the private asset class groups. The FundCentral system contains information on the individual holdings of a limited partnership and this information can be used for portfolio analysis and reporting. FundCentral contains information from the GCM Customized Fund Investment Group ("CFIG"). CFIG reviews private equity investment funds, performs due diligence on select funds, and co-invests with its advisory clients. CFIG has a significant investment relationship with the State of North Carolina. As a result of this relationship with IMD, FundCentral is made available at no additional cost to IMD.

Albourne Castle

Castle, a web-based client portal offered by Albourne Partners, provides IMD's private market asset classes and Hedged Equity with comprehensive qualitative and quantitative research on institutional hedge fund and closed-end private market investment strategies. The portal also contains a bespoke reporting tool which staff uses in their evaluation of specific strategies.

Morningstar Direct

Morningstar Direct is a client-installed application and is currently used by IMD staff in the Risk and Asset Allocation and Global Equity teams, as well as a dedicated investment resource associated with

Supplemental Retirement Plans. The software provides a repository of Mutual Fund data from which staff can create customizable investment performance and fee reports within the program for presentation to the Supplemental Retirement Plans Investment Sub-committee and Board. The software is also used to conduct mean-variance optimization for asset allocation modeling purposes.

Callan PEP

Performance Evaluation Program (PEP) is a performance and risk evaluation tool developed by Callan, a consulting organization utilized by IMD Global Equity team and the Risk and Asset Allocation team. The Global Equity team uses PEP to research, analyze and monitor prospective investments. The PEP tool also provides access to Callan's proprietary database of information on investment managers.

Burgiss Group Private i

Private i is an investment management and performance analysis tool developed by The Burgiss Group. Like FundCentral, it is used primarily by Operations and the private asset class groups to track investments made in the private equity, real estate, credit, and inflation-sensitive asset classes. Private i contains a database of the division's private equity and real estate partnership agreements. Each month, the valuations of the private equity investments from BNY Mellon are loaded into Private i for the purpose of performance analysis and reporting. Private i provides summary information about a fund, but does not track the individual investments within a fund. Information regarding specific investments within a partnership is tracked using GCM FundCentral and Burgiss Private Informant. The Burgiss Group offers a web-based, hosted version of Private i.

Burgiss Private Informant

Private Informant is another software package offered from The Burgiss Group. Private Informant is a web-based portfolio management tool and is not hosted on DST equipment. The software allows for the tracking of individual holdings by a partnership company, while Private i manages the overall valuation of a fund and the individual holdings. Private Informant is used primarily by the operations and private asset class groups to track underlying holdings information.

Private Informant is also provided to IMD as a part of the custodial agreement with BNY Mellon. Much of the information in Private Informant is similar to the information in GCM FundCentral; however the division uses both products since they are afforded flexibility to customize FundCentral by GCM and both systems can be used as sources to reconcile holdings.

Burgiss Private iQ

Private iQ, also offered by the Burgiss Group, is a decision support and benchmarking tool utilized by the Private Equity, Real Estate, Risk and Asset Allocation, and Alternative Investment teams for the analysis of private funds. While Private i and Private Informant are geared towards the funds in which IMD is already invested, Private iQ provides the ability to conduct analysis across the peer fund universe. Data from Private iQ is also incorporated into the SAS Risk Analytics tool.

Man FRM Clarus

Clarus is an online reporting tool from Man Group that enables portfolio transparency by allowing institutional investors greater insight into hedge fund allocations in managed accounts. This enables members of the Public Equity team to review risk and exposure in investments in the managed account platform.

TradeWeb and MarketAxess

TradeWeb is an online marketplace for the trading of fixed income securities such as US Treasury Bonds and the bonds of various government agencies. MarketAxess is another electronic trading platform for corporate bonds. Both platforms provide access to broker-dealers and facilitate trading for the fixed income portfolios and government agencies. While AIM serves as an order management system, providing an oversight framework and the method to communicate transactions for settlement to the custodian, TradeWeb and MarketAxess are the tools where trades are actually executed by the Fixed Income team.

SAS Risk Analytics

SAS Risk Analytics is a custom solution constructed for IMD by the SAS Institute. The system contains risk and performance measurement models for fixed income equity, private markets, hedge funds, and other funds. It also provides specific reports and dashboards for pension fund portfolio management. It contains data management processes specific to pension fund assets, and integrates third-party benchmark and market data related to pension funds. The portfolio and market data are hosted at the SAS Analytics Lab for State and Local Government.

Matlab

Matlab is a numerical computing environment and programming language developed by MathWorks. Matlab includes a number of computational libraries that can be developed for use in portfolio analysis and optimization, simulation, investment selection, and price modeling. Matlab is currently used in the management of the Credit and Inflation-Sensitive Portfolios and is being investigated as a tool for us in macroeconomic modeling.

Backstop Solutions Customer Relationship Management (CRM)

Backstop at its core is a CRM solution. Backstop's CRM entity structure creates organizations which can be a company, a managing organization for a fund, a family office, pension, endowment, foundation, etc. The system maintains a record of all correspondence and permit the logging of all phone calls, meetings, e-mails, and any and all other interactions between IMD and active and potential investment fund managers. The system retains copies of all electronic documentation received from a fund manager related to its business with IMD, including, but not limited to, investment strategy, holdings, performance reports, and contracts and addenda.
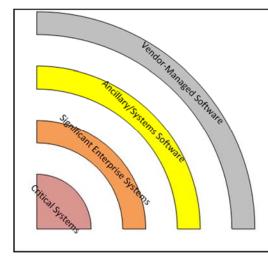
NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

INVESTMENT MANAGEMENT DIVISION

PORTIA SYSTEM (Purchased)

BLOOMBERG RESEARCH and AIM (Purchased)

CMS BOND EDGE SYSTEM (Purchased)

PRIVATE I (Hosted by Burgiss Group)

PRIVATE iQ (Hosted)

PRIVATE INFORMANT (Hosted)

BNY MELLON WORKBENCH (Hosted)

Validate Custodian Statement against Internal Trade Records for Fixed Income

Manage Fixed Income Transactions

Perform Fixed Income Portfolio Analytics

Perform Real Estate and Private Equity Fund Analysis and Performance Reporting

Conduct Peer Fund Performance Analysis for Private Equity and Real Estate

Perform Real Estate Investment Analysis and Performance Reporting

Manage Custodian Account

Record Cash Transactions for Investment Funds

Conduct Investment Research

Portfolio Performance Reporting

Reconcile Pricing for MBS

Transaction Reconciliation

SAS RISK ANALYTICS (Hosted)

MATLAB (Purchased)

MARKETAXESS (Hosted)

TRADEWEB (Hosted)

FUNDCENTRAL (Hosted)

CALLAN PEP (Hosted)

FRM CLARUS (Hosted)

Total Portfolio Risk Analytics and Modeling

Credit and Inflation Analytics

Online Trade Platform for Fixed Income

Online Trade Platform for Fixed Income

Perform Private Equity and Real Estate Analysis and Performance Reporting

Evaluate Performance and Risk of Global Equity Investment Managers

Evaluate Risk and Exposure in the Public Equity Managed Account Platform

ALBOURNE CASTLE (Hosted)

MORNINGSTAR DIRECT (Purchased)

Perform Research on Hedge Funds and Closed-End Private Funds

Develop Mutual Fund Fee and Performance Reports

Applications

Business Processes

Figure 7 - IMD - System to Business Process Mapping

2017-2019

Department of the State Treasurer - Application Roadmap

Investments Management Division

	2016	2017	2018	2019	2020
BNY Mellon Workbench	Maintain	Maintain	Maintain	Maintain	Maintain
Bloomberg AIM	Maintain	Maintain	Maintain	Maintain	Maintain
Bloomberg Research	Maintain	Maintain	Maintain	Maintain	Maintain
PORTIA	Maintain	Replace			
CMS BondEdge	Maintain	Enhance	Maintain	Maintain	Maintain
FundCentral	Maintain	Maintain	Maintain	Maintain	Maintain
Albourne Castle	Maintain	Maintain	Maintain	Maintain	Maintain
Morningstar Direct	Maintain	Maintain	Maintain	Maintain	Maintain
Callan PEP	Maintain	Maintain	Maintain	Maintain	Maintain
Private i	Maintain	Maintain	Maintain	Maintain	Maintain
Private Informant	Maintain	Maintain	Maintain	Maintain	Maintain
Private iQ	Maintain	Maintain	Maintain	Maintain	Maintain
Man FRM Clarus	Maintain	Maintain	Maintain	Maintain	Maintain
MarketAxess	Maintain	Maintain	Maintain	Maintain	Maintain
TradeWeb	Maintain	Maintain	Maintain	Maintain	Maintain
SAS Portfolio Risk Analytics	Enhance	Enhance	Maintain	Maintain	Maintain
Matlab	Maintain	Maintain	Maintain	Maintain	Maintain
Backstop CRM	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 8 - IMD - System Roadmap

Strategic Technology Initiatives for 2017-2019

Implement Tools to Support Document and Electronic Content Management

IMD seeks to implement a tool to manage the creation, approval and archiving of legal and business documents and content related to investment operations. At the same time, the Department of State Treasurer already has a plethora of electronic document management technology deployed across the enterprise, and a new project initiated by FOD for procurement and contract management that will likely include elements of document storage and business process automation. The challenge for the IT division will be to meet the needs of IMD, as well as other divisions seeking similar, but not exactly the same functionality, without unnecessarily expanding the agency's application portfolio and increasing the overall support burden involved in maintaining these systems.

Establishing a multi-division working group, understanding all requirements around document management, and identifying common areas of functionality shall be the first order of business for the IT division. Secondly, the IT division must identify opportunities to leverage existing technology to support required functionality, with SharePoint as the most likely candidate to support document management functionality for IMD and all other divisions. Since the IT Division is targeting an upgrade to its SharePoint infrastructure no later than mid-2017, it is unlikely that any implementation of new functionality leveraging SharePoint will take place until the new release is operational in the DST environment; however, a coterminous rollout of an upgrade with new functionality will be evaluated.

Although it remains a last-choice option, the implementation of a new document and electronic content management system may be necessary to support IMD business needs. If this becomes the necessary direction, a competitive procurement and implementation will likely carry this project into 2018 and the IT division will also seek opportunities to migrate existing platforms into a new system selected for this project.

Implement Technology Infrastructure to Support Equity Index Internal Trading

As part of establishing a new internal trading desk for public equity assets, IMD will need to invest in a set of tools to potentially support front-, middle- and back-office operations. The specific needs will be determined through a consulting analysis that will review back-office technology and internal resource assessment needs. Examples of potential tools include a portfolio accounting system designed to track assets, cost basis, and realized gain or loss; a portfolio management system used for transaction management and reporting; and a reconciliation system, designed to accept data feeds and validate transactions when they have cleared.

Depending on the recommendations of the consulting engagement, IMD, in partnership with FOD and the IT division, would begin competitive procurement for one or more of these systems in early 2017. While a complete, integrated suite of tools may provide for ease of implementation, the requirements of IMD may necessitate partial outsourcing and the purchase of separate products, with integration to occur as part of a professional services engagement. Hosted solutions, or software-as-a-service (SaaS) offerings are of special interest because of the demanding operational requirements of these systems. A service provider can offer great value in reliability and recoverability, having experience in delivering their solution to other institutional and industry investment managers.

Due to the specialized nature of these products, IMD would engage the expertise of an investment industry consultant to assist with the selection of appropriate products, with full implementation targeted no later than the end of 2017.

Enhance Digital Productivity

Technology has tremendous potential to improve the productivity of IMD, not necessarily in the form of enterprise, line-of-business applications, but smaller systems and tools than will have an impact in the day-to-day operations of the division. For instance, IMD staff regularly review material from current and potential investment managers and increasingly, this material is made available in digital format. Often times, this material is too large to be distributed via e-mail, and tools that allow for the receipt and distribution of large electronic files would help with issues of e-mail attachment size limitations. Tablets that allow IMD staff to review material during meetings, along with note-taking technology that provides for centralized storage with synchronization and sharing would be of immense benefit to IMD. Portfolio teams could share and retain information more easily, and could do so while staff is working remotely. In addition to improving technology capabilities for remote work, tools like Skype and GoToMeeting improve collaboration and can even reduce the need for expensive travel.

IMD has recently implemented a new online trade ticket system that provides for trade ticket routing and approval. This replaces a paper process that also required physical signatures, and it can allow the staff to both execute trades quicker and maintain better audit records of trade approvals, as opposed to binders of physical records.

There are a number of systems, tools, and technologies like these that can benefit IMD; however, the expansion of the portfolio must be weighed against the challenge of integration and data security. Each introduction of a new tool creating new questions about general administration, authentication and user access, security of data, and risk of vendor lock-in. The IT division will continue to work with IMD in the identification, evaluation and implementation of enabling tools.

Continue Work on SAS Risk Management Tool

IMD continues to make necessary adjustment and changes often precipitated by 3rd party vendors (e.g. MSCI Sector Changes) which have a cascading effect on data validation across the entire tool. IMD is also working to ensure performance data from the Managed Account Funds are calculated and feed properly into the SAS Risk Management Tool.

IMD has been presented with quotes for operation and maintenance of the SAS Risk Management tool for two additional years through the end of 2018. In addition to ongoing maintenance of data interfaces, dashboards, and models, these optional years of service provide an opportunity for new model development, incorporation of new data elements and feeds, and further enhancement of the existing product. Continued utilization for another one or two years is under evaluation and IMD is expected to decide on a course of action no later than Q4 2016.
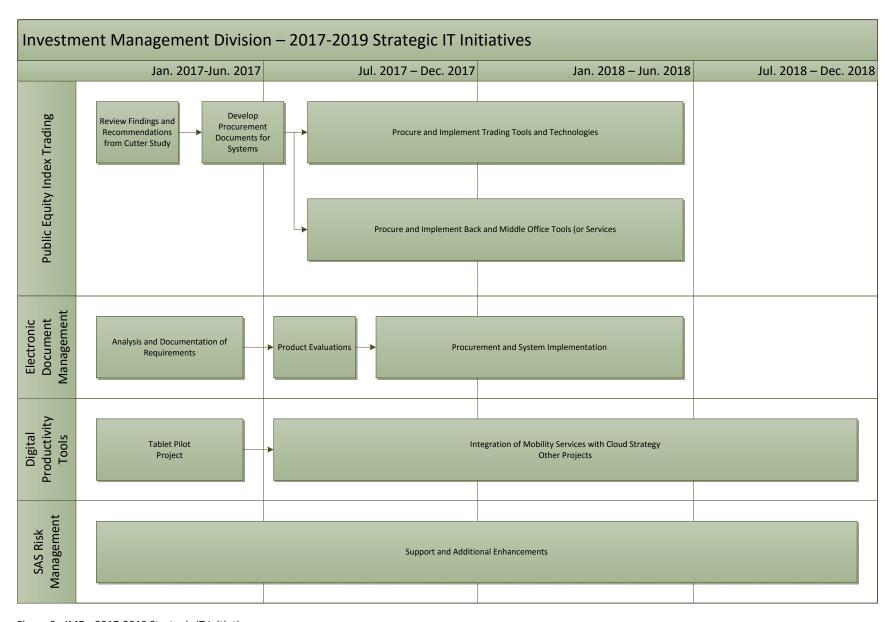
Investment Management Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018

Public Equity Index Trading

- Review Findings and Recommendations from Cutter Study
- Develop Procurement Documents for Systems
- Procure and Implement Trading Tools and Technologies
- Procure and Implement Back and Middle Office Tools (or Services

Electronic Document Management

- Analysis and Documentation of Requirements
- Product Evaluations
- Procurement and System Implementation

Digital Productivity Tools

- Tablet Pilot Project
- Integration of Mobility Services with Cloud Strategy Other Projects

SAS Risk Management

- Support and Additional Enhancements

Figure 9 - IMD - 2017-2019 Strategic IT Initiatives

2017-2019

2017-2019

Retirement Systems Division

Overview

The Retirement Systems Division (RSD) of the Department of State Treasurer administers the North Carolina Retirement Systems, death benefit plans, disability plans, and the NC Supplemental Retirement Plans (voluntary, defined contribution plans) created under North Carolina state law. These plans and programs cover the vast majority of active and retired public employees in the state.

The North Carolina Retirement Systems Division provides benefits to more than 900,000 members, including:

- Teachers
- State Government Employees
- Local Government Employees
- Firefighters
- Rescue Squad Workers
- Judges
- Law Enforcement Officers
- National Guard Members
- State Legislators
- Registers of Deeds
- Other public workers

The Retirement Systems Division administers seven retirement systems and several smaller systems and supplemental pension funds.

- Teachers' and State Employees' Retirement System (TSERS)
- Local Government Employees' Retirement System (LGERS)
- Consolidated Judicial Retirement System (CJRS)
- Firefighters' and Rescue Squad Workers' Pension Fund (FRSWPF)
- National Guard Pension Fund (NGPF)
- Legislative Retirement Fund (LF)
- Registers of Deeds Supplemental Pension Fund (RDSPF)

A key purpose of the retirement systems and benefit plans is to assist public employers in attracting and retaining high quality employees by providing valuable post-employment benefits, including replacement income at retirement, as well as death, disability, and survivor benefits. RSD staff members continuously review features and options within the benefit plans to ensure that all promised benefits are attainable over time and are an efficient use of employees' and taxpayers' contributions.

The Division is also responsible for communicating the Treasurer's retirement readiness mission — that all public employees will be able to replace 80% of their pre-retirement income for each year of their retirement. The total assets of all state-administered pension funds were valued at $89.6 billion as of June 30, 2015.

The total number of retirees receiving benefits for the year ending June 30, 2015, was 267,779. The total dollar amount of benefits paid for year ending June 30, 2015, was $5.6 billion, up from $5.3 billion in the previous fiscal year.

Legislative Highlights

The 2015 Session of the North Carolina General Assembly enacted the following retirement-related legislation:

- Full funding for the Annual Required Contributions of the retirement systems.
- Extension of the eligibility to participate in the NC 403(b) Program to teachers and faculty of the North Carolina Community College system.
- An increase of the monthly benefit for members of the National Guard Pension Fund.
- Approval of funds to improve ORBiT's self-service online retirement system.

Supplemental Plan Awards

The Supplemental Retirement Plans NC 403(b) Program was recognized in 2015 by two national organizations and granted two prestigious national awards.

The first was the "2015 Excellence in 403(b) Plans Award," presented by the National Association of Government Defined Contribution Administrators (NAGDCA), for which the development and implementation of the NC 403(b) Program was recognized as an outstanding achievement in defined contribution plan design.

The second award was granted by Pensions & Investments Magazine and the Defined Contribution Institutional Investment Association. Treasurer Cowell was named a "2015 Innovator" for her efforts in providing a thoughtful, multi-layered and unique legislative solution that would help North Carolina's frontline educators and school staff to ultimately save more for retirement. In naming Treasurer Cowell as the recipient, the NC 403(b) Program was recognized for its "competitive pricing, institutional investment management and strong oversight by the North Carolina Supplemental Retirement Board of Trustees…while helping NC educators reach retirement readiness."

In addition, the NC 401(k) and the 457 Plans were recognized for its 2014 National Save for Retirement Week communications program by the National Association of Government Defined Contribution Administrators. The NAGDCA Leadership Recognition Award was presented to the Retirement Systems Division for the NC 401(k) and 457 Plans in the category of excellence and innovation in retirement plan design, administration and/ or effective communication methods. The basis for the award was its comprehensive and targeted outreach to Millennial and Generation X males and females that led to an enrollment boost in

the plans of 4 percent. Since then, the Department of State Treasurer has been awarded two 2015 NAGDCA Leadership Awards and has also received a 2016 Plan Sponsor Council of America Signature Award, recognizing excellence in Plan Communication. All of these awards recognize the efforts being made in support of the Treasurer's mission to secure the retirement of North Carolina's public servants while also delivering personalized services in that effort.

Plan Benchmarking Study

In support of the Department's overall mission to exercise fiduciary oversight and provide outstanding customer service that provides value to, and instills confidence by, the state's citizens, customers, and financial community, the Supplemental Retirement Board of Trustees approved a benchmarking study comparing the NC 401(k) and NC 457 Plans to a peer group of private and public sector plans. In 2015, CEM Benchmarking completed its study of 16 comparable defined contribution plans and found that the NC 401(k) and NC 457 Plans delivered a total net value added well above its peer group for the five-year period ending 2014. Total net value added measures to what extent the plans' investment options outperformed their benchmark indices after fees.

Highlights from 2015-2017

IRS Compliance Initiatives

In 2015, the Retirement Systems Division, in conjunction with the IT Division, completed work to bring all North Carolina pension systems into compliance with U.S Internal Review Service Section 415(b) through the establishment of a Qualified Excess Benefits Arrangement (QEBA). The QEBA program provides for the payment of pension benefits in excess of IRS annual limits, separate from TSERS, LGERS, and other existing 401(a) defined benefit programs. Implemented through changes to ORBIT and Microsoft Dynamics GP, the QEBA program provides system fund accounting, payroll operations, and annual tax reporting for members receiving benefits under this arrangement.

Additionally, RSD and IT implemented modifications to ORBIT to comply with IRS provisions related to Requirement Minimum Distributions (RMD) at age 70 ½. Under IRS rules, all participants in an employer-sponsored retirement plan must begin withdrawing funds at age 70 ½, regardless of employment status. The ORBIT system was modified to identity individuals separated from active service, but not in receipt of a retirement benefit, approaching the defined RMD age. Letters to members notifying them of IRS requirements to begin withdrawals are automatically generated and mailed, along with information detailing how to initiate retirement benefits. Following two warning letters, vested members are automatically placed into retired status and non-vested members are returned their contributions. This automated notification and withdrawal process has satisfied IRS requirements for retirement systems under RSD's administration.

Contribution-Based Benefit Cap (CBBC)

In 2014, the CBBC legislation was enacted that authorized the Department of State Treasurer to take measures to curb "pension spiking" effective January 1, 2015. A CBBC liability typically arises as a result of a substantial increase in compensation that results in unusually high liabilities to the Retirement System.   Prior to the change in the law, these unforeseen liabilities were then absorbed by other members and employers in the Retirement System. With the passage of this law, the impacted member's employer (or employee if first hired after Jan 1, 2015) is now responsible for paying the additional employer contribution incurred when a member's retirement exceeds the CBBC. The ORBIT system was modified to invoice employers for the CBBC liability and accept payments under this legislation.

In consultation with Buck Consulting, the actuary firm for the State retirement systems, RSD and the IT Division developed a formula to identify individuals in the ORBIT system at risk of exceeding the contribution-based benefit cap established through actuarial analysis. Employing units are now notified of individuals at risk through a monthly watch list report.

Enabling Technology Enhancements and Upgrades

Over the past two years, RSD and the IT Division have implemented or started the implementation of several new and enhanced enabling technologies to support RSD operations. As part of the Department of State Treasurer Building Consolidation and Relocation project, RSD implemented new Call Center and Interactive Voice Response (IVR) technology to replace outdated and unsupported technologies. Working with the Department of Information Technology's Telecommunications section, RSD converted from a legacy Nortel Symposium Call Center system to a new Avaya solution. The new Avaya solution provides call routing for member services personnel and tools for call monitoring to assess call center performance. Simultaneously, RSD implemented a new Interactive Voice Response (IVR) system from

Unify. The IVR system is fully integrated with ORBIT and designed to permit callers to receive information on their pension benefits even when the call center is unavailable. RSD also implemented TeliOpti WFM to optimize the schedules of call center personnel based on trends in call volume.

RSD and the IT Division have started making strides toward the expansion of self-service functionality available to retirement system members. When the ORBIT Self-Service web application was introduced in 2007, only a limited number of functions were made available, primarily for retired members to manage their benefit payments. RSD has developed a strategy to introduce more self-service functionality to members, focusing on key activities conducted by active members, such as initiating retirement or requesting a refund of contributions. In 2015, the division was appropriated funds by the General Assembly to hire contractual personnel to assist with this effort. As part of the expansion of services, the IT Division reviewed the security features of the ORBIT Self-Service website and decided to make modifications to provide a more secure user experience. The IT Division is introducing functionality for multi-factor authentication to ORBIT Self-Service and developing functionality to use confirmation codes to validate transactions conducted on the website. RSD, IT and the Communications Section of the Office of State Treasurer has also redesigned the ORBIT Self-Service interface to improve the overall user experience, support mobile devices, and avoid unnecessary confusion or problems when using the site. These modifications will be made available in ORBIT Self-Service in Q4 of 2016.

While ORBIT is the principal business application used by RSD, RSD-IDMS, their electronic document and workflow system is also an important part of business operations. RSD-IDMS houses over 30 million electronic document images related to retirement system member accounts; enrollment forms, beneficiary designations, and inbound and outbound correspondence are just some of the documents maintain in the system. The workflow component which manages the flow of business processes throughout RSD has as many as 8,000 processes open at one time related to refunds, retirements, and other activities. Beginning in late 2015, the IT Division began the complex task of redeveloping these business process models for use in EMC WorkflowXtender 8.0. Simultaneously, the IT Division has been working with RSD to replace Oracle Document Capture, the document imaging solution used in RSD-IDMS, as well as upgrading EMC DiskXtender and EMC ApplicationXtender, the document storage components of the system. Different components of the system will be moved into production at different phases, beginning in Q3 2016, with all work expected to be complete by the end of 1Q 2017.

Challenges and Opportunities for 2017-2019

Expand Self-Service Capabilities

Each year, an increasing number of participants become eligible to receive benefits under a retirement plan administered by RSD. "Baby Boomers", individuals born between 1946 and 1964, continue to reach retirement age in increasing numbers, a trend expected to continue for at least another 15 years as people born later in this period reach their mid-60s and seek to retire from the work force. The increase in retired and retiring members will continue to place a strain on the personnel resources of RSD. Call volumes will increase, inbound and outbound correspondence will increase, and overall member activity will increase as system members initiate retirements, change beneficiaries, modify tax withholdings, change health benefit elections, and perform other benefit-related activities.

The challenge for RSD is to develop a response to this increased demand for services without significantly increasing headcount or operational costs. Technology solutions are a powerful tool to improve operational efficiencies and increase the capacity of the organization. Developing self-service solutions that enable members to utilize web and phone technologies to conduct business with RSD is an important priority for the division, not only for the next two years, but for the foreseeable future.

Increase Security and System Availability

With efforts to drive more members to make use of functionality in ORBIT Self-Service, RSD must continue to diligently protect member personal data and undertake efforts to increase ORBIT system availability as more members come to rely on ORBIT Self-Service. Efforts are already underway to improve user authentication and require confirmation of transactions conducted using ORBIT Self-Service. RSD must promote awareness of these new security features through targeted member communication and identify additional ways to keep user information safe without severely compromising ease of use.

While ORBIT performance under current workloads has been extremely reliable, the system must be prepared to handle an increase of users at all hours of the day. Additional capacity, improved disaster recovery capabilities and improved performance monitoring are just a few approaches to make sure ORBIT is ready for more utilization of new self-service functionality. Training for call center representatives on self-service functions and more user education on self-service functionality is also critical to a successful expansion of self-service functionality.

Future of Retirement Systems

As with many defined-benefit programs across the country, the future of North Carolina's retirement systems is not clear. Many government-sponsored pension programs have been closed to new participants in favor of a defined-contribution plan. In some cases, hybrid programs have been established, allowing individuals to elect a plan at the start of their employment, or make one or two conversions between a defined-benefit and a defined-contribution plan throughout their career. Private-sector companies have instituted pension buyout programs to clear long-term liabilities for benefit programs, an alternative for public pensions under investigation in the City of Philadelphia and the State of Illinois.

As the General Assembly and other elected officials define policy related to government-sponsored pension programs, RSD must be prepared to respond to changes to support new retirement benefit arrangements put forth for public sector employees. Since ORBIT supports not only the administration of TSERS, but local governments in the LGERS system, the IT Division will play a pivotal role in conducting system modification to support not only Statewide pension legislation, but policies adopted by local governments.

Evolving IRS regulations and modifications to NC General Statutes will continue to provide challenges to both RSD and IT as these rule changes result in modifications to the ORBIT system to maintain compliance. Both large and small changes, some with short timeframes for implementation, can emerge at any time and threaten progress of ongoing initiatives by diverting attention and personnel.

Current System Portfolio and Operational Activities

The Application Portfolio of the Retirement Systems Division supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 10 - RSD - System to Business Process Mapping*. The 2016-2020 Application Roadmap for the division is provided in *Figure 11 - RSD - System* Roadmap.

ORBIT (Online Retirement Benefits through Integrated Technology)

ORBIT comprises three distinct systems utilizing the same core common codebase and data repository, ORBIT Line of Business, ORBIT Member Self-Service, and ORBIT Employer Self-Service.

The ORBIT Line of Business System is the principal business application of the division. It is the system of record for all pension systems under the administration of RSD and maintains all records of service, contributions, refunds, service purchases, and named beneficiaries. It is used by RSD personnel to process all system activities, such as enrollment, retirement, disability applications, refunds, service purchases, and payment of death benefits. ORBIT is also used to process the monthly payroll for all benefit recipients – over 270,000 people each month.

ORBIT Member Self-Service is a publicly accessible web application that allows members of the retirement system to manage elements of their benefits through an online interface. Members can request benefit estimates, obtain their current balance, change tax withholding, change electronic fund transfer information, and change address information through the Member Self-Service application.

ORBIT Employer Self-Service provides tools for participating employers to submit information regarding employees to RSD. Each month, via file transfer protocol (FTP) or through the Employer Self-Service interface, each employer participating in a pension system submits information on service, salary, and pension contributions for all active employees.

The ORBIT system was first placed in service on Dec. 31, 2005 for the processing of retirement payroll. In October 2007, all remaining processes were implemented. The ORBIT system was constructed by BearingPoint (now Deloitte) personnel, working alongside DST IT and RSD resources. It is a Microsoft .NET application, utilizing a mixture of ASP.net Web Forms and ASP MVC4 and other .NET technologies such as Windows Communication Foundation ("WCF") and LINQ. It interfaces with a Microsoft SQL Server RDBMS. Along with the Microsoft .NET application, the ORBIT system makes use of the following technologies.

Microsoft BizTalk

Microsoft BizTalk Server is a system integration and process orchestration tool used extensively by the ORBIT system. Employer Reporting, the process by which employers participating in an RSD-managed retirement system report information on active employees for service and contribution records, is managed by Microsoft BizTalk. The ORBIT system receives monthly feeds of personnel records from over 1,000 employers participating in TSERS and LGERS each month. BizTalk is also used to integrate and process monthly health insurance premium deductions from CobraGuard, the State Health Plan billing provider, for over 200,000 retirees and disability members who are eligible to receive health insurance. The BizTalk Server also manages integration between Microsoft Dynamics GP, the accounting system used by RSD, and ORBIT, passing accounting transactions between systems.

Adobe Forms

Adobe Forms is used in ORBIT to produce pre-populated PDF forms for printing or online presentation. These forms are used by members to initiate RSD processes, such as a retirement application, an application for refund of contributions, an application for change of EFT banking information, etc.

C-Series

C-Series is a software package from Bottomline Technology used for the production of checks and EFT stubs. RSD produces hundreds of physical checks weekly for supplemental and refund payroll and thousands of physical checks monthly for retirees and disability members– each member's first monthly retirement benefit check is printed, as are monthly payroll checks for individuals not opting to participate in EFT and grandfathered into the physical payment system.

SQL Server Reporting Services (SSRS)

SQL Server Reporting Services is part of the Microsoft Business Intelligence Suite of SQL Server products. It is used as the reporting toolkit attached to ORBIT.

SilentPrint

SilentPrint from Funasset Software is a batch print management package. This tool is used to produce all outbound physical mail for RSD, printed nightly.

RSD-IDMS (Retirement System Division – Integrated Document Management System)

RSD-IDMS is an electronic document management and business process automation system implemented in 2002 for the management of documents related to enrollment, eligibility and processing of pension benefits along with any other electronic artifacts of operational activities. The system consists of EMC ApplicationXtender 6.0, an electronic document management system, Oracle Web Capture, a web-based document scanning and indexing solution, and EMC WorkflowXtender 6.0, a business process automation toolkit for the routing and monitoring of work activities. All components of this system are being upgraded or replaced in FY2016-2017.

RSD Data Warehouse

The RSD Data Warehouse is a reporting and analysis data repository used by the RSD for operational performance monitoring, as well as demographic and financial analysis of the various retirement systems. The Data Warehouse aggregates data from ORBIT and the RSD-IDMS and leverages the SQL Server Business Intelligence Toolkit to provide analysis cubes, reports, report builder functionality, and data mining functions.

Address Verification – MelissaData

All outbound mail is validated for address accuracy and matched against the National Change of Address ("NCOA") database. This is necessary to receive bulk-mailing discount rates from the US Postal Service. DST IT has contracted with MelissaData, a USPS-recognized provider of address validation services, to perform address verification services. MelissaData provides a web-service interface to their hosted database of valid addresses and the NCOA database. This service is used by RSD, as well as the Unclaimed Property Division.

Call Center – Avaya & TeleOpti WFM

RSD's Call Center uses Avaya hardware and software hosted by DIT Telecommunications. The Avaya products, as well as any additional internal ITS products, track, monitor, and report on all call related activities. An Integrative Voice Response ("IVR") system from Unify is also integrated into call center operations. It makes web service calls directly into the ORBIT system to feed the IVR all necessary data for each of its functions. TeliOpti WFM is used for workflow management functions and helps to optimize scheduling for call center personnel based upon call volume trends and forecast. The Call Center also utilizes call recording technology for quality control, training, performance monitoring, and legal and regulatory compliance.

Mortality Audit - Berwyn DeathCheck

Berwyn DeathCheck is a mortality audit service that utilizes information from the Social Security Administration, state and local government vital records, and proprietary data sources, as well as matching algorithms, to identify deceased individuals in a data population. Each quarter, RSD provides Berwyn with the information on all individuals actively in receipt of a retirement or disability benefit to ensure all payments are being issued to living persons.

Mortality Audit – GDAC

Similar to the service provided by Berywn, RSD supplies information each month to the NC Government Data Analytics Center (GDAC) to conduct a mortality audit of benefit recipients and inactive retirement systems members who are neither actively contributing to the system nor receiving benefits. The GDAC matches data supplied RSD against records in the Social Security Administration Death Master File (SSDMF) and other data records supplied by other state agencies such as DHHS, DOR, and DOT.

Figure 10 - RSD - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

Retirement Systems Division

	2016	2017	2018	2019	2020
ORBIT (Online Retirement Benefits through Integrated Technology)	Enhance	Enhance	Enhance	Enhance	Enhance
MelissaData Smart Mover	Maintain	Maintain	Maintain	Maintain	Maintain
Microsoft BizTalk	Maintain	Maintain	Maintain	Maintain	Maintain
Adobe Forms	Maintain	Replace			
SQL Server Reporting Services	Maintain	Maintain	Maintain	Maintain	Maintain
C-Series	Enhance	Maintain	Maintain	Maintain	Maintain
SilentPrint	Enhance				
RSD-IDMS - Retirement Integrated Document Management System	Enhance	Maintain	Maintain	Maintain	Maintain
Retirement Data Warehouse	Maintain	Maintain	Maintain	Maintain	Maintain
Avaya - TeliOpti WFM Call Center	Maintain	Maintain	Maintain	Maintain	Maintain
Interactive Voice Response - Unify	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 11 - RSD - System Roadmap

Strategic Technology Initiatives for 2017-2019

ORBIT Self-Service Enhancements

In 2016, RSD and the IT Division initiated the first phase of a multi-year effort to expand the self-service functionality in ORBIT available to retirement system members. The first phase is focused on enhancing user security and improving the user experience, primarily through the use of responsive design to support mobile device access. Impersonation, the capability to allow call-center representatives to see ORBIT Self-Service as a customer, is also being constructed into new self-service functions. These modifications are expected to be available no later than Q4 2016.

Following this effort to lay a foundation for future development, the IT Division will begin to develop functionality to enable self-service processes. Functionality will first be developed to permit members to initiate their retirement from the ORBIT Self-Service web application. Today, all retirements are initiated through the use of paper forms mailed or faxed to RSD. The implementation of self-service functionality will reduce the burden on staff involved in physical records management, shrink the time involved from retirement initiation to the start of benefits, and ease the process for members to claim their retirement benefits.

When this new functionality is in place and if funding remains available, RSD and the IT Division will begin work on an enhancement to permit members to withdraw funds from retirement systems upon separation from employment through ORBIT Self-Service. As with retirements, this functionality for refunds of contributions will reduce paper records, improve process efficiency, and improve responsiveness to members. Additional functionality for self-service implementation will be explored at the conclusion of this project and plans for future expansion will be developed at that time.

One area of potential expansion is the production of on-demand benefit statements for members. Each year, an annual statement is made available to each member, outlining current balances and projected benefits for both the defined-benefit plan and any defined-contribution plans in which the member participates. Through the ORBIT Self-Service application, RSD would like to make this information available to members with data updated throughout the year as balances and contributions change with each pay period. This effort would require new data integration with defined-contribution administrators such as Prudential and TIAA-CREF, as well as modifications to the ORBIT application to produce recalculated benefit statements upon request.

Fire and Rescue Pension Fund Modifications

Work continues on major enhancements to ORBIT to address management of the Firefighters' and Rescue Squad Workers' Pension Fund. A great deal of data cleansing has occurred over the past two years, creating more accurate information about member contributions and service history required for benefit calculations and most importantly, actuarial analysis.

Analysis of requirements for enrollment and contribution intake have been conducted, and the designs for modifications to the ORBIT Employer and Employee Self-Service subsystems are being developed. When complete, these modifications will allow members of the pension fund to more accurately monitor their contribution and service history. It will also allow fire and rescue squads to submit and manage rosters without the need for paper documentation. Analysis is being conducted on benefit processes such as retirement, refunds, and death benefits and improvements that can be made to ORBIT to support these activities.

Disability Enhancements

In late 2011, a study of the RSD Division's processing of death and disability benefits was conducted by Buck Consultants. The study highlighted numerous deficiencies in staff training, operations, procedures, and tools, notably, problems with the ORBIT system. Buck identified numerous inconsistences between statutory requirements, business operating procedures, and ORBIT functionality. These inconsistencies created the risk of incorrect payments, exposed the system to potential abuse, and created difficulty for staff working to meet the needs of retirement system members. In 2013, RSD, in conjunction with DST IT, rolled out the first set of modifications to ORBIT based upon the recommendations of the study. This set of modifications was focused on the processing of death benefits for deceased members and their surviving beneficiaries.

Following the completion of Fire and Rescue enhancements, work will resume on the implementation of recommendations related to the processing of disability benefits. Significant analysis of disability processes has been conducted; however, work in this area was suspended to focus on other initiatives such as IRS compliance, pension spiking control enhancements, and modifications to the Fire and Rescue pension system. A redesign of ORBIT functionality to address processing deficiencies will be conducted. There is also the potential to develop new self-service functionality for the administration of disability benefits following the implementation of self-service functionality for retirement and refund processing.

Complete Contribution-Based Benefit Cap (CBBC) Initiatives

While a great deal of progress has been made to address CBBC, there is more work to be completed. The next phase of development will involve modifications to the employee reporting process to allow units of government to pay contributions resulting from CBBC liability as part of the normal contribution remittance process. Self-service initiatives and the modifications to the Fire and Rescue Pension fund are at the forefront of projects for RSD and the IT Division, but it is anticipated that these modifications will be completed within the next two years, although the specific timeframe will be determined based upon progress in these other areas.

Retirement Readiness

Retirement readiness, the goal that public employees will be able to replace 80% of their pre-retirement income, is a primary driver of RSD activities. To this end, RSD and the IT Division will seek to implement a number of initiatives to support retirement readiness. In addition to on-demand benefit statements designed to better educate members about their retirement, targeted e-mail and web communication regarding RSD-sponsored retirement programs will also be key to educational efforts.

RSD also seeks to provide for automatic enrollment in a defined-contribution plan at the start of an employee's service in government. This functionality could be implemented as an extension of the defined-benefit enrollment currently conducted by ORBIT, and will require data integration and exchange with defined-contribution plan administrators. This functionality becomes even more important in the event the defined-benefit plan is closed to new participants to ensure that new employees are enrolled and contributing to a tax-deferred retirement plan. The criticality and timing of these enhancements will be significantly influenced by policy and legislative decisions around the defined-benefit plan made in the coming years.

Call Center Study

RSD, in conjunction with the Unclaimed Property Division, seeks to study call center operations in both divisions. This study will examine all facets of call center operations, such as current and future call volumes, staffing levels, training, service delivery, costs, and technology, as well as provide comparisons to industry best practices. The results of this study will be used to determine the feasibility of call center consolidation, future service delivery models, and key metrics to evaluate performance effectiveness.

Implementation of a New Document Scanning Solution

RSD currently uses Oracle Document Capture, a product that has been discontinued by Oracle and is no longer supported or receiving upgrades to functionality. The IT Division has been evaluating potential solutions and will be seeking to implement a solution with a long history of successful implementations in a variety of scenarios that can support the document load of RSD. At the same time, an initiative to replace the document scanning solution used by the Unclaimed Property Division is underway, and a single solution serving both divisions is ideal. The IT Division expects to select and procure a solution in late 2016 and implement no later than the end of the 2Q of 2017.

Retirement Systems Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018- Dec. 2018
ORBIT Self-Service Expansion	Security and Interface Updates	Application for Retirement	Refund Processing and Additional Functions (To-Be Determined Based on Workload and/or Automation Value)	
RSD-IDMS Upgrades	Implement Workflow Changes	Scanning Software Replacement		
Fire & Rescue Enhancements	Fire/Rescue System Enhancements			
Disability Enhancements				Disability Enhancements
CBBC Completion	Complete Contribution-Based Benefit Cap Enhancements			
Auto-Enrollment for DC Plan	Pursue Authorization for Auto-Enrollment for Defined Contribution Plans	Implement Auto-Enrollment Functionality		
Call Center Study		Call Center Study		

Figure 12 - RSD - 2017-2019 Strategic IT Initiatives

2017-2019

State and Local Government Finance Division

Overview

The State and Local Government Finance Division handles the sale and delivery of all State and local debt and monitors the repayment of State and local government debt. Staff counsel local governments in determining the feasibility of projects, the size of the financing, and the most expedient form of financing. Additionally, this Division monitors and analyzes the fiscal and accounting practices of all local governments.

The Division comprises the Debt Management section, which issues and monitors all State and local debt, and the Fiscal Management section, which monitors fiscal and accounting standards for local governments. The Division also provides the State Treasurer, the Local Government Commission, the North Carolina Capital Facilities Finance Agency, and the North Carolina Infrastructure Finance Corporation with staff assistance in fulfilling their respective statutory functions.

History

In 1931 the North Carolina General Assembly established the Local Government Commission (LGC), staffed by this Division, to help address the problems in local government finance caused by the Depression. In 1933, 62 North Carolina counties, 152 cities and towns, and some 200 special districts were in default on the principal or the interest or both of outstanding obligations. The debt of its local governments in general finds a significantly better reception on the national bond markets than the national average. Many attribute this favored credit status, in part, to the work of the LGC. This Commission is unique nationally and is often referred to as a model for local government financial oversight.

The Local Government Commission

The LGC, established by G.S. 159-3, provides assistance to local governments and public authorities in North Carolina. It is staffed by the Department of State Treasurer and approves the issuance of debt for all units of local government and assists these units with fiscal management. The Commission is composed of nine members: the State Treasurer, the Secretary of State, the State Auditor, the Secretary of Revenue, and five others by appointment (three by the Governor, one by the General Assembly upon the recommendation of the President Pro Tempore, and one by the General Assembly upon the recommendation of the Speaker of the House of Representatives). The State Treasurer serves as Chair and selects the Secretary of the Commission, who heads the administrative staff serving the Commission. The General Statutes require the Commission to meet at least quarterly. As a matter of practice, the Commission meets on the even months, and the Commission's executive committee meets in the odd months.

The North Carolina Capital Facilities Finance Agency

Private colleges, universities, nonprofit and for-profit corporations providing certain services may receive tax-exempt financing assistance through bonds issued by the North Carolina Capital Facilities Finance Agency (Agency), established by the General Assembly in 1986. The Agency Board of Directors is composed of seven members: the State Treasurer, the State Auditor, and five others by appointment (three by the Governor, one by the President Pro Tempore of the Senate and one by the Speaker of the House of Representatives). The administrative staff for the Agency is provided by the Department of State Treasurer. The Agency meets monthly.

The staff presents the proposed financing and its recommendations to the Agency board and subsequently to the LGC for approval. Since its creation, the Agency has provided over $7.1

billion in tax-exempt capital financing. As of June 30, 2015, there were $2.93 billion in outstanding obligations. Each issue is payable solely from revenues derived from each entity financed, is separately secured, and is separate and independent from all other series of bonds as to source of payment and security. During the fiscal year ending June 30, 2015, the Agency issued $1.11 billion in bonds for 12 institutions. The Agency's annual report is available from the Department of the State Treasurer.

Debt Management

The Division issues and monitors all State debt, including debt secured by a pledge of the taxing power of the State and debt for which repayment is subject to appropriation. With the assistance of other State agencies, the Division determines the cash needs, plans for the repayment of debt (maturity schedules) and schedules the sale at the most appropriate time. Finally, the Division handles the actual sale and delivery of the debt, maintains the State bond records and register of bonds, and monitors the debt service payments. At June 30, 2015, the State had General Obligation bonds outstanding of approximately $3.5 billion and certificates of participation, limited obligation bonds and lease-purchase bonds outstanding of approximately $2.25 billion.

The Division also is responsible for the authorization and sale of revenue bonds for the North Carolina Medical Care Commission, the Municipal Power Agencies, the North Carolina Capital Facilities Finance Agency and the North Carolina Housing Finance Agency.

The other primary function of the Division is the approval, sale and delivery of all North Carolina local government bonds and notes. This includes the sale of revenue bonds, which are secured only by specific revenue pledged in payment of the bonds. The Division staff counsels and assists local governmental units in determining the necessity of a project, the size

of the issue, and the most expedient form of financing. The staff strives to resolve all problems and to determine that all statutory requirements are met before applications are presented to the LGC for approval.

Debt records are maintained for all units on principal and interest payments coming due in the current and future years. All debt service payments are monitored through a system of monthly reports. As of June 30, 2015, authorized and unissued general obligation bonds for local governments and authorities amounted to $4.5 billion and general obligation debt outstanding amounted to $9.5 billion.

Another responsibility of the Division's staff is assisting units that desire to enter into agreements to finance the lease or installment purchase of capital assets. Before approving such agreements, the LGC must find that the proposed project is necessary and expedient, the proposed undertaking cannot be economically financed by a bond issue and that the contract will not require an excessive increase in taxes. During the fiscal year ending June 30, 2015, the LGC approved contracts or other agreements (including refundings) totaling $1.8 billion.

Fiscal Management

Another function of the Division involves monitoring certain fiscal and accounting standards prescribed for local governmental units by the Local Government Budget and Fiscal Control Act. The Act requires each unit of local government to have its accounts audited annually by a Certified Public Accountant or by an accountant certified by the Commission as qualified to audit local government accounts. As a part of its role in assisting local units and monitoring their fiscal programs, the Division provides guidance in following generally accepted accounting principles. Each local government is required to file a copy of its annual audit report with the Division and

submit all audit invoices to the Division for approval.

The staff of the Fiscal Management Section annually reviews the audited financial statements of approximately 1,300 local governments and public authorities. The staff determines that all reports are prepared in accordance with generally accepted accounting principles and that applicable auditing standards have been followed. The staff also reviews the audit report to evaluate the financial condition of the unit, to determine if the unit complied with the Local Government Budget and Fiscal Control Act and other State laws, and to determine if the unit has an adequate system of internal controls in place. As a part of the audit review process, staff reviewed 583 single audits and 269 "Yellow Book" audits to ensure that audits performed under Government Auditing Standards (the "Yellow Book") and the Federal and State single audit acts meet all the federal and State requirements.

When Division staff notes problems, local governments and public authorities, as well as their independent auditors, receive written communication expressing the staff's concerns, suggestions for improvements and an offer of assistance. On behalf of the LGC, staff requests a response detailing the unit's plans to take corrective action. In fiscal year 2014-15, staff sent 528 audit letters to units of local government. Letters typically discussed such issues as over expenditures in the budget, fiscal weaknesses in the water and sewer system, internal control problems with the accounting system, credit cards or deposits, late delivery of audits or problems with the unit's level of fund balance. In addition, letters were sent to small units that routinely have internal control weaknesses related

to segregation of duties, which is a challenge for units with limited finance staff. In providing assistance to local governments, units are counseled in accounting systems and internal controls, cash and investment management, budget preparation, risk management, capital planning and changes in laws and regulations. Educational programs in the form of seminars and classes are also provided in order to accomplish these tasks. Staff members make presentations throughout the year at various workshops sponsored by:

- North Carolina Association of School Business Officials
- North Carolina Government Finance Officers Association
- North Carolina Local Government Investment Association
- North Carolina League of Municipalities
- North Carolina State University MPA Program
- North Carolina Rural Water Association
- North Carolina Department of Justice
- UNC School of Government
- Eastern Carolina Council of Governments
- Lumbee River Council of Governments
- Cherry, Bekaert, LLP

Highlights from 2015-2017

Website Redesign

In 2015, working with representatives from the Communications section of the Office of State Treasurer and IT personnel, the SLGFD conducted a comprehensive inventory of all content on NCTreasurer.com and redeveloped the public website to make information more organized and easier to find. The SLGFD has more content on the Department of State Treasurer public website than any other division and this material is critical to local governmental units and financial institutions. Through NCTreasurer.com, SLGFD publishes "Bond Reporter", a comprehensive monthly schedule of bond sales, financing agreements, and revolving loans. The SLGFD also publishes guidance for governmental accounting and auditing, GASB guidance, and public disclosure memos on NCTreasurer.com The division also provides two reporting interfaces to allow the public to acquire local government financial data.

In the original implementation of NCTreasurer.com, this content was loosely organized and the information architecture was based upon the older public website. The redesign introduced new navigation and search elements and a new organizational structure for content that has improved the ease of use for the public and local government constituents.

System Performance Improvements

From a technology perspective, no other division of the Department of State Treasurer has benefited more from the 2015 facility move and consolidation effort than the SLGFD. The SLGFD was previously located in leased commercial office space on Fair Meadow Lane in Raleigh. While in this facility, end-users were plagued with slow network speeds that interfered with business operations. The building also lacked reliable wireless access for external users, a problem that plagued board meetings and meetings with representatives from local government units.

Since moving to the new DST facility at Atlantic Avenue, the SLGFD has not experienced any issues related to poor network performance. All business applications are responsive and SLGFD personnel have sufficient network performance to participate in web conferences and conduct web-based training including Continuing Professional Education (CPE) necessary to maintain certification as public accountants.

Debt Management System

For over fifteen years, the SLGFD has utilized a system of Microsoft Excel spreadsheets along with a relational database to manage information related to the debt instruments issued by local government units. The Information Technology (IT) Division worked with the SLGFD to capture the necessary requirements for a new Debt Management system and released an RFP in June 2015. Following an evaluation of proposals, the EnABLE solution from Technology Partnership Group, Inc. was selected as the new platform for debt management. This solution will provide data management as well as workflow management for debt approval, issuance, and monitoring. EnABLE also provides an external portal that will support two-way communication of forms and documents supporting SLGFD business processes, including bond applications, supporting documentation, and other electronic communication around debt payment reminders.

Work began on this system implementation in mid-2016 and full implementation is expected to be concluded in 1Q 2017.

Challenges and Opportunities for 2017-2019

New Debt Processes for Local Units

With the implementation of a new online Debt Management System in early 2017, the SLGFD will face several new challenges. First, processes related to debt issuance and management will change to leverage the new technology and this will create a training challenge for both internal and external users of the system. The SLGFD must address training concerns for internal staff leading into the implementation of the new system and reinforcement training following go-live. At the same time, local government units will need training and guidance on the use of the new online system. Some smaller government units may only use the new system once every couple of years, so the division must develop training resources that will be available to units long after the initial go-live period.

It is anticipated that feedback from staff and local units will also prompt system changes or enhancements after go-live. Prioritizing enhancement requests, scheduling implementation, and communicating changes to users will be another challenge for the division following the implementation of the new system. The SLGFD must also consider how to receive feedback from units. User groups, online forums, and other ideas should be pursued to create opportunities to hear external user comments, concerns, and suggestions.

Support for Field Representatives

The SLGFD has recently hired two personnel as full-time field representatives. These employees will work remotely and travel to local units to provide assistance to staff on issues related to financial management. The field representatives will also collect data and information that can be used by SLGFD staff in Raleigh to aid in understanding problems and developing guidance for units that are of special concern to the division. Since these workers will spend the vast majority of their time outside of the main office in Raleigh, they must have everything necessary to work remotely. They will require stable laptops with connectivity options that will allow for remote access from even the most rural areas of North Carolina. They will also require cell phones that provide connectivity under the same conditions. As data is collected and sent back to Raleigh for further analysis, additional tools like portable scanners may also be necessary. New systems for the transmission of large electronic documents or data files may need to implemented. These field representatives will also require communication technology like Skype or WebEx to allow them to meet with personnel in Raleigh without requiring travel. While the Department of State Treasurer has supported multiple office locations in the Raleigh area and has experience supporting a workforce that travels extensively, the support of full-time remote personnel is a new challenge for the agency.

New Rules and Requirements for Infrastructure Projects

The Local Government Commission, whose work is supported by the SLGFD, is implementing new rules and requirements for the issuance of debt. There are a number of local government units in some form of financial distress, and it is the job of the SLGFD to help guide these units to more stable financial footing. In some cases, this could even involve the merger of local units that are too small to sustain themselves as an independent government unit. In order to develop better strategies for dealing with troubled units, as well as proactively identifying larger trends in financial condition, the SLGFD has received funding to hire a full-time economist. This economist is expected to analyze data collected by the division, as well as other sources, and identify trends and make recommendations of action to local units, the SLGFD, the State Treasurer, and the Local Government Commission. The work of the new

economist will require new tools and infrastructure for data collection and storage along with new tools for econometric analysis.

Increasing Financial Transparency

The North Carolina General Assembly has passed legislation requiring more transparency of financial information for both the State and local government units. Today, each unit of government in North Carolina issues an audited financial statement along with information shared in the Annual Financial Information Report (AFIR) data collection process. This data is aggregated and reported annually; however, new legislation mandates the reporting of transactional level data at a more frequent interval.

Unfortunately, there is a vast variety of systems used by each unit of government in North Carolina to manage financial activity. While large units of government can afford large-scale, industry-standard financial systems supported by technical experts, smaller units of government do not have access to these types of systems, making data extraction for reporting extremely difficult, if not impossible.

Even if all units leveraged sophisticated financial management software, there is a broad spectrum of financial management sophistication between large and small units of government. Large units are staffed with a team of accountants and other financial professionals, while smaller units may have neither the professional expertise nor the same volume of personnel.

The challenges associated with this transparency initiative are two-fold; a challenge of technology and a challenge of personnel. Addressing this initiative will require additional support for smaller units of government; potentially new systems, as well as staff augmentation and training. The SLGFD has been working with the North Carolina Community College System to develop a curriculum to train local unit finance personnel in topics related to public finance; however, additional work will be necessary to create a more uniform standard of knowledge and technology across North Carolina.

Current System Portfolio and Operational Activities
The Application Portfolio of the SLGFD supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 13 - SLGFD - System to Business Process Mapping*. The 2016-2020 Application Roadmap for the division is provided in *Figure 14 - SLGFD - System* Roadmap*.

Audit Management – CCH Workpaper Manager
CCH Workpaper Manager, a commercial software package from WolterKluwer, is used by the Fiscal Management Section of the division to manage information collected on the thousands of annual audit reports received each year from counties, municipalities, school boards, public hospitals, and other local governments and public authorities. A document management component of the software stores audit reports, contracts, invoices, and any resulting communication, while the trial balance functionality of the software is used to store and report the financial data elements presented in the annual audited financial statement.

Document Transfer – LeapFile
LeapFile is a subscription-based, Software-as-a-Service (SaaS) file exchange portal. It is utilized by the Fiscal Management Section to allow local government units or their auditors to file their annual reports and related documents in PDF form, which are often too large to be transmitted via e-mail. The submitted electronic documents are uploaded from LeapFile to CCH Workpaper Manager for permanent storage.

Debt Management – SQL Server Database with Excel Spreadsheets
Information on bonds issued by the State of North Carolina and local governmental units is stored in a SQL Server database and updated and accessed through Excel spreadsheets customized using Visual Basic for Applications ("VBA"). This system is slated for replacement in 2017.

AFIR Reporting – Department of State Treasurer Website
AFIR information is collected via a US Census Bureau website and the information is loaded into a SQL Server database through an automated transfer and upload process. The data is reported to the public on the Department of State Treasurer website through an ASP.Net website with reports designed in SQL Server Reporting Services.

County and Municipal Financial Condition Dashboard
The County and Municipal Financial Condition Dashboard is a reporting tool accessible through the Department of State Treasurer's website, although it is hosted on a separate web application server and database. Developed and released in 2010 in conjunction with the UNC School of Government, the Financial Condition Dashboard distills complex financial data into a set of 6-8 key indicators that reveal the financial condition of a county or municipality. The tool also permits the benchmarking of financial condition data against as many as five similar units. The tool utilizes SQL Server Reporting Services, an ASP.NET Web Forms interface, and a SQL Server 2008 R2 database.

Bond Sales – Parity
Municipal and state bonds are sold through an auction-like mechanism. Parity by iPreo is a hosted service that provides a virtual marketplace for the electronic sale of bonds.

Municipal Bond Manager – Muni-Ease Bond Manager

Muni-ease is a municipal bond management application developed and supported by Prescient Software. Muni-ease is used by the division to validate bond sale bid calculations received through Parity.

Time-Value Calculations - T-Value

T-Value from TimeValue Software is a purchased application that performs amortization calculations on debt instruments.

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

STATE & LOCAL GOVERNMENT FINANCE DIVISION

CCH WorkPaper Manager (Purchased)

EXCEL SPREADSHEETS WITH SQL SVR DB (In-house Developed)

NCTreasurer.com (In-house Developed)

MUNI-EASE BOND MANAGER (Purchased)

TVALUE (Purchased)

PARITY (Hosted by Ipreo)

Audit Report Review

Audit Contract Review/Approval

Debt Applications

Publish Bond Ledger

Verify Bond Sale Bid Calculations

Perform Time/ Value Calculations on Debt

Manage Bids for Bond Sale

"White Letter" generation for corrections to audit

203 Cash and Investments Review

Tracking of Authorized Debt

Publish AFIR information

Unit Letter Generation for warning regarding fiscal condition

AFIR Collection and Processing

Debt Schedule Tracking/Bond Ledger

Publish Statistical Reports

Statistical Report Generation

Generate Annual Debt Service Requirements Report

LeapFile (Hosted)

Financial Dashboard (In-House Developed)

Generate Monthly Debt Notices

Secure File Transfer for Large Audit Files and Data

Public Access to County and Municipal Fiscal Condition Ratios

Arbitrage Compliance Monitoring

Applications

Business Processes

Figure 13 - SLGFD - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

State and Local Government Finance Division

	2016	2017	2018	2019	2020
CCH WorkPaper Manager - Audit Management	Maintain	Maintain	Replace		
Bond System	Maintain	Maintain	Replace		
EnABLE		Maintain	Maintain	Maintain	Maintain
Financial Condition Reporting Dashboard	Maintain	Maintain	Enhance	Maintain	Maintain
AFIR - Annual Financial Information Reports	Maintain	Maintain	Enhance	Maintain	Maintain
LeapFile	Maintain	Maintain	Replace		
Parity	Maintain	Maintain	Maintain	Maintain	Maintain
Mun-Ease Bond Manager	Maintain	Maintain	Replace		
Tvalue	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 14 - SLGFD - System Roadmap

Strategic Technology Initiatives for 2017-2019

Complete Debt Management System and Implement Audit and Administrative Management Functionality

Work is underway to implement EnABLE for the Debt Management Section of SLGFD.   While the primary requirements of the new system were focused on functions related to debt issuance and monitoring, the EnABLE system from TechPG has additional functionality that can be leveraged by the Fiscal Management Section for both audit data management and administrative management functions. By implementing this functionality in EnABLE, the Fiscal Management Section will be able to eliminate two other disparate systems that are currently in use. Overall, the EnABLE system could replace four systems and provide a centralized and consistent set of data across the entire division. The SLGFD, the IT Division and TechPG are conducting a full analysis of the requirements of the Fiscal Management Section to develop an estimate of effort and costs for implementation of the requirements in the EnABLE system. It is anticipated that all work for both sections will be completed by Q2 2017.

Following the full implementation of the system, it is anticipated that user feedback will prompt the need for modifications or enhancements to the EnABLE system. Whether these configuration changes can be performed by DST personnel or require professional services from TechPG must be determined. The IT Division must also support the training efforts of the SLGFD in use of the new system, especially for external users. The Department has had great success hosting training videos on NCTreasurer.com as an aid to users of the State's Core Banking System. The IT Division, SLGFD, and training resources within the Office of State Treasurer Human Resources will work together later in 2016 to develop a training strategy.

Tools to Support Remote Workers

The IT Division will be working with the SLGFD to enhance service offerings to support the field representatives in their work outside of the DST offices in Raleigh. Notably, the IT Division will be pursuing technologies to support video or web-based conferencing. Implementation of this technology will also enhance communication between staff in Raleigh and local units and save time and money in travel costs. The IT Division will also evaluate mobility technology such as aircards, tablets, and hybrid devices to ensure that field staff will have technology and access to network connectivity from anywhere in North Carolina where services are needed.

Enhancements for Data Collection and Analysis

With the addition of new field representatives and the forthcoming hiring of a full-time economist, the SLGFD will have new needs for technology solutions to expand data collection and data analysis. The EnABLE system and the US Census Bureau's AFIR data collection interface will collect and house standard data elements collected from CAFRs; however, there may be needs for more focused, ad-hoc analysis. For example, field representatives may collect more detailed data related to the operation of utility programs, like water & sewer, or electricity, and the staff economist may analyze this data to identify trends, issues, and/or success factors related to utility operation by local units of government.

The IT Division, in conjunction with the SLGFD, will need to implement tools and technologies to support these efforts. This could include consultative services in data modeling and programming for data warehousing. This will likely involve the implementation of analytic software such as Matlab, R, or SAS

to permit econometric analysis of new and previously collected data. The IT division is utilizing Microsoft SQL Server 2016 for the database infrastructure of the EnABLE application. This version of the database software includes R as a tool that may potentially be leveraged in some capacity.

While a full strategy around these efforts will need to involve staff not yet hired, there are pockets of expertise within the Department that can be leveraged for guidance. The Investments Management Division has made use of SAS technology and Matlab for some analysis of financial data, and the State Health Plan has had a long and successful partnership with the Government Data Analytics Center (GDAC) for the warehousing and analysis of health benefit data. The IT Division hopes to utilize the expertise and guidance of the GDAC in supporting the efforts of the SLGFD.

Multi-Tenant Financial System for Local Units

In support of both transparency initiatives and to create a common platform for financial management across the State, the SLGFD would like to offer local units the opportunity to participate in a multi-tenant financial system. While the large units of local government have already made a significant investment in sophisticated financial management software, many smaller units lack the resources to implement a financial management package. This results in accounting discrepancies, delays in audits and the production of annual financial reports, and makes reporting of transactional-level data all but impossible. By offering a multi-tenant solution to local units, costs for implementation to each unit will be lower through economies of scale and it will reduce the IT burdens associated with running their own on-premise software solution.

It is unclear what, if any products, are available to support this endeavor. Furthermore, whether the Department of State Treasurer, the Department of Information Technology, or a third-party will act as the host of this solution has yet to be determined. As multiple agencies within the State of NC begin work to develop a plan to replace the North Carolina Accounting System (NCAS), the IT Division and the SLGFD may benefit from a partnership with this working group to assess the feasibility of incorporating this service into a new statewide financial system.

State & Local Government Finance Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
Debt and Fiscal Management System	Debt Management Implementation Fiscal Management Implementation			
Enhancements for Remote Worker Support	Remote Worker Pilot Projects Gather Requirements for Remote Workers	Implement Enhancements and Tools for Field Staff		
Improve Data Collection and Analytics		Collect Requirements for New Data Collection Streams	Implement Data Analytics Enhancements	
Multi-Tenant Financial System		Investigate Options for Multi-Tenant Financial System	Develop Procurement Documents and Conduct Procurment	

Figure 15 - SLGFD - 2017-2019 Strategic IT Initiatives

2017-2019

2017-2019

State Health Plan

Overview

The State Health Plan for Teachers and State Employees (Plan) provides health care coverage to approximately 700,000 teachers and school personnel, state employees, retirees, current and former lawmakers, state university and community college personnel, and their dependents. The mission of the State Health Plan is to improve the health and health care of North Carolina teachers, state employees, retirees, and their dependents, in a financially sustainable manner, thereby serving as a model to the people of North Carolina for improving their health and well-being.

The Plan's vision is to be a leader in North Carolina by providing access to cost-effective, quality health care and wellness programs for our membership. In fulfilling its mission and vision, the Plan seeks to follow these values: focusing on our members; collaborating with our vendor partners and other stakeholders on behalf of our members; acting in a transparent and open manner with the highest degree of integrity; and striving for the best quality of care and service for our members.

The Plan is dedicated to providing members with an excellent customer experience and convenient access to health and wellness programs, and to providing public leadership on health policy. The Plan is self-insured and exempt from the Employee Retirement Income Security Act (ERISA) as a government-sponsored plan.

The Plan's strategic priorities are to (1) improve members' health, (2) enhance members' experience and (3) ensure a financially stable State Health Plan.

Governance

The Treasurer, Executive Administrator, and Board of Trustees are designated as fiduciaries for the Plan. The powers and duties of the Treasurer are set forth in statute at NCGS 135-

48.30(a) and include setting benefits, premium rates, copays, deductibles, and coinsurance percentages and maximums subject to approval of the Board of Trustees. The Board of Trustees' powers and duties are set forth at NCGS 135-22 and include approving large contracts, approving premium rates, copays and deductibles proposed by the Treasurer, and developing and maintaining a strategic plan. The General Assembly determines member eligibility rules and provides state funding for the Plan.

The Board of Trustees is required to be composed of at least one of the following: an employee of a State department, agency or institution; a teacher employed by a North Carolina public school system; a retired employee of a State department, agency or institution; and a retired teacher from a North Carolina public school system. The board must also include individuals with the following expertise: actuarial science, health economics, health benefits and administration, and health law and policy. The State Treasurer is an ex officio member of the Board and serves as its Chair, but only votes in the event of a tie. The Director of the Office of State Budget and Management serves as an ex officio nonvoting member. Two members are appointed by the Governor. Two members are appointed by the State Treasurer. Two members are appointed by the General Assembly upon the recommendation of the Speaker of the House of Representatives. Two members are appointed by the General Assembly upon the recommendation of the President Pro Tempore of the Senate.

Membership Statistics

The State Health Plan provides health care coverage to approximately 700,000 teachers, state employees, retirees, current and former lawmakers, state university and community

college personnel, and their dependents. (700,166 in July 2016)

Among total membership, there are:

- 482,714 active employees and dependents. Dependents include spouses and children up to age 26.

- 912 COBRA participants and their dependents. The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) requires most employers with group health plans to offer employees the opportunity to continue their group health care coverage temporarily under their employer's plan if their coverage otherwise would cease due to termination, layoff or other change in employment status.

- 213,735 retirees and their dependents.

- 2,805 direct bill participants who consist of surviving spouses and children, former legislators, National Guard, Fire and Rescue, and 100% contributory Reduction-in-Force members.

The Plan offers three Preferred Provider Organization (PPO) plans to our active and Non-Medicare retirees, described below, using the Blue Options(SM) network. These plans offer freedom of choice among in-network providers, lower out-of-pocket costs and a strong emphasis on preventive health. The plans offer financial incentives for taking steps to improve one's health.

- The Consumer-Directed Health Plan 85/15 (CDHP) is a high deductible health plan that is accompanied by a Health Reimbursement Account (HRA), which is set up for members by the State Health Plan. This plan includes the ability to lower monthly premiums by completing wellness activities. As of July 2016, the CDHP accounted for 30,321

members, or 4.33 percent of total membership.

- The Enhanced 80/20 PPO Plan has higher premiums in exchange for lower copays, coinsurance and deductibles. This plan also includes the ability to lower monthly premiums by completing wellness activities. As of July 2016, the 80/20 Plan accounted for 290,647 members, or 41.51 percent of total membership.

- The Traditional 70/30 PPO Plan has lower premiums in exchange for higher copays, coinsurance and deductibles. As of July 2016, the 70/30 Plan accounted for 222,747 members, or 31.81 percent of total membership.

In 2016, the State Health Plan offered five health plan options for Medicare Primary members. These plans include the Traditional 70/30 Plan, which is administered through Blue Cross and Blue Shield of North Carolina, and Group Medicare Advantage (PPO) Plan options — offered through Humana and UnitedHealthcare — which include benefits and services such as access to the SilverSneakers® Fitness Program, a nurse help line and disease and case management services.

Financial Statistics

The General Assembly does not appropriate funds directly to the State Health Plan. Instead, it provides funds to State agencies, universities, community colleges, local school systems and the retirement system to pay an "employer contribution" or monthly premium on behalf of employees and retirees. As such, the State Health Plan is 100 percent receipt-supported, with premium receipts, including employer contributions and amounts paid by employees and retirees for their own and dependent coverage, representing approximately 99.2 percent of total revenues in fiscal year 2015-16.

Traditionally the State has offered employee-only and retiree-only coverage on a "non-contributory" basis, meaning the State paid the full premium cost on behalf of employees and retirees through the employer contribution. Since 2011, contributions have been required to enroll in certain Plan offerings ("partially contributory" coverage), although the State continues to pay the large majority of the total premium cost for employee coverage.

Currently, employees and retirees may enroll their eligible dependents in the plan on a "fully contributory" basis, meaning the member is responsible for paying the full premium cost of dependent coverage.

Premium rates are established for each State fiscal biennium based on an actuarially based forecast prepared by the Plan's consulting actuary. Historical claims experience is trended forward to cover anticipated increases in cost and utilization and any required or proposed benefit changes.

The forecasting methodology also assumes the buildup and maintenance of an adequate reserve to cover fluctuating claims costs and cash flows.

The forecast model produces a projected premium increase that is required to cover the Plan's expenses during the upcoming forecast period or fiscal biennium, and that premium increase is typically applied to all rates across the board. If a 5 percent increase is required according to the model, the General Assembly is asked to increase the employer contribution by 5 percent and the employee- only, retiree only and dependent premium rates are also increased by 5 percent.

Future premium rates are impacted by the Plan's actual financial performance. If claims experience is less (i.e., better) than projected, the Plan's cash reserves increase over the year and the required premium increase in the next

year will be lower than originally projected. Conversely, if expenses are higher than projected, the Plan will spend down or use its reserve to cover the increased cost, and the required premium increase in the next year will be higher than originally projected.

Membership Health Snapshot

The State Health Plan monitors the general health of its member population to identify and address health-related trends.

Clinical Risk Group analysis is a management tool that performs analysis of claims and clinical data to assign individual members to a specific clinical group based on their diagnosis. The analysis helps to identify the prevalent health risks within the State Health Plan's population, predict the financial impact of those risks, and find opportunities for the Plan to better control cost and improve the health of their members. (Segal Consulting, 2015)

The information below shows the distribution of the Plan's membership by clinical risk grouping. $2.4 billion or 76% of total claims were spent on members with one or more chronic disease diagnosis. State Health Plan membership by health status is:

- Healthy – 52.2%
- Chronic – 47.1%
- Catastrophic – 0.7%

Analysis of the Plan's medical and pharmacy claims show the following:

The major findings include:

- Mental illness had the highest prevalence, impacting 29% (155,546) of the Plan's active and pre-Medicare retiree members; the Per Member Per Year (PMPY) cost associated with mental illness was $6,424 in 2015.

- Hypertension had the second-highest prevalence, impacting 24.6% of the Plan's membership, with a PMPY of $7,922.

- The prevalence of diabetes was 7.8%, increasing 1.3% from the previous year.

State Health Plan Health Assessment Completions

As a result of continuing to offer a wellness premium credit for members completing a Health Assessment by the end of the 2015 Annual Enrollment period, a total of 199,384 State Health Plan members completed a Health Assessment (185,116 online and 14,268 telephonic completions) in 2015. Information obtained through Health Assessment completions is kept confidential, and only shared with the State Health Plan through aggregate reports.

The State Health Plan and its partners use these aggregate reports to tailor health promotion initiatives to meet the needs of the membership. Through Health Assessment aggregate reports, the Plan has learned that:

- Over 60% of Plan members are either overweight or obese based on their Body Mass Index (BMI)

- 74% of members consider their health to be excellent or very good

- 54% of members are at risk for pre-diabetes

- Stress is considered the top identified condition, with over 134,588 members affected

- Weight loss is the highest priority health goal for 55,453 members

In addition, the Health Assessment continues to provide members with a comprehensive view of

their health. After completing the Health Assessment, members can access a personalized health report as well as customized health action steps. These resources not only help members understand their current health status, but they also provide suggestions on ways to improve or maintain their health.

Milestones

Strides to improve the online enrollment experience within the enrollment system, eEnroll, was a goal for the Plan this year and complements one of the Plan's strategic priorities: Improving the Member's Experience.

The Plan's Eligibility and Enrollment partner was able to conduct focus groups and usability testing in order to launch a new and enhanced online enrollment experience that is set to be available to Plan members in September 2017.

Highlights from 2015-2017
New Data Analytics Strategy

In early 2016, the senior leadership of the Plan adopted a comprehensive strategy for the use of data analytics across the division, which will systematically leverage health information assets to provide valuable insights allowing for leadership to make informed, data driven business decisions in support of the overall SHP strategic and operational priorities.

The long-term vision for data analytics within the Plan is to become a leader and innovator in healthcare data analytics, whereby an analytics culture and mindset is prevalent throughout the Plan. The more data assets that are leveraged, the more insights about the Plan's member's health and experience as well as the Plan's performance can be derived by applying data science and advanced modeling methods, in real or near real time.

The data analytics journey will move the Plan forward in developing capabilities to support the data analytics strategy and vision, as illustrated in *Figure 16 - SHP Data Analytics Maturity Curve*

Figure 16 - SHP Data Analytics Maturity Curve

The capabilities to be developed will fall within two primary areas focused on data management and advanced analytics and data science.

Within the data management function, the focus will be on strengthening the existing data warehouse, with an emphasis on data architecture and design, metadata and master data management, data quality assurance, data security and standardizing BI operational reporting on members, providers, pharmacy, sites of service, super utilizers, vendors, and the overall metrics of the Plan's strategic plan.

Within advanced analytics and data science function, the focus will be on developing use cases, analytical plans, statistical analysis and forecasting methods, predictive and prescriptive modeling and ongoing optimization

Challenges and Opportunities for 2017-2019

Secure Communication with Blue Cross/Blue Shield and Others

Since 2012, SHP has been utilizing the Department of State Treasurer's Zix Secure Gateway for e-mail encryption when exchanging e-mail with Blue Cross/Blue Shield of NC (BCBSNC) and other external parties such as BenefitFocus and ExpressScripts. Encrypted e-mail is required to prevent the disclosure of an individuals protected health information, or PHI. At the time of implementation, both BCBSNC and the Department of State Treasurer utilized Zix Gateway and the exchange of encrypted e-mail was seamless. Since that time, BCBSNC has change their e-mail encryption solution and unfortunately, the use of the Zix Gateway creates issues with conversation threading in most e-mail clients, and it becomes difficult to track related messages. Additionally, since BCBSNC utilizes their own e-mail encryption solution, outbound messages from SHP will pass through the Zix Gateway but inbound messages must be retrieved from a different encryption portal, confounding retention policies and the ability to fulfill public record requests. As the contracted vendor to act as the plan's third-party administrator, there is a very large volume of e-mail communications between BCBSNC and SHP, so this problem is particularly acute.

In conjunction with the IT division, the SHP needs to identify an alternative method of encrypting e-mail communication with BCBSNC and identify a solution to the shortcomings of the Zix Gateway for e-mail conversation management when communicating with other external entities in an encrypted format.

Exception Management for Benefit Enrollment

Throughout the benefit year, SHP is presented with requests for exceptions to the annual benefit open enrollment period. These exceptions must be evaluated and adjudicated by SHP, and in some cases, appeals must also be considered and ruled upon. The entire disposition of a benefit enrollment exception request must be tracked and maintained, in the event the issue is ultimately brought before the Office of Administrative Hearings. Although of lesser frequency, the same requirements are necessary for the adjudication of exceptions and appeals related to benefit coverage. The SHP requires a case management system to maintain the documentation and record of activity for these requests.

Contract Management

The SHP has a number of contracts with external parties for a variety of services related to health plan operations. The lifecycle of an SHP contract can be complex, requiring preliminary review and authorization to contract and an evaluation of data confidentiality issues that may be covered under HIPAA. The drafting of the contract itself is a multi-step process, involving multiple drafts and reviews, and a contract itself may have any number of amendments, addenda, and related correspondence. Once the contract is established, monitoring deliverables, recording contract compliance, and monitoring key dates for review and renewal are critical to the contract management process.

For many years, the SHP utilized a document management and workflow system, LibertyNET, to meet the division's contract management requirements. This system was highly customized to match the business requirements and processes of SHP; however, it has reached the end of product life. LibertyNET was purchased by Hyland Software, the maker of the OnBase document management and workflow system, and Hyland is encouraging all users to move to the OnBase platform.

Despite the end of the LibertyNET product, SHP still has important requirements for contract production and management. Addressing these requirements in context of other similar needs across the agency is an important need for SHP.

New Document Repository with Extranet Capabilities

The use of Documentum for the management of reports from vendors has become a time-consuming, labor-intensive process due to technical issues. The timely distribution of reports and the accurate, long-term storage of vendor reports are critical to monitoring health plan operations and auditing past performance. SHP requires a new solution to handle the massive influx of reporting from multiple vendors and the distribution of these reports to key individuals within the division.

In addition to a new document repository for report cataloging and storage, SHP also requires a repository that can be used for collaboration with external entities. SHP is managing a large of number of vendors involved in claim processing, enrollment, billing, and population health management. The Plan also coordinates the integration of hundreds of employers with vendors to manage the provisioning of health care benefits to over 700,000 people. This management and oversight involves a great deal of documentation, collaboration and data sharing.

The State Health Plan lacks the tools for cohesive, centralized management of documentation and collaboration artifacts among the hundreds of stakeholders involved in health plan operations. E-mail is a weak solution for the distribution of materials, and severely lacking in the ability to transmit and secure sensitive data that may need to be shared between claims administrators, agency human resource departments, and SHP employees. SHP requires a robust communication portal, secured to meet HIPAA compliance standards, yet accessible by any of the myriad of people involved in health plan operations.

Current System Portfolio and Operational Activities

The Application Portfolio of the State Health Plan Division supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 17 - SHP - System to Business Process Mapping.* The 2016-2020 Application Roadmap for the division is provided in *Figure 18- SHP - System* Roadmap*.*

SAS w/Enterprise Guide – Health Care Analytics

The State Health Plan has utilized the State of North Carolina Government Data Analytics Center (GDAC) to provide a hosted SAS enterprise data warehouse for managing the Plan's data.

Currently, monthly eligibility, medical claims and pharmacy claims data is received from the Plan's vendors and is transformed and loaded into the enterprise data warehouse for ad-hoc reporting and data requests.

Through ongoing efforts focused on data management and data quality standards, combined with integrating additional data into the enterprise data warehouse, the Plan will have a much stronger foundation in the enterprise data warehouse from which to build standard operational reports and to have it serve as a key platform and source of data for building advanced analytical models.

LibertyNET – Contract Management

LibertyNET is an electronic document management system used for the management of contracts and other procurement-related documentation that originally was implemented by the State Health Plan (SHP) Division. It was primarily used by staff in the SHP Contracting and Healthcare Compliance section. The software managed approximately 39 critical contracts under the SHP administration, along with amendments, side letters, procurement documentation, and correspondence. LibertyNET was originally developed by Liberty Information Management Systems and is currently sold and supported by Hyland Software. DST is currently running version 11, the last released version of the software. The system is currently used only for document retrieval and work is underway to conduct a final migration of content and retire the system no later than 1Q 2017.

Documentum – Report Management

Documentum is an electronic document management system offered to State agencies as a hosted service by the Department of Information Technology (DIT). Documentum offers multiple document management solutions and the system utilized by DIT is based on Documentum's Content Server software, NOT the Documentum ApplicationXtender solution utilized by the Unclaimed Property Division (UPD) and the Retirement Systems Division (RSD). SHP utilizes Documentum for the storage of electronic reports received from BCBSNC and other contracted vendors. In the past, the filing of the electronic reports was automated by customizations created by DIT, but currently requires manual processing.

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

STATE HEALTH PLAN DIVISION

SAS w/ENTERPRISE GUIDE
(Hosted by GDAC)

LIBERTYNET
(Purchased)

EMC DOCUMENTUM
(Hosted by ITS)

Extract-Transform-Load claim records for medical services from BCBSNC and pharmacy services from ExpressScripts

Route manage Requests to Contract

Storage of reports produced by BCBSNC and other vendors.

Provide a framework for reporting utilization and other key measures of the health care service contracts

Maintain electronic copies of contracts, addenda, side letters, and other contracting documentation.

Provide a toolkit for the actuarial valuation of the Health Plan Fund by contracted actuarial consultants.

Provide reports on contract expiration, deliverable status, and other contract-related processes

Applications

Business Processes

Figure 17 - SHP - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

State Health Plan Division

	2016	2017	2018	2019	2020
SAS - Healthcare Analytics	Enhance	Enhance	Enhance	Maintain	Maintain
LibertyNET Contract Management System	Retire				
EMC Documentum	Maintain	Replace			

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 18- SHP - System Roadmap

Strategic Technology Initiatives for 2017-2019

Enhancements to Communication Technology

In conjunction with the IT division, SHP seeks to enhance tools and technologies used for communication with vendors and partners. Addressing issues related to the exchange of encrypted electronic mail with BCBSNC is of critical importance. The IT division will work with BCBSNC technical personnel to explore the establishment of a secure tunnel for encrypted e-mail communication. If this solution is not feasible, alternatives to the use of Zix Gateway will be explored.

The implementation of a secure Extranet is an effort that could benefit the entire agency, not just SHP. Almost all divisions are struggling to share large electronic documents in a secure fashion with external parties. Microsoft SharePoint is currently used as the web content platform for the department. As part of a planned upgrade to SharePoint 2016, the IT division will explore the implementation of an Extranet that will permit SHP to secure share and exchange large files with entities such as BenefitFocus, ExpressScripts, Segal, and hundreds of health benefit representatives.

This Extranet infrastructure could also provide secure repository for the delivery of reports from vendors. Implementation of this functionality would enable the retirement of the Documentum system and ease the burden of manual management of vendor reports. An analysis session to plan the SharePoint 2016 upgrade is scheduled for November 2016, with implementation expected to begin in 2017.

Contract Management

As with the Financial Operations Division (FOD) and the Investment Management Division (IMD), there is a critical need for a procurement and contract management tool. The ideal tool will possess three important components: document and content storage, workflow, and functions for contract management. It is important to identity a tool that both meets the needs of the SHP while providing the capacity to be used across the division. It would be wastefully duplicative to provide three distinct contract management tools in an agency the size of DST, so all parties seeking this functionality should examine and review practices and processes and seek to reach a commonality that can support the selection and implementation of a single contract management tool.

An immediate need pertains to the extraction of information in the legacy LibertyNet system. Electronic content was stored in LibertyNET using a proprietary format, and it is important to extract these documents into their native Word, PDF and Excel formats, along with associated metadata. This extraction is a precursor to the implementation of a new contract management system, and by extracting the documents and metadata information before the new contract management system is ready, the legacy LibertyNET system can be retired.

The IT Division and SHP have begun communications with Hyland Software to discuss the extraction of LibertyNET content and expect to begin this process in Q4 2016. The documents and metadata will be housed in a secure file server location until they can be imported into a new electronic contract management following selection and implementation.

Case Management

The management of enrollment and benefit exception requests is a challenge for the SHP, and the retention of records related to exception requests can be dramatically improved. An electronic case

management system could assist with these issues. The specific business cases associated with a case management system have not yet been detailed and this will be critical to product selection and evaluation. In 2017, working with IT division, the SHP can begin to document requirements, process flows, and other specifications necessary to conduct a competitive procurement of an electronic case management system. There may be an opportunity to partner with the Retirement Systems Division in the evaluation and selection of a product. RSD has expressed some similar needs to track cases and adjudications and a platform that can be shared across multiple divisions is far more preferable than distinct systems. Exploring systems that are utilized by other agencies, such as DHHS, will also inform the selection process. Although dependent upon the size and scope of the system, and the pricing of available tools in the marketplace, it is likely that implementation can begin no earlier than Q4 2017, and will likely carry forward into 2018.

Data Analytics Enhancements

Over the next three years, the SHP will evaluate vendors for population health management, health care claims administration, and Medicare Advantage. Even if the existing vendors remain in place, the re-issuance of these contracts allows for an opportunity to review data provided by the vendors and modify requirements to support the data management and data quality standards as well as allow for better operational reporting and advanced analytic needs of the SHP. In the event new vendors are selected, a considerable amount of effort will be put forth to integrate data feeds with the existing SAS data warehouse. If vendors remain in place, some work to accommodate additional data elements or datasets can be expected.

Additional non-eligibility and non-claims data will also be integrated into the enterprise data warehouse, to create a richer data warehouse from which to build standard operational reports and to serve as a key platform and source of data for building advanced analytical models.

The SHP is planning to continue to invest in SAS and will be implementing a project in three phases. The first two phases are to build dynamic operational reporting for members, providers, pharmacy, sites of service, super utilizers, vendors and the overall metrics of the Plan's strategic plan while the third phase begins the ongoing and iterative process of building predictive and prescriptive models. As part of the project, SHP is considering a migration to Oracle Exadata, will leverage open source big data technologies and will implement SAS Visual Analytics for visual data exploration and charting, accessible to non-technical users with minimal experience with SAS products. The project as a whole is the cornerstone of the data analytics strategy and fully supports the mission and vision of the Data Analytics section of the Plan.

State Health Plan – 2017-2019 Strategic IT Initiatives

	Jan. 2017- Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
Contract Management System	Product Evaluation → Procurement of a Contract Management System →	Implementation of Contract Management System		
Case Management System		Product Evaluation → Procurement of a Case Management Solution →		Implementation of Case Management
Data Analytics Expansion	Negotiation of Data Analytics MOU with GDAC	Execution of Data Analytics Expansion Strategy		
Communication Tool Expansion				Implementation of a Extranet Collaboration Portal / Implementation of Report Management Portal

Figure 19 - SHP - 2017-2019 Strategic IT Initiatives

2017-2019

Unclaimed Property Division

Overview

The Unclaimed Property Division (UPD) of the Department of State Treasurer oversees and maintains unclaimed property for the State. By law, unclaimed property is escheated, or turned over, to the Department for safekeeping. The UPD is responsible for recovering and returning such property to all rightful owners.

The unclaimed property which is turned over to the Department was previously held by financial institutions, insurance companies, government agencies and other businesses, referred to as "holders", in the form of wages, utility deposits, insurance policy proceeds, and other sources of funds. Property is considered unclaimed when the apparent owner fails to communicate interest in it for a period of time called the dormancy period. Once the property has met its dormancy limit and the holder has made a good faith effort to locate an apparent owner, any funds they are holding are escheated to UPD and maintained in the Escheat Fund by directive of a 1971 state law. Upon receipt of this information, UPD works to locate the owners by various means, including listing names on the NCCash.com website, earning media coverage through television and newspapers, and participating in community events such as the North Carolina State Fair, Mountain State Fair, Wilmington Riverfest, and many others throughout the State to reunite owners with their money and promote public awareness about the program.

The interest earned on these funds pays for the operating costs of the UPD, and all remaining interest is sent to the State Education Assistance Authority (SEAA) to provide grants, loans and scholarships for North Carolina students attending public universities. At the end of the 2015 fiscal year, ending June 30, a total of $7.6 million from interest earned and $ 29.6 million from the principal of the Escheat Fund was sent to SEAA. As a result, a total of

79,635 students received financial assistance from the Escheat Fund during the 2014-2015 academic year. The General Assembly mandated that additional principal from the Escheat Fund of $16.3 million go to the State Board of Community Colleges, and $6.5 million to the Department of Military and Veterans Affairs to provide educational assistance for needy and worthy students.

As a result of these ongoing efforts to reunite owners with their funds, the NC Cash program received statewide recognition for outstanding service. The UPD was presented the inaugural Sunshine Award for Government by the North Carolina Open Government Coalition for educating the public on the unclaimed property process, and helping citizens of our state to locate and claim their lost property.

The UPD continues to build on efforts to partner with individuals, holders, and organizations to assist them with identifying and reporting unclaimed property. As a part of UPD's "Partners in Compliance" initiative, staff members offer their technical expertise, information and resources to help holders comply with North Carolina's unclaimed property laws and reporting requirements. In August 2015, the UPD's Holder Education Seminar brought more than 200 attendees, representing a diverse range of industries from across the state to the McKimmon Center in Raleigh, North Carolina to learn more about the State's reporting laws and guidelines.

The holder community gave national recognition to the UPD for its holder education efforts through the Unclaimed Property Professionals Organization (UPPO). The UPD was awarded the 2015 UPPO Member's Choice Website award for its user- friendly Holder Reporting website. It was noted that, "All the information a holder needs is readily available".

Holders reported $155.6 million in unclaimed property in the 2014-15 fiscal year. As of June 30, 2015, the Escheat Fund was valued at approximately $440.1 million. This is a combination of unclaimed property collected from holders and interest earnings from the investment of the fund. As the custodian of these funds, North Carolina remains liable to the rightful owners for the full amount of unclaimed property reported to the Department. This includes an additional $1.06 billion which has been reported since June 1971, but has been appropriated by the legislature from the Escheat Fund principal over the last 12 years.

It is the goal of the Department that the annual amount utilized from the Escheat Fund for financial aid will be limited to, or in close proximity to, the annual amount of interest earned on the Escheat Fund and will not continue to involve substantial appropriations from the principal. While the Department holds these funds, additional investment authority granted through legislation will now allow the Venture Multiplier Fund to serve as seed money to create the opportunity to spur greater entrepreneurial activity within North Carolina with small, strategic investments.

Highlights from 2015-2017

Implementation of eClaims

In January 2015, the Unclaimed Property Division (UPD), in conjunction with Wagers and Associates, Inc., the Information Technology Division and the Communications Section of the Office of State Treasurer, implemented e-Claims, a new online tool for searching and claiming escheated properties. While the Department of State Treasurer has long provided online search capabilities through NCCash.com, this new system allows for the complete submission and approval of claims online.

By automating the verification of the claimant's identity and connection to a claimed property, claims meeting specific criteria are processed and flagged "ready for payment" with minimal human intervention. Since the implementation of e-Claims, UPD has tripled the number of claims paid and has reduced the minimum value of property that can be searched and claimed online from $50 to $10. At the same time, UPD has also expanded the age of property that can be searched, from properties reported within the last 15 years, to properties reported since 1992. These efforts have doubled the number of properties available for searching from two million to four million escheated properties.

Enhancements to Document Capture Activities

As part of the claim process, UPD receives evidentiary documentation that both identifies a claimant and establishes the legitimacy of their claim for escheated property. This evidence may be in the form of utility bills, photocopies of identification documents, or correspondence from financial institutions. Most of the time, these evidence documents contain various barcodes associated with the evidence document, and this has created a problem for UP since the implementation of the UPD-IDMS in 2007.

The system makes use of specific bar codes to separate claim and evidence documents when scanned. Prior to scanning received mail, all documents had to be reviewed for extraneous barcodes, and the barcodes needed to be redacted, so as to not interfere with the document scanning and sorting process. This required a tremendous amount of manual effort, and if a barcode was missed, or not fully redacted, its detection by the scanner would result in mis-indexed or lost documents. Working with IT, UPD implemented changes to the automated scanning and sorting process to modify the parameters for barcode detection and automated sorting behavior. These changes eliminated the need for manual barcode reduction, improving scan efficiency and accuracy. The division also implemented new document scanners that run faster and more reliably than the nearly ten-year-old units that were replaced.

Call Center Upgrades and Enhancements

In July 2015, as part of the Department of State Treasurer Facility Relocation and Consolidation, the UPD, in conjunction with the Department of Information Technology (DIT) replaced their legacy call center technology with a new solution from Avaya. For many years, UPD had utilized the Nortel Symposium product offered through DIT Telecommunications; however, this system was no longer in support and required replacement. Both the Retirement Systems Division (RSD) and UPD utilize the same call center system, and while RSD has implemented more advanced features for call monitoring and recording, UPD has leveraged the technology to provide improved system messaging. For instance, depending on call queue size and/or UPD staff availability, the call center messaging can direct callers to the phone number of an overflow call center staffed by Xerox State & Local Solutions. This call routing based upon load and/or availability was not available in Symposium and has improved customer satisfaction and reduced wait time.

Challenges and Opportunities for 2017-2019

Antiquated and Limited Unclaimed Property Management System

The Unclaimed Property Division has utilized UPS2000, a product of Wagers and Associates, for over 15 years as the core line of business application in the management of all division processes. While this application has served the division well, limitations of the application and its underlying technology are impacting division performance. UPS2000 was conceived and developed as a data processing system and relies heavily on user interaction to perform the simplest of tasks. More modern systems adopt an exception-handling approach, automating functions to the greatest extent possible and requiring user intervention when necessary to deal with relatively rare or unique scenarios.

Systems that minimize manual processing allow limited staff to focus more time on unique and difficult activities and offload mundane and repetitive activities to the system resulting in more effective use of staff time. A more modern system should provide support for a broader range of activities, including public web interfaces for property searching, online claim submission, and automated evaluation and approval of claims. A new system should also provide enhanced functionality for receipt of property information and funds from holders and ease integration with call center technology and back-office accounting and financial systems.

Improve Submission of Holder Report Data and Funds

An improved Unclaimed Property Management System will provide enhancements for greater efficiencies in the receipt and management of escheated properties. UPD can begin taking steps to improve the Holder Reporting process even before the implementation of a new system. Currently, businesses and organizations that are holding property that must be reported and turned over to the State of North Carolina can do so by filing a physical holder report or an electronic copy of the report data.

The UPD has been using UPExchange from ETM to receive electronic holder report data and electronic transfers of escheated funds. Effective August 1, 2016, this service began charging property holders for submissions and as a result, many organizations may return to submitting physical reports and physical checks, reducing operation efficiencies as more user time is necessary for data entry and management. At the same time, limitations in the UPExchange interface related to the download of electronic holder reports have also created issues for operational efficiency that could be overcome through an alternative design.

The UPD must identify no-cost or lower-cost alternatives to UPExchange to continue to drive electronic holder reporting; however, the division must also seek solutions that optimize efficiency. The replacement of the Unclaimed Property Management System is a long-term solution, but since full implementation could be over one year away, alternative solutions must be identified for use in late 2016 and for the 2017 reporting period.

Improve Efficiencies in Document Capture

Despite incredible growth in the submission of electronic material by both claimants and property holders, the UPD still receives large volumes of physical documents. Claims, holder reports, and claimant evidence make up the largest portion of physical documents that are sent to the division every day, and these documents must be organized, scanned, indexed and retained in electronic format for use throughout the organization in business process activities. The management of physical documents and

conversion to electronic format involves a great deal of manual effort and personnel time that could be more effectively used in other activities. The UPD must review current processes for mail handling and sorting, scanning preparatory activities, and indexing of electronic documents to identify opportunities for improvement. At the same time, in coordination with the IT Division, UPD will seek technology improvements such as barcoding, OCR, and other tools that can drive performance efficiencies in handling inbound documents.

Electronic Funds Transfer (EFT) of Claim Payments

The UPD pays all claimants through the issuance of a physical check. Over 91,000 claims were paid during the 2015-2016 fiscal year, a dramatic increase since the implementation of e-Claims. The use of physical checks is very costly, both in terms of personnel time and actual expense. Physical check stock and MICR toner must be held in reserve and postage must be paid for the mailing of checks. All of the checks must be physically handled, printed, sorted and stuffed into envelopes. Printing physical checks also increases the time delay in returning escheated property to claimants and introduces opportunities for fraud or theft of checks.

The UPD would like to explore the use of electronic funds transfer (EFT) for the payment of claims. Using EFT would speed up the payment of claims, require far less human intervention, and reduce the opportunities for fraud or theft.

Data Matching to Identify Potential Claimants

Session Law 2011-230 requires that the Department of Motor Vehicles, the Employment Security Commission, and the Department of Revenue must share information with the Department of State Treasurer that can be used to identify potential claimants of escheated or abandoned property. These agencies have up-to-date address information on NC residents acquired through driver licenses, vehicle registrations, unemployment claims, and personal tax returns. This address information can be matched against property records to identify the current location of potential claimants. Claim forms and other informational materials can be mailed or electronically-mailed to potential claimants identified through the data matching process. Since the North Carolina Retirement Systems are also under the management of the Department of State Treasurer, information from these systems provides another opportunity for the UPD to match against approximately 660,000 records to identify the current location of potential owners of unclaimed property.

The UPD has met with representatives from the Government Data Analytics Center (GDAC), discussed some data matching requirements, and also explored opportunities to utilize data repositories housed by the GDAC for data matching. Data matching efforts can also be improved through more frequent and diverse sourcing of data, the application of more sophisticated matching techniques, and integrated functionality to feed matching data into applications for claim initiation or payment.

Current System Portfolio and Operational Activities

The Application Portfolio of the UPD supports the business operations of the division. The following systems are essential components of normal business operations. A mapping of business processes to systems is provided in *Figure 20 - UPD - System to Business Process Mapping.* The 2016-2020 Application Roadmap for the division is provided in *Figure 21 - UPD - System* Roadmap.

UPS2000 – Unclaimed Property Management System

The Unclaimed Property Management System is the principal business application of the division. It is the system of record for all property under the management of the Escheat Fund. It also processes all claims against escheated property and produces a "settlement" file, transmitted to the Office of the State Controller for the generation of warrants payable to claimants. The current UPMS is UPS2000, a client/server application developed by Wagers and Associates and supported by Xerox State & Local Solutions. The division has used UPS2000 since 2003.

e-Claims – Unclaimed Property Search and Claims

e-Claims is a web-based tool for property search and claim activities that is made available through the Department's public website, NCTreasurer.com. The e-Claims system is operated by Wagers and Associates and hosted by Xerox State & Local Solutions on behalf of the UPD. It is designed to allow the public to search property escheated to the State of North Carolina since 1992. The system allows for the initiation of claims for escheated property and based on information provided by the claimant and the original holder, the system can validate identity and accept electronic claims based on configurable dollar thresholds and other criteria established by the UPD. These electronic claims are then processed for payment with minimal human intervention.

UPD-IDMS – Unclaimed Property Division Integrated Document Management System

UPD-IDMS is an electronic document management and business process automation system implemented in 2007 for the management of claim forms, evidence, holder reports, correspondence, audit reports, and other electronic artifacts of operational activities. The system consists of EMC ApplicationXtender 6.5, an electronic document management system, Oracle Web Capture, a web-based document scanning and indexing solution, and a business process automation toolkit for the routing and monitoring of work activities developed by DST IT using .NET technologies.

Call Center – Avaya

The Call Centers of the UPD uses Avaya hardware and software hosted by DIT Telecommunications. Avaya is used to coordinate, monitor and report on call center activities. The Retirement Systems Division ("RSD") uses the same technology for call center operations.

Address Verification – MelissaData

All outbound mail is validated for address accuracy and matched against the National Change of Address ("NCOA") database. This is necessary to receive bulk-mailing discount rates from the US Postal Service. The IT Division has contracted with MelissaData, a USPS-recognized service, to perform address verification services. MelissaData provides a web-service interface to their hosted database of valid addresses and the NCOA database. This service is used by the UPD, as well as the RSD.

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

UNCLAIMED PROPERTY DIVISION

UPS2000
(Purchased)

DOCUMENT
MANAGEMENT
(Purchased)

NCAS
(Hosted by
NCOSC)

AVAYA
(Hosted by DIT)

NCCash.com
ONLINE
PROPERTY
SEARCH
(Hosted by Xerox)

Claim Initiation and
Claimant Property
Research

Claim Processing

Claim Payment

Claim Initiation and
Claimant Property
Research

Claim Initiation and
Claimant Property
Research

Claim Processing

Holder Reporting
and Receipt of
Funds

WORKFLOW
(Developed In-
House)

Claim Payment

Audit and
Compliance
Tracking

Holder Reporting
and Receipt of
Funds

Claim Processing

Audit and
Compliance
Tracking

Holder Reporting
and Receipt of
Funds

Management of
Escheats Securities

Audit and
Compliance
Tracking

Applications

Business Processes

Figure 20 - UPD - System to Business Process Mapping

Department of the State Treasurer - Application Roadmap

Unclaimed Property Division	2016	2017	2018	2019	2020
UPS 2000 - Unclaimed Property Management System	Maintain	Replace			
e-Claims - Unclaimed Property Search and Claims	Maintain	Replace			
UPMS To-Be-Determined			Maintain	Maintain	Maintain
UPP-IDMS - Unclaimed Property Integrated Document Management System	Maintain	Replace			
Avaya - Call Center	Maintain	Enhance	Maintain	Maintain	Maintain
Address Verification - MelissaData	Maintain	Enhance	Maintain	Maintain	Maintain

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 21 - UPD - System Roadmap

Strategic Technology Initiatives for 2017-2019

Implementation of a New Unclaimed Property Management System

The UPD has partnered with the IT Division to develop a Request for Proposals (RFP) to solicit proposals from qualified firms interested in providing an unclaimed property management solution to support the collection, tracking, safekeeping, reporting, and return of property under the State's escheat program.

This will be a complete replacement of the current solution in place. The contract to be awarded as a result of this effort will be for the following solution components: application software and/or operational services (Software as a Service), documentation, data conversion and validation, integration, implementation, training, maintenance, and support. The processing functions to be addressed and supported by the resulting integrated system solution will include the following system areas:

1. Unclaimed property management data repository and processing component supporting processing for Holders, Owners, properties, claims, audit, and Holder reporting portal;

2. An integrated workflow management system component;

3. An integrated documents management capability;

4. An online holder reporting portal for the submission of remittance reports;

5. An online system to support public search and claim creation with online automatic authentication and verification capabilities included; and

6. A standalone outreach solution to support claims search and processing capabilities.

A new solution is expected to address many of the operational challenges and opportunities facing the division. A fully integrated solution will support the online initiation and evaluation of claims, and the payment of claims using an EFT solution. At the same time, a new solution is also expected to support the electronic submission of holder reports and escheated property, minimizing human intervention. Ideally, a more modern solution should also support better integration with call center technology and other third party systems through the use of APIs or other data exchange technologies. New data exchange technology should also support an expansion of the data matching program to identify potential claimants.

Depending on the solution presented, a comprehensive system could potentially replace a number of systems in use by the division by providing functionality for electronic document management, workflow, and mailing address verification. A comprehensive solution will reduce overall support and maintenance costs associated with disparate systems.

UPD expects to release the RFP in 3Q 2016 and following evaluation, vendor selection and contract negotiation, anticipates full production implementation within one year.

Enhancements for Call Center Operations

With an increase in the number of claimants, UPD has also experienced an increase in call volume. Many of these calls are related to the status of claim processing and could be addressed through an automated system, such as an IVR system integrated with existing call center technology. Following, or concurrent with, the implementation of a new Unclaimed Property Management System (UPMS), the IT

Division will seek to integrate data related to claim processing status from the UPMS with an IVR solution. This is one of many data integrations sought in a new system and it will be important for the new UPMS to quickly and easily support these types of integration projects. Call center operational performance and customer satisfaction will improve by allowing claimants to quickly check claim processing status without waiting on hold to a call center representative.

UPD, in conjunction with the Retirement Systems Division, is commissioning a study of call center operations in both divisions. This study will examine all facets of call center operations, such as current and future call volumes, staffing levels, training, service delivery, costs, and technology, as well as provide comparisons to industry best practices. The results of this study will be used to determine the feasibility of call center consolidation, future service delivery models, and key metrics to evaluate performance effectiveness. This study is expected to occur in late 2016, with implementation of recommendations in the 2017-2019 timeframe.

Implementation of a New Document Scanning Solution

In order to achieve improved efficiencies in the handling of inbound mail and documents, the IT Division must implement a new document scanning solution for use by UPD. The division currently uses Oracle Distributed Document Capture, a product that has been discontinued by Oracle and is no longer supported or receiving upgrades to functionality. The IT Division has been evaluating potential solutions and will be seeking to implement a solution with a long history of successful implementations in a variety of scenarios that can support the document load of the UPD. At the same time, an ideal solution will support integration with the current electronic document repository and any new document repository functionality provided by a new UPMS solution. The IT Division expects to select and procure a solution in late 2016 and implement no later than the end of the 2Q of 2017.

Expansion of Data Matching Program with GDAC

The UPD seeks to expand its partnership with the GDAC in identifying potential property claimants as part of a comprehensive data matching program. While the UPMS currently in use supports the extraction of property data to be used in matching efforts, it is a time-consuming process that requires assistance of the UPMS software development vendor. The implementation of a new UPMS with expanded data integration technology should allow UPD to supply property data more frequently to the GDAC. This property data can then be analyzed against the data housed in the GDAC to identify potential claimants more frequently, rather than just once or twice per year. Additionally, when property owners are positively identified through GDAC matching techniques, the implementation of a new UPMS should support the automatic return of property without the need for human intervention.

While improvements to the current process for data matching can be made while a new UPMS is selected and implemented, a full expansion of the data matching program to support automatic payments cannot occur until the implementation of a new UPMS is completed. This expansion of data matching can begin during the 2Q of 2018.

Unclaimed Property Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
New Unclaimed Property Management System	Conduct Procurement	Implementation of New Unclaimed Property Management System		
New Scanning Solution	Implement New Scanning Solution		Integration of Scanning Solution with New UPMS	
Call Center IVR				Implement IVR with UPMS Integration
Data Matching Program				Implement Data Matching Expansion with GDAC and new UPMS

Figure 22 - UPD - 2017-2019 Strategic IT Initiatives

2017-2019

Information Technology Division

Overview

The Information Technology (IT) Division's mission is to deliver comprehensive technology solutions that allow the Department of the State Treasurer (DST) to achieve a fiscally sound and prosperous North Carolina.

Strategic Goals

- Maintain a stable and secure IT infrastructure to support business operations.

- Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.

- Secure DST electronic information and systems by employing an IT risk management methodology, a well-sponsored State-compliant Security Program, enterprise grade monitoring and detection security services, and audits and reviews.

- Plan, design and implement new technology solutions to meet changing business needs and objectives

- Procure and manage contractual relationships with technology and staffing vendors critical to the delivery of IT services.

- Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.

In each of the initiatives discussed throughout the Strategic Plan, the important measurements of value or success are driven by the business unit, not the IT Division.

The IT Division seeks to achieve specific measurable targets in the delivery of IT services. Even when IT satisfies a scope of business requirements on-time and within budget, business objectives ultimately determine the value and success of the initiative.

Due to the nature of the IT Division as a support organization, successful satisfaction of measurement targets does not always result in meeting important departmental strategic goals.

Strategic Objectives

- Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department.

- Implement initiatives in the project portfolio meeting project planning targets of +/- 10% in budget, scheduling, and defined requirements in the interest of customer service.

- Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Key Operational Metrics

In addition to fulfilling the strategic objectives, the IT Division seeks to meet the following key operational goals in 2015-2017

- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.

- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.

- Critical system uptime of 99% during business hours minus scheduled maintenance.

- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.

- On time completion of all HR-assigned training. On time completion of all HR-related documentation (reviews, work plans, etc.…)

- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.

- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

Organization and Staffing

The IT Division of the Department of State Treasurer is led by the Chief Information Officer, a Deputy State Treasurer that reports to the State Treasurer through the Chief of Staff. The Chief Information Officer is Bill Golden.

The division is organized around three functional areas. Technical Services is responsible for the technology infrastructure of the department, including items such as networking, storage, servers, virtualization, backup/recovery, and management of the physical data center. The group also supports department-wide systems such as e-mail. Desktop support functions, such as construction and maintenance of desktop and laptop hardware, are the responsibility of Technical Services. This team is directed by the Manager of Technical Services.

Systems Development oversees the procurement, implementation, and maintenance of the business application portfolio of the department. Business applications specific to a division, such as the Retirement Systems Division's ("RSD") ORBIT pension administration system and Financial Operations Division's ("FOD") Core Banking system, are managed by systems developers in this section. Database administration and management is also the responsibility of Systems Development. The team is directed by the Manager of Systems Development.

Information Security manages the IT Information Security Program – the policies and guidelines for the secure operation and delivery of business applications and technology infrastructure services. This group is also responsible for reviewing the existence, State Policy Compliance, and reliability of IT security controls and assessing risk to systems from procedural, legal, technical, and physical shortcomings. The Information Security team also directs threat management and cyber incident response to security events through malware and virus protection, hardening policies, firewall and network intrusion

monitoring and prevention vulnerability assessment. The Information Security group also directs DST Disaster Recovery strategy. The team is directed by the Information Security Manager.

Information Security

The Information Security Team comprises three members led by the Information Security Manager. Risk Management, policies and compliance are mostly managed by the Information Security Manager; implementation, support and maintenance of IT Security Technology services are managed by the Network Security Specialists directed by the Information Security Manager. IT security services include, but are not limited to the following, firewall/VPN maintenance and administration, endpoint security, which includes, malware and rogue host detection and prevention, Microsoft Active Directory policy management, mobile device management (encryption, security configuration) and host hardening. The team also provides vulnerability detection systems and provides leadership and oversight on mitigation activities. All cyber security events are monitored, analyzed and evaluated for potential security incidents. The Information Security Manager is also responsible for setting the strategic direction for disaster recovery and acts as the primary point of contact between DST and the State Chief Risk Officer.

Systems Development

The Systems Development Team comprises 31 members, divided into five groups, each led by a Development Supervisor. Each team focuses on services for a specific division or division(s), and the team specializes in technical acumen and/or business knowledge that serve the divisions they support.

The Retirement Development Team is the largest development group, co-managed by two supervisors. Composed of 11 full-time developers and three contractual developers, this team supports ORBIT, the State's pension administration system. ORBIT is used by RSD for the management of all retirement systems and related activities, such as retiree payroll, employer reporting and contribution management, refunds, service purchases, and death and disability benefit processing.

The Banking Development Team comprises four developers, including their Development Supervisor. This team is responsible for the maintenance and operation of Core Banking, the statewide banking platform operated by the FOD, as well as other key financial management systems. This system is critical to statewide deposit and payment management.

The Web Development/Investments/Unclaimed Property Support Team comprises five developers, including their Development Supervisor. This team is responsible for the maintenance and operation of the department's web content management system, NCTreasurer.com, the department's Intranet infrastructure, and web analytics and support tools. They also develop and support applications for the Unclaimed Property Division, such as UPS2000, the management system of the State Escheat Fund, and UPD-IDMS, a document management and business process automation system that supports division operations. This team also provides IT assistance and support to the Investment Management Division, as well as development and support of the Retirement Systems Division Integrated Document Management System (RSD-IDMS)

The SLGFD and Database Development and Administration Team oversee the data infrastructure of the department, and comprises five database administrators and developers, including their Development Supervisor. The team maintains the data infrastructure through performance monitoring, index management, space utilization oversight and projection, and backup and recovery. Additionally, the team provides design support to the application development group and is responsible for the

development of data analysis services and supporting functions such as reports, data warehouses and marts, and ETL processes, most notably, RSD's data warehouse. The team also oversees the business applications of the SLGFD, including their audit management system, their debt management system, and their reporting infrastructure.

Technical Services

The Technical Services Team comprises 19 members, divided into three groups, each led by a Technical Services Supervisor. Each team focuses on services for specific areas, and the team specializes in technical acumen and/or business knowledge that serve the Office of State Treasurer.

The Tier I Desktop Support Team is the largest technical group comprising seven technicians including the Desktop Supervisor. This team supports all desktop applications for the Department of State Treasurer including client-side components of core business systems such as ORBIT, Core Banking, Logics, Wagers, AutoAudit, and Bloomberg. In addition, the team supports third party Enterprise Solutions including Microsoft Office, Adobe Suites, HEAT, Malware, Antivirus, and desktop encryption, and desktop patch management. The team is responsible for providing first level Helpdesk support to all divisions within the Department of State Treasurer.

The Tier II Desktop-Server Support Team comprises five technicians including the Technical Support Supervisor. This team provides advanced desktop support to Tier I and basic server and infrastructure support for the department's infrastructure areas. The team is responsible for department backups/restores, FAX Services, Exchange, Terminal Servers, Print Services, infrastructure patch management, and bi-annual Disaster Recovery test. The team is responsible for providing advanced Helpdesk support to all divisions within the Department of State Treasurer.

The Tier III Infrastructure Support comprises five technicians including the Technical Support Supervisor. This team provides advanced support to Tier I and Tier II. The team is responsible for all infrastructure areas including network, Active Directory, infrastructure patch management, email archiving / eDiscovery, SAN/NAS, WAN, Data Center management and Disaster Recovery planning and testing. The team is responsible for infrastructure design, planning and implementation.

Business Relationship Manager

The division also has a Business Relationship Manager (BRM) that reports directly to the CIO. The role of the BRM is to maintain the Service Level Agreements with the business divisions, be a customer service advocate for the business, and be a central point of contact for incidents that may occur.

Highlights from 2015-2017

Department of State Treasurer Facility Move and Consolidation

In 2014, the Department of State Treasurer signed a lease to occupy office space on Atlantic Ave. for the next 10 years. The Department vacated the Albemarle and Seaboard Buildings on Salisbury Street in Raleigh, along with offices located at Fair Meadow Lane, Barrett Dr., and Glenwood Avenue to move all eight DST divisions into the Longleaf and Red Oak buildings. All new office space was wired for network access, outfitted for wireless network access, and integrated with the Department of Administration badge access system. The buildings themselves needed to be connected with each other and to the State of NC Wide Area Network.

The Department operated a data center in the Albemarle Building that hosted practically all of the agency's critical business systems and IT infrastructure, including e-mail, the State's Core Banking System and ORBIT, the State of NC Pension Administration System. After consultation with the Department of Information Technology, it was determined that the agency would need to continue to retain management of all servers, storage, and network equipment and IT Division needed to relocate this equipment to the facility at Atlantic Ave. As a result, the IT Division was tasked with designing and constructing a new data center to create an efficient, manageable, and scalable environment for DST technologies.

The Technical Services team partnered with DST divisions, DIT staff and other stakeholders to determine the requirements to successfully design and build the data center in the Longleaf Building. It took six months to complete the data center build in April of 2015. Over a period of five months in the summer of 2015, the entire IT Division conducted a phased migration of all critical information technology to the Longleaf Building. This migration, which entailed seven weekend shutdowns of business applications, was successfully concluded in September of 2015 **with only three hours of planned outage time during normal business hours**.

Independent IT Cost Survey of Peer Retirement Systems

In 2016, CEM, an independent benchmarking and research organization specializing in pension funds, endowments, foundations, sovereign wealth pools, conducted an analysis of the administration costs of the North Carolina Retirement Systems based upon 2014-2015 fiscal year data. CEM collects data from 31 public pension systems in the United States, along with other public pension systems in five other nations.

When compared to a peer group of US public pension plans, the State of NC Retirement Systems had the third-lowest information technology cost per member. With IT spending of only $7.31 per member, IT expenses incurred by NC pension systems are far below the peer group median of $23.78 per member. North Carolina's peer group includes the California Public Employees Retirement System (CalPERS), the California State Teachers Retirement System (CalSTRS), the State of Florida Retirement System, and the New York State and Local Retirement System (NYSLRS).

IT/IS cost was $7.31 per active member and annuitant. This was below the peer median of $23.78.

Figure 23 - IT Costs Per Active Member and Annuitant

Desktop and Laptop Refresh

In 2015, the IT Division initiated a refresh of desktop hardware which had been delayed as a result of the building relocation project. The older computers had reached end-of-life, according to departmental policies related to refresh cycles. Computer failure rates were increasing, as were maintenance costs, as vendor support had expired on many units. Employee productivity was also being negatively impacted due to slow performance as a result of insufficient hardware resources. The newer computers deployed to the department offer faster speed with multiple core processors, better graphics for handing video, improved energy efficiency, and an overall improvement in user experience. The hardware refresh also opened the door to software improvements by utilizing a 64-bit operating system that supports many of the 64-bit applications used by the agency.

Microsoft System Center Configuration Manager (SCCM) Upgrade

In 2015, Microsoft SCCM 2007 was upgraded to SCCM 2012. The upgrade now allows IT staff to control all software installations by using a standard single image, where an image is created once and then deployed to multiple devices. Software updates, patches, and application deployments can also be automated and scheduled for deployment outside of normal production hours, minimizing user interruptions. The upgrade also enables unified management of all departmental laptops and desktops, providing one console to manage all computers and enabling remote access to client equipment. The SCCM upgrade provided new built-in reporting features to help manage software compliance, asset management, and hardware inventories and reports can be customized to provide information relevant to the IT environment.

Microsoft SQL Server Virtualization

In 2016, the IT Division began work to virtualize the department's SQL Server infrastructure. A VMWare virtual environment has been constructed and the migration of servers to this environment is underway and expected to conclude in May of 2017. As a part of the virtualization effort, all database servers are being upgraded to SQL Server 2014 or SQL Server 2016, ensuring maintenance for the next eight to ten years on these platforms. Virtualizing the SQL Server environment has reduced the number of physical servers in use, shrinking the data center footprint and physical hardware support. Virtualization of these servers also saves energy, enables quicker recoverability from failures and faster server provisioning, and will ultimately improve disaster recovery efforts.

Challenges and Opportunities for 2017-2019

Improve Service Delivery

In 2013, the Department of State Treasurer commissioned an independent review of the operational practices of the Information Technology Division. A team from the Center for Public Technology at the University of North Carolina School of Government, and their associated external subcontractors, conducted this review.

Information regarding the IT Division was collected through interviews with key Department leadership, IT staff, and external stakeholders. Documents, including the Departmental strategic plan, the 2013-2015 IT Strategic Plan, the IT Operating Model, and documented procedures and policies were also reviewed to assess the division's practices and operating environment. Lastly, industry best practices

were evaluated and peer interviews with other private-sector and state agency IT leaders were conducted to establish benchmark practices for IT operations.

The review highlighted the successful efforts of the IT Division in the application of technology solutions that enhanced overall Departmental operational efficiency and customer service and responsiveness. The review also called attention to the extremely low operating costs associated with IT service delivery when compared with other large pension programs of similar size. The IT Division was recognized for a commitment to sound operational practices and overall employee satisfaction.

Among the recommendations of the IT Operational Study, the IT Division must continue to improve its service delivery across the entire agency. As recommended in the study, the IT Division has instituted a role committed solely to business relationship management and filled this position in 2016. At the same time, the IT Division has developed standardized service-level agreements (SLAs) with the seven other agency divisions. The SLA clarify the services available from the IT Division, roles and responsibilities, and measures of performance. Through a reorganization of duties, Technical Services has also moved two personnel from evening and overnight shifts to daytime availability. This has increased the resources available to provide Enterprise Desktop Support to the department.

There is still more work to be completed. The Helpdesk model used by the IT Division is not consistent with industry best practices, sometimes resulting in poor service and clouding the general perception of the IT division among the user community. Much of this can be attributed to a lack of clarity of roles and responsibilities in the service delivery model, a lack of well-documented procedures, and insufficient tools for performance measurement.

It will be important for the IT Division to continue work on improving service delivery over the next two years. The IT Operational Study has provided solid recommendations for corrective action; however, the building relocation project drew resources and attention from this effort. Having successfully completed this initiative, the IT Division can resume activities focused on achieving operational excellence.

Expand Identity and Access Governance

Over the last eight years, almost all growth in the Department of State Treasurer's Application Portfolio has involved systems delivered in a software-as-a-service (SaaS) model. This trend will continue, as SaaS products provide value with little up-front costs and faster implementation time. For the IT division, the use of SaaS products also limits infrastructure maintenance and allows resources to focus on development and maintenance of software unique to the agency that cannot be purchased in an open market.

At the same time, the use of SaaS products introduces new risks in the areas of user access and data management and complicates oversight of security policy compliance and cyber-threat response capabilities. Often times, SaaS products do not easily integrate with the department's Active Directory for user authentication and authorization. Users often have multiple accounts, or identities, spread across many different systems. As a result, it is difficult to control and monitor the permissions granted to an application user and ensure access is terminated at appropriate times, such as employee separation or reassignment. The use of SaaS products also creates challenges for data management as external systems host sensitive and critical data such as social security numbers, bank records, and health information. Identity and access governance and data management challenges are intertwined, and addressing these are critical to continued expansion of the department's application portfolio.

Develop New Capabilities in Data Analytics

The Department of State Treasurer seeks to utilize data analytics more expansively in agency operations and the IT Division plays an important role in meeting this requirement. Before each division can embrace data-driven decision making in normal operational practices, analysts across the department must have the tools necessary to access business data to inform decision making. The IT Division has been deploying a number of tools across the agency, such as Microsoft PowerQuery for SLGFD and MATLAB for IMD, to aid in data analysis. It is unlikely that any single toolkit will meet the needs of each division and the IT Division must continue to keep abreast of developments in the industry and apply the appropriate technologies to each specific analytics challenge. Leveraging the resources of the Government Data Analytics Center (GDAC) to assist in the development and support of analytics platforms for SHP has also been an effective strategy that should be considered for other divisions.

The IT Operational Study identified deficiencies in the staff capacity to implement and support division-wide data analytics. DST has neither enough staff, nor staff with the appropriate skills, to successfully conduct enterprise-wide data management, analytics, visualization, and reporting. Working across the entire agency, the IT Division must formulate a strategy to address these personnel needs, through new positions and training opportunities for existing staff. By addressing both the skills and capacity gaps that exist within the organization, the agency should be poised to make rapid advancement towards the integration of analytics across all department operations.

SHP is currently conducting a strategic evaluation of their analytics program. In addition to defining and prioritizing divisional initiatives around analytics, they are performing a comprehensive review of resourcing, including staff, skills, tools, and data used in analysis. The division is also defining governance structures for the ongoing oversight and prioritization of analytics projects to ensure continued value from initiatives and clarify priorities across the organization. This work being conducted in SHP may potentially serve as a model for other divisions that are seeking to bring more order to their analytics programs.

Strengthen Disaster Recovery Capabilities

For over seven years, the Department of State Treasurer has utilized a "warm-site" configuration at the State of NC Western Data Center (WDC) for the recovery of critical business systems. A collection of physical database servers and virtualized application servers have been maintained in a ready state and in the event of a disaster, recovery of current data and some minor reconfiguration are all that are necessary to restore systems. Despite the ready state of these systems, a large volume of data must be moved to the WDC for recovery, whether it involves the physical transport of tape backups or the electronic transfer of large files. A great deal of system recovery time involves data transport, and this is an area upon which the IT Division can make improvements.

Utilizing technologies such as SAN replication, as well as application synchronization capabilities in products like Microsoft SQL Server, issues with data transport can be addressed and the WDC can be reconfigured to a "hot" site, ready to be utilized quickly in the event of a disaster. By maintaining system and data replication, it may also be possible to expand the critical services to be recovered in the event of a disaster. Bi-directional synchronization and replication will also address long-standing issues involving the return of normal operations to the Raleigh area following the resolution of a disaster situation.

Transition to a New State Treasurer

In January 2017, for the first time in eight years, North Carolina will have a new State Treasurer. While the most immediate impact will involve the activities of the Office of State Treasurer, soon thereafter, the policy preferences of the new State Treasurer will be operationalized and a new strategic direction of the Department will establish priorities across the divisions of the Department. While this IT Strategic Plan reflects the priorities of current agency leadership, with new leadership, new initiatives will likely emerge along with shifts in prioritization. The IT Division must be prepared to respond to changes to priority and direction accordingly.

Employee Engagement

The Department of State Treasurer conducts biennial surveys of employee engagement and IT Division faces challenges in three areas: classification and compensation, communication, and collaboration.

Compensation and classification concerns are particularly acute since the demand for technology workers in the Raleigh area continues to grow and recruitment and retention of personnel remains a challenge. Talented employees demand opportunities to grow and develop their skills in new and emerging technologies. At the same time, as these employees develop skills in new technologies, they increase their value to other employers. The IT Division must continue to provide training and on-the-job learning opportunities to engage employees and maintain workplace committed to employee retention. At the same time, ensuring appropriate job classification, opportunity for advancement, and fair pay are critical.

With an expansive portfolio of work, clear communication of priorities and activities is necessary to create a clarity of focus across the IT division. The complexity of information technology requires the coordination of teams of specialists and this collaboration is only achieved when priorities are clearly communicated. Lack of coordination and clarity otherwise leads to employee frustration.

Current System Portfolio and Operational Activities

Information Technology Division – Infrastructure Portfolio

Exchange	Microsoft Exchange is an Enterprise platform for e-mail, calendaring, contacts, task, and unified messaging. Outlook and OWA provide the user interface that integrates with the Exchange backend.
Commvault	Commvault Simpana is an Enterprise backup and recovery solution. Simpana provides secure tape backups by using encryption technology.
Enterprise Vault	Symantec Enterprise Vault is an archiving solution to store, manage and discover critical business information.
SCCM	System Center Configuration Manager is an Enterprise solution used to create standard desktop images for software deployment.
DameWare	DameWare provides remote access to servers, desktop and laptops so that the IT staff can quickly support the end-user community.
Storage Manager	SolarWinds provides data storage monitoring and management for the EMC 480 SAN. SolarWinds monitors storage performance, isolates hotspots, automates storage capacity planning, maps VMs to physical storage, analyzes storage usage, reclaims storage space, manages fiber channel switches, and gains visibility into the SAN fabric.
WhatsUp Gold	WhatsUp Gold is a network management solution designed to monitor networks.
Kiwi CatTool	Kiwi CatTool is a configuration management and network automation tool that is used to manage network switches.
ZixGateway	ZixGateway is used as an enterprise e-mail encryption solution.
Securance	Securance is an e-mail filtering (anti-spam filter, antivirus software) solution that includes e-mail protection and security services
MeetingPlanner	MeetingPlanner is an add-on component to Microsoft Exchange used for scheduling management of conference rooms and other shared facilities of the Department of State Treasurer.
Serv-U	Serv-U is a secure FTP file transfer software
GFI Faxmaker	Enterprise fax solution allowing users to receive and send faxes directly from their email client.
VMware vCenter	VMware vCenter is a centralized management tool for the vSphere suite. VMware vCenter Server allows for the management of multiple ESX servers and virtual machines (VMs) from a centralized console.
HEAT	HEAT is a patch management and remediation software that identifies and patches vulnerabilities across servers, desktops and laptops.
Wireshark	Wireshark is a network monitoring tool that analyzes network activity at protocol levels.

Information Technology Division – Business Application Portfolio

Team Foundation Server	Microsoft Team Foundation Server ("TFS") is used by the Systems Development group for the storage and management of source code for all in-house developed business applications and customizations, including application code and database scripts. The tool is also used in the automated build process of ORBIT.
Helpdesk	Helpdesk 3.0 is an in-house developed application used by the Information Technology Division to accept support requests and incident reports from end-users and route and monitor incident responses by IT team members.

Information Technology Division – Infrastructure Roadmap

Department of State Treasurer - Infrastructure Roadmap

Hardware and Devices

	2016	2017	2018	2019	2020
Core Network Switch*	Enhance	Maintain	Maintain	Maintain	Maintain
Storage Area Network Switches*	Maintain	Maintain	Enhance	Maintain	Maintain
EMC SAN - Raleigh*	Maintain	Maintain	Enhance	Maintain	Maintain
EMC SAN - WDC	Maintain	Maintain	Maintain	Maintain	Maintain
Desktops/Laptops (IT, FOD, OST, UPD)	Enhance	Maintain	Maintain	Maintain	Maintain
Desktops/Laptops (RSD)	Maintain	Enhance	Maintain	Maintain	Maintain
Desktops/Laptops (SHP, IMD, SLGFD)	Maintain	Maintain	Maintain	Maintain	Enhance
Virtual Hosts - Infrastructure Cluster*	Maintain	Maintain	Maintain	Maintain	Enhance
Virtual Hosts - Application Cluster*	Maintain	Enhance	Maintain	Maintain	Maintain
Virtual Hosts - SQL Server Cluster	Enhance	Maintain	Maintain	Maintain	Maintain
Virtual Hosts - WDC	Maintain	Enhance	Maintain	Maintain	Maintain
Virtual Host - DMZ*	Maintain	Maintain	Maintain	Maintain	Enhance
DDR	Maintain	Maintain	Maintain	Maintain	Replace
ADIC	Maintain	Maintain	Maintain	Maintain	Maintain
Recovery Point	Maintain	Maintain	Maintain	Maintain	Maintain
NetApp	Maintain	Maintain	Maintain	Maintain	Maintain
Centera	Maintain	Replace			

Infrastructure Software

	2016	2017	2018	2019	2020
Microsoft Exchange	Maintain	Maintain	Maintain	Enhance	Maintain
Microsoft SCCM	Maintain	Maintain	Enhance	Maintain	Maintain
VMWare	Maintain	Enhance	Maintain	Maintain	Maintain
Windows Client OS	Enhance	Enhance	Maintain	Maintain	Enhance
Microsoft Office Suite	Enhance	Enhance	Maintain	Maintain	Enhance
Enterprise Vault	Enhance	Maintain	Maintain	Maintain	Maintain
Active Directory	Maintain	Maintain	Enhance	Maintain	Maintain
ZixGateway	Enhance	Maintain	Maintain	Maintain	Maintain
HEAT	Enhance	Maintain	Maintain	Maintain	Maintain
Storage Manager	Maintain	Maintain	Maintain	Maintain	Maintain
Serv-U	Maintain	Maintain	Maintain	Maintain	Maintain
What's Up Gold	Maintain	Maintain	Maintain	Maintain	Maintain
Commvault	Maintain	Maintain	Maintain	Maintain	Maintain
Kiwi CatTool	Maintain	Maintain	Maintain	Maintain	Maintain
Dameware	Maintain	Replace			
GFI Faxmaker	Maintain	Maintain	Maintain	Maintain	Maintain
Wireshark	Maintain	Maintain	Maintain	Maintain	Maintain
Securance	Maintain	Maintain	Maintain	Maintain	Maintain
MeetingPlanner	Maintain	Replace			

* Replaced in 2015

Figure 24 - IT Infrastructure Roadmap

Information Technology Division – Business Application Roadmap

Department of State Treasurer - Application Roadmap

Information Technology Division

	2016	2017	2018	2019	2020
Helpdesk	Maintain	Replace			
Microsoft Team Foundation Server	Enhance	Maintain	Replace		
Microsoft Project Server	Retire				
SQL Server Reporting Services	Enhance	Maintain	Maintain	Maintain	Enhance

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Figure 25 - IT Business Application Roadmap

Strategic Technology Initiatives for 2017-2019

Replace Helpdesk and Application Lifecycle Management Systems

As part of the effort to improve overall service delivery, and in accordance with the recommendations of the IT Operational Study, the IT Division will seek to replace the current Helpdesk system used by the Department of State Treasurer. The current Helpdesk system is a custom developed application, first released in 2007. It has become challenging to maintain, drawing development resources from other pressing needs, and it lacks many features necessary for better operational performance management.

The IT division will be exploring both on-premises and cloud solutions to replace our Helpdesk system. Ideally, the new system will have scalable components to include custom reporting, a knowledge base, asset management capabilities, change management capabilities, and process control and workflow for incidents and service requests. The selection of a commercial product with minimal customization will also impose industry best-standard practices upon the IT Division for incident and service request management.

The current Helpdesk system has also been designed to perform application lifecycle management (ALM) functions and serves as the IT Division's development backlog and tracking system. The Systems Development group has been using Microsoft Team Foundation Server (TFS) for source control management for almost eight years, and many of the ALM functions of TFS could be leveraged to replace functions performed by the Helpdesk system. Work items for development requests and defects can be created and routed for analysis, coding and code review, and when combined with source code control, an ALM system can ensure only well-tested and vetted changes are pushed into a Production environment. It may also be possible to leverage features of TFS for automated deployment, eliminating the human error risk involved in production changes. The migration from on-premise TFS to the Microsoft Azure Visual Studio Team Services (VSTS) will also be explored.

Expand Disaster Recovery Capabilities at Western Data Center

Moving toward "hot site" disaster recovery capabilities has long been a goal of the IT Division and the technology environment of the Department of State Treasurer is almost in a position to support this configuration. As part of the Building Move and Consolidation initiative, the IT Division developed a great deal of experience in site-to-site SAN replication of data and virtual machines. This was the foundation of the successful building move and can serve as the basis upon which a new DR infrastructure can be developed.

The IT Division has moved a SAN device to the State's Western Data Center (WDC) and this SAN is being used to house data and virtual machines that are required for disaster recovery. Due to the age of existing hardware at the WDC and the desire to move to a fully virtualized environment, aligned with the ongoing database server virtualization efforts in the Raleigh office, new hardware for the WDC must be procured and installed. Once in place, along with some network reconfiguration activities, the implementation of replication with site recovery services can take place.

Critical virtual servers in Raleigh will be replicated to the WDC and poised to come online in the event of a disaster. Bi-directional replication will permit a recovery to normal operations at end of a disaster event. Due to the unique nature of database servers, technologies such as high-availability clustering will be implemented to allow little-to-no data loss during a cutover of operations between Raleigh and the WDC.

Enhance Infrastructure Services

There is a great deal of growth in the technologies available for information technology infrastructure. Some of these technologies include converged and hyper-converged solutions, software defined networking, software defined storage, automation and cloud computing, as well as on premise solutions. These technologies and others will be evaluated for their potential to enhance service delivery of desktop, server and infrastructure solutions while decreasing deployment times and complexities.

Key areas of research will include alternative virtualization platforms and converged solutions. While the IT Division currently uses VMWare for virtualization, Microsoft Hyper-V is a virtualization solution that runs on Windows Server 2008 R2 and may reduce cost while increasing IT agility and flexibility across on-premises and cloud resources. Converged solutions require an entirely different way of looking at infrastructure solutions. Converged infrastructure will leverage our existing virtual technologies while reducing resources, lowering cost, reducing system management, faster provisioning, and providing an easier path to cloud-based infrastructure. Outside of on-premise solutions, the IT Division will continue to monitor and evaluate Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PasS) and hybrid solutions. The IT Division has a had great deal of success deploying SaaS solutions for focused business needs and the implementation of more SaaS products is expected to continue.

The IT Division will also seek to expand the current use of Microsoft System Center to provide a unified management solution for provisioning, monitoring, and securing the infrastructure while eliminating the use of multiple third party solutions providing these services.

Expand Identity Management Capabilities

With the proliferation of Software-as-a-Service (SaaS) business systems, along with the deployment of new mobile devices, identity management continues to be a challenge for the IT Division. It is no longer possible to merely deactivate a single account in Active Directory and remove all access to critical business systems. Management of access required more advanced tools and technologies. Tools like Azure Active Directory, when synchronized with on-premise AD, can provide single sign-on functionality and a single point of management for both on-premise and SaaS applications. Tools like Azure AD can also be leveraged to provide self-service password management and centralized management of mobile devices.

As a necessary precursor to expanding identity management capabilities, the IT Division must upgrade its existing Active Directory to both maintain ongoing vendor support and leverage new features in AD 2012. Active Directory Domain Services (AD DS) in Windows Server 2012 includes new features that will make it simpler and faster to deploy domain controllers (both on-premises and in the cloud), more flexible and easier to both audit and authorize access to files with Dynamic Access Control, and easier to perform administrative tasks at scale, either locally or remotely, through consistent graphical and scripted management experiences. The enhanced DFS Namespaces and DFS Replication in Windows Server 2012 will provide new management functionality as well as interoperability with Direct Access and Data Deduplication.

Tools must also be leveraged to improve processes surrounding the provisioning of user access. Today, DST uses a process initiated with a paper form and routed through the existing Helpdesk system with practically no workflow control. It is a time-consuming process to monitor and creates a number of opportunities for error, whether adding access or removing it. Utilizing toolkits to electronically collect

access requests and automate the provisioning of access where possible will streamline the access provisioning process, provide better accountability and monitoring of user access, and eliminate errors and delays in provisioning that frustrate users and hamper employee productivity.

In the long-term, the IT Division must review identity management in the selection of all new business systems, as well as upgrades to existing systems. Special consideration must be given to systems that can leverage centralized identity management tools and existing on-premise systems such as ORBIT should be examined for possible integration with an identity management toolkit.

Relocate Server Operations

The Department of State Treasurer was granted an exception by the Department of Information Technology (DIT) to move equipment to a server room at the agency's new Atlantic Avenue facility on January 13, 2015. This exception was granted with the stipulation that DST develop a plan by mid-2016 to move server operations to a DIT data center. DST has a 10-year lease in the new facility, which includes a brand new Uninterruptable Power Supply (UPS), diesel generator, and air conditioning units. As a result, there is no urgent need to move equipment; however, DST must relocate server operations before the end of the lease in 2024.

In January 2016, DIT published a Data Center Consolidation Plan, and while DST is not one of the eleven agencies described within the scope of this plan, the agency has taken steps to eliminate all instances of MS Server 2003, reduce physical servers in use, and meet an 80% virtual to physical server ratio. The IT Division anticipates a virtual-to-physical server ratio of over 85% at the completion of the Microsoft SQL Server Virtualization Project. At the conclusion of the consolidation of the eleven agencies listed in the plan, DST has also agreed to the study and evaluation of applications as candidates for server consolidation.

The IT Division will continue work to relocate server operations from the Atlantic Avenue facility before the end of the lease period. As noted earlier, the department has seen a rise in the use of SaaS applications and the IT Division will continue to evaluate SaaS solutions as alternatives to on-premise solutions. Notably, the IT Division is exploring the use of O365 for Sharepoint-based intranet services and potentially electronic mail and communication services. The IT Division will also be exploring the use of cloud-based infrastructure providers such as Microsoft Azure and Amazon Web Service as an alternative to on-premise server implementations.

Those applications that cannot utilize cloud-based delivery, whether for cost or technology limitations, will be evaluated for migration to a DIT data center. The IT Division has utilized floor hosting at the DIT Western Data Center for disaster recovery, and will continue to do so; however, floor hosting at the DIT Eastern Data Center, as well as DIT managed services, will also be explored as alternatives to reduce server operations in the Atlantic Avenue facility.

Develop Long-Term Electronic Document Strategy

The Department of State Treasurer utilizes at least five different electronic document management tools. Three of these tools are in the Documentum product line, offered by EMC, recently acquired by Dell. The future of the Documentum product line is in question since the acquisition. The Department also utilizes an EMC Centera device for WORM-based storage of document content for two systems. This product line has been discontinued by EMC and a replacement storage technology must be identified and implemented.

No later than the end of 2017, the IT Division seeks to implement a replacement to the EMC Centera and has started evaluating potential solutions. The IT Division will be monitoring developments in the electronic document management product space closely over the next two years. The IT Division will be developing a strategy for electronic document management services by identifying alternative products for electronic document management while also seeking to minimize the number of platforms of use across the agency. As a Documentum customer, DIT is also impacted by the Dell acquisition of EMC and the IT Division will work closely with DIT to monitor the future direction of DIT electronic document management services and utilize them if possible.

Increase Mobility Capabilities

The Department of State Treasurer has experienced an increase in the number of personnel working remotely, whether resulting from work-related travel, or as a permanent assignment as a division field representative. Simultaneously, the IT Division has seen an increase in requests for Enterprise Mobility Services, tools and technology that will permit staff to remain connected and permit access to departmental systems at any time.

The Department of State Treasurer, like many State agencies, also conducts business with a large number of boards and commissions. The Local Government Commission, the Investment Advisory Committee, and the Teachers' and State Employees' Retirement System Board of Trustees are just a few of the boards and commissions for which the agency must prepare volumes of physical documents for each meeting. The preparation process is time-consuming and inefficient, especially as board and committee members have expressed a desire to move to the use of electronic media for meeting material.

With the increase in the mobile workforce, the IT Division must develop an infrastructure to meet these demands. Appropriate policies must be developed and tools identified to ensure compliance with public record retention while balancing personal privacy. Cloud-based technologies to support collaboration and information sharing among staff and external entities must be researched and implemented, again, balancing the data security requirements of the agency with the need to expand access to data across a variety of platforms.

Offer New Data Analytics Capabilities

There is a demand for increased use of data analytics to support business operations across the entire department; however, implementation of new governance structures, tools, personnel and processes are a necessary precursor to these efforts. Without these structures in place, it will be impossible to prioritize analytics efforts among all the other work that is requested of the IT Division, and there is no guarantee that any projects selected will truly be beneficial without strong project justification methodologies in place.

There are a number of initiatives underway at the current time – IMD has been working with the SAS Institute on a project related to investment portfolio risk analytics, SHP has partnered with the GDAC for the construction of a health claims data warehouse, and SLGFD, IMD, and RSD are all experimenting with ad-hoc analytics to various degrees. Conducting an analysis of the successes and failures of these initiatives will be an important guide to all future endeavors. Due to the varied nature of the operational imperatives of the various DST divisions, there is no single method, process, or toolkit that will have division-wide applicability; however, replicating areas of success with modifications and avoiding known

problems will improve future implementations. The strategic planning activities related to analytics that conducted in SHP have been valuable for that division and it is a model of planning and organization that the IT Division will seek to replicate across the Department.

The use of the GDAC for operational data analytics must be carefully considered to balance the mission and purpose of the GDAC with the needs of the Department of State Treasurer. The GDAC is a Statewide service and must deliver this service equitably to all State agencies. At the same time, the specific data analytics needs of each division of DST must be met in some fashion. DST is currently facing this challenge, as SHP and the GDAC are working to meet the expanding needs of SHP with the resources and capabilities available through the GDAC. As other divisions within DST expand their data analytics requirements in a similar manner, this will continue to be a challenge for the GDAC and each DST division. While DST would like to continue to leverage the expertise of the GDAC, other avenues must be considered.

In order to truly achieve benefits from data analytics, it will not be enough to engage in traditional business intelligence-type activities of merely counting transactions or elements. Utilizing predicative analytics and modeling to unlock patterns and business insights will allow management to make informed decisions about resource allocation and utilizations. For instance, predicting the seasonal load of claims on escheated property will allow for the effective utilization of temporary staff. Understanding the total retirement portfolio of a State employee or teacher will allow RSD to develop and promote programs designed to help ensure sufficient savings and income for retirement.

Unfortunately, DST is limited in the number of staff that can perform this type of analysis. Identifying strategies for training additional staff, as well as augmenting existing staff with some specialized skillsets will make this possible. Understanding the scope of these efforts and the finances involved will be critical to allocating or requesting funds toward this effort. The importance of governance and project justification cannot be understated as it pertains to this effort. Procuring high-value professional services and training, as well as funding new positions, can only be justified and secured for the most beneficial projects. An effective governance body that prioritizes these efforts will make sure scarce departmental resources are not wasted.

2017-2019

Appendices

Appendix A – IT Organizational Chart

North Carolina Department of the State Treasurer
Division of Information Technology Services
Updated 6/13/2016

Deputy Treasurer Chief Information Officer

Reporting to the Deputy Treasurer / Chief Information Officer:
- Information Technology Manager
- Technology Support Tech
- Information Technology Manager
- Networking Specialist

Under the first **Information Technology Manager**:

- Business & Technology App. Specialist → Business & Technology App. Specialist → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Contractor
- Business & Technology App. Specialist → Business & Technology App. Specialist → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Contractor → Contractor
- Business & Technology App. Specialist → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst
- Business & Technology App. Specialist → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst → Business & Technology App. Analyst
- Business & Technology App. Specialist → Business & Technology App. Specialist → Business & Technology App. Specialist → Business & Technology App. Specialist → Business & Technology App. Analyst

Under the second **Information Technology Manager**:

- Technology Support Specialist → Technology Support Tech → Technology Support Tech → Technology Support Analyst → Technology Support Analyst → Technology Support Analyst → Technical Support Tech
- Operations & Systems Specialist → Technology Support Analyst → Technology Support Specialist → Technology Support Analyst → Technical Support Analyst
- Operations & Systems Specialist → Technology Support Specialist → Technology Support Specialist → Technology Support Specialist → Technical Support Analyst

Under **Networking Specialist**:
- Networking Specialist → Networking Analyst

Level I Support

Provide consultation and support to DST clients. Provide basic support of hardware, applications, operating systems and networking for desktop systems. Provide support for DST issued mobile devices. Provide desktop patching. Individuals are not involved in application development, system integrations or network analysis. Complex technical desktop and networking problems are assigned to Level II– higher level support team.

Level II Support

Analytical work providing consultation and support to DST clients. Provide advanced hardware, applications, operating systems support for desktop issues and basic support of hardware, applications, operating systems and networking for server systems. Support Exchange, Network Print Services, Enterprise Fax Services, server patching, and disaster recovery. Responsible for agency backups and restores. Individuals are not involved in application development, system integrations, and design or network analysis.   Refer complex technical problems to higher level support team – Level III

Level III Support

Advanced technical work providing consultation and support to DST clients.. Provide advanced hardware, applications, operating systems and networking support for desktop and server areas. Responsible for design, implementation and oversight of programs or projects. Support virtual environments, SAN storage, networks, server patching, and disaster recovery.

ORBIT
IVR
Helpdesk
Case Tracker

Core Banking
Positive Pay

Bank InfoImage
Check 21

Dynamics
Supply Inventory System

Internet/Intranet Sites
SharePoint Core
iContact/List Serv
Investment Systems
UPP-IDMS
UPS2000
UPP Audit System
Software Deployment
RSD-IDMS

Database Admin/Mgmt
and Development
RSD Data Warehouse
SLGFD Audit System
Fin Data Reporting
Bond System
IA – AutoAudit
TFS Admin

Information Technology
Security & Disaster
Recovery

Appendix B – System-to-Business Process Mapping

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

OFFICE OF THE STATE TREASURER

| WEBTRENDS ON DEMAND (Hosted) | iCONTACT (Hosted) | NCTREASURER.COM (Vendor Developed In-house supported and maintained) | SHPNC.ORG (Developed, supported and maintained in-house) | COMPASS INTRANET (Vendor Developed In-house supported and maintained) |

Provide usage metrics for Treasurer's Website, DST Intranet, and ORBIT Self-Service

Mass electronic mailing services for Department of State Treasurer

Public Interface to Retirement Systems, Unclaimed Property, Banking, State and Local Government, Investments, State Health Plan, Job Seekers, and other OST initiatives

Public interface to State Health Plan for Teachers and Retirees

DST Employee interface to HR Forms, News, Job Seekers and other Department related information

| SALESFORCE.COM (Hosted) | CLEARPOINT (Hosted) | CISIONPOINT (Purchased) | AUTOAUDIT (Purchased) |

State Treasurer Event and Contact Management

Strategic Plan and Operating Model Management Tool for Department of State Treasurer

Database of print, online, broadcast and social media mentions of the Department of the State Treasurer

Maintain artifacts and records of the Internal Audit section

Applications   **Business Processes**

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

FINANCIAL OPERATIONS DIVISION

| CORE BANKING Flexcube UBS (Purchased) | EXTERNAL BANKING Flexcube DB (Purchased) | CHECK 21 (Purchased) | BANK IMAGING (Purchased) | BUSINESS OBJECTS (Purchased) | DYNAMICS (Purchased) |

CORE BANKING Flexcube UBS (Purchased)
- Provide DDA and Savings commercial type Banking functions for agencies
- Determine daily availability of funds for investment
- Provide limited GL functionality for Accounting and Banking Operations
- Interface with the FRB for clearinghouse activities such as pay decisions
- Upfront consolidation of agency disbursing accounts with positive pay and stop pay
- Generate daily tax payment reporting and process tax transfers to Dept of Revenue (DOR)
- Reconcile Depository accounts, Cash Concentration accounts, Community Bank accounts, the Federal Reserve account, and Miscellaneous bank accounts used to hold funds (external)
- Reconcile and balance with data from the NC Cash Management Control System

EXTERNAL BANKING Flexcube DB (Purchased)
- On-line banking functions for agency banking customers
- Agency Funds Transfer functions
- Collect agency interface and pay information
- Payroll and Sales tax transfers and reporting for agencies to Dept of Revenue (DOR)
- Provide banking functions for state agencies including account statements and check images

CHECK 21 (Purchased)
- Receive and process check files
- Long term research and archive for Federal Reserve Bank (FRB) financial transactions
- Low cost, short term image archive alternative to FRB image option for pay decisions.
- Generate return image files to the FRB

BANK IMAGING (Purchased)
- Check Image archival and retrieval for NCDST operations via FCC
- Check Image retrieval for agencies via FC@
- Long term archive of monthly statements

BUSINESS OBJECTS (Purchased)
- Provide all reporting functionality for FCC and FC@.
- Through custom reports provide error correct and backout procedures for the larger interfaces
- Generate agency notices such as overdraft and interest statements

DYNAMICS (Purchased)
- Provide interface functions between FCC and Orbit for Retirement
- Miscellaneous check creation and positive pay generation for Retirement
- Provide monthly account balancing and reconciliation for Retirement.

| Axway Secure Transport (Purchased) | FTPManager and ConvManager | Counter Scanner Application |

Axway Secure Transport (Purchased)
- Secure Transport Interface mandated by the Federal Reserve Bank
- Secure retrieval of Cleared Check Files from the Federal Reserve Bank
- Secure transmition of Check files to the Federal Reserve Bank for Return and Adjustment

FTPManager and ConvManager
- Send and retrieve files from various FTP locations
- Interface with the Banking System Notification Processes
- Conversions between EBCDIC and ASCII formats to accommodate Z/OS mainframe systems

Counter Scanner Application
- Workstation Interface with Counter Scanner Hardware
- Extracts Images from the Scanner and writes small batches of images to the Bank Imaging System
- Check Image archival and retrieval for NCDST operations via FCC

Applications

Business Processes

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

INVESTMENT MANAGEMENT DIVISION

PORTIA SYSTEM (Purchased)	BLOOMBERG RESEARCH and AIM (Purchased)	CMS BOND EDGE SYSTEM (Purchased)	PRIVATE I (Hosted by Burgiss Group)	PRIVATE iQ (Hosted)	PRIVATE INFORMANT (Hosted)	BNY MELLON WORKBENCH (Hosted)

- Validate Custodian Statement against Internal Trade Records for Fixed Income
- Manage Fixed Income Transactions
- Perform Fixed Income Portfolio Analytics
- Perform Real Estate and Private Equity Fund Analysis and Performance Reporting
- Conduct Peer Fund Performance Analysis for Private Equity and Real Estate
- Perform Real Estate Investment Analysis and Performance Reporting
- Manage Custodian Account

- Record Cash Transactions for Investment Funds
- Conduct Investment Research
- Portfolio Performance Reporting

- Reconcile Pricing for MBS
- Transaction Reconciliation

SAS RISK ANALYTICS (Hosted)	MATLAB (Purchased)	MARKETAXESS (Hosted)	TRADEWEB (Hosted)	FUNDCENTRAL (Hosted)	CALLAN PEP (Hosted)	FRM CLARUS (Hosted)

- Total Portfolio Risk Analytics and Modeling
- Credit and Inflation Analytics
- Online Trade Platform for Fixed Income
- Online Trade Platform for Fixed Income
- Perform Private Equity and Real Estate Analysis and Performance Reporting
- Evaluate Performance and Risk of Global Equity Investment Managers
- Evaluate Risk and Exposure in the Public Equity Managed Account Platform

ALBOURNE CASTLE (Hosted)	MORNINGSTAR DIRECT (Purchased)

- Perform Research on Hedge Funds and Closed-End Private Funds
- Develop Mutual Fund Fee and Performance Reports

Applications	Business Processes

2017-2019

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

RETIREMENT SYSTEMS DIVISION

ORBIT (Developed In-House)	**ORBIT SELF SERVICE** (Developed In-House)	**DOCUMENT MANAGEMENT** (Purchased)	**C-SERIES** (Purchased) **SILENT PRINT** (Purchased)	**SMART MOVER / MELISSA DATA** (Purchased)

Employer Reporting – collect monthly member contributions from 1200+ employer entities

COLA / Post Interest / Annual Statements / 1099/W-2 – major annual batch processes

Fire and Rescue – a retirement plan that has the same basic functions of other plans (retirements, refunds, service purchase, etc.) but so different in rules that essentially creates separate screens to accommodate.

Refunds - refund contributions and any accrued interest to members no longer an employee

Accounting – Maintain EFT bank account, tax withholding overpayment collection, integration into Dynamics, etc.

Reports – Any and all reports used throughout the system (metric reports, work queues, status reports, processing results)

Correspondence – All Letters, Adobe PDF application forms, cover sheets, etc. produced daily via batch process.

Invoicing - Invoicing entries are created throughout the different processes in ORBIT. These invoices are then sent to the members, retirees and employers for payment

Maintain Death – Captures death related information and enables the user to process death related payments for both a Payee and a Beneficiary of a Payee

Legal Document Processing – active and retired members divorce processing. Produce divorce affidavits and record Domestic Relations Order (DRO) information

Member Profile – all major information about a member presented on one screen plus create request and journal updates to document interactions with members

Service Audit – audit members account for service corrections

Service Purchase - produce a cost for member to purchase service in system. Record receipt of funds and post service to member's account.

Estimates - member's potential retirement benefits depending on scenarios they request.

Retirement – calculate member's benefits, record their option and setup benefit account

Payroll – monthly for retirees / benefit recipients and supplemental payrolls for refunds /rollovers / DIP ER Reimbursements, etc.

Disability – DIPNC & DRET – tracks all applications and does benefit calcs.

Transfers- is the process through which a member may transfer service from one Retirement System to another Retirement System

401K/457 Supplemental Retirement - Calculate members benefit and set up benefit account

Employer – all employer contribution reporting functions plus reports and some functions to help service their employees

Beneficiary Designation – Choose death benefit and Return of contributions designee

Retirement Benefit Estimator – What If scenarios to estimate retirement benefits

401K/457 Transfer Benefit Estimator – A members customized benefit estimate based on the estimate criteria

Service Purchase Estimator – service purchase estimate of cost on the different types of service to be purchased

Health Insurance Enrollment – through eEnroll: add, edit, or cancel health insurance coverage

Annual Statements / 1099 / W-2 – get copies of these documents online

Update Personal Info – Retiree information, EFT, tax withholding, email, phone number, and home address

Update Personal Info – Active Member information: email and phone number

Imaging – all incoming correspondence items get saved to each member's account as images

Workflow – Imaged documents generate workflows that route those documents to the various processes to be worked.

C-Series - Print checks, EFT stubs **Silent Print**: Print letters, forms and correspondence

Validate/Verify mailing addresses in Orbit with the NCOA DB and validate/ format Retiree address in ORBIT

MICROSOFT BIZTALK (Purchased)	**ADOBE FORMS** (Purchased)

Orchestrate interface files to and from external entities including employer reporting monthly contribution files from the 1200+ employers and Health Insurance deductions for 200+ Retirees and Disability members from CobraGuard

Generate PDF forms developed with Adobe Designer.

BERWYN DEATHMATCH (Purchased)	**GDAC DEATHMATCH** (Hosted by GDAC)

Conduct mortality audit on benefit recipients quarterly

Conduct mortality audit on benefit recipients and inactive members monthly

Applications	Business Processes

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

STATE & LOCAL GOVERNMENT FINANCE DIVISION

CCH WorkPaper Manager (Purchased)

EXCEL SPREADSHEETS WITH SQL SVR DB (In-house Developed)

NCTreasurer.com (In-house Developed)

MUNI-EASE BOND MANAGER (Purchased)

TVALUE (Purchased)

PARITY (Hosted by Ipreo)

Audit Report Review

Audit Contract Review/Approval

Debt Applications

Publish Bond Ledger

Verify Bond Sale Bid Calculations

Perform Time/Value Calculations on Debt

Manage Bids for Bond Sale

"White Letter" generation for corrections to audit

203 Cash and Investments Review

Tracking of Authorized Debt

Publish AFIR information

Unit Letter Generation for warning regarding fiscal condition

AFIR Collection and Processing

Debt Schedule Tracking/Bond Ledger

Publish Statistical Reports

Statistical Report Generation

Generate Annual Debt Service Requirements Report

LeapFile (Hosted)

Financial Dashboard (In-House Developed)

Generate Monthly Debt Notices

Secure File Transfer for Large Audit Files and Data

Public Access to County and Municipal Fiscal Condition Ratios

Arbitrage Compliance Monitoring

Applications

Business Processes

**NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems**

STATE HEALTH PLAN DIVISION

SAS w/ENTERPRISE GUIDE (Hosted by GDAC)	LIBERTYNET (Purchased)	EMC DOCUMENTUM (Hosted by ITS)
Extract-Transform-Load claim records for medical services from BCBSNC and pharmacy services from ExpressScripts	Route manage Requests to Contract	Storage of reports produced by BCBSNC and other vendors.
Provide a framework for reporting utilization and other key measures of the health care service contracts	Maintain electronic copies of contracts, addenda, side letters, and other contracting documentation.	
Provide a toolkit for the actuarial valuation of the Health Plan Fund by contracted actuarial consultants.	Provide reports on contract expiration, deliverable status, and other contract-related processes	

Applications   Business Processes

NORTH CAROLINA DEPARTMENT OF STATE TREASURER
Current Applications Systems

UNCLAIMED PROPERTY DIVISION

UPS2000 (Purchased)	DOCUMENT MANAGEMENT (Purchased)	NCAS (Hosted by NCOSC)	AVAYA (Hosted by DIT)	NCCash.com ONLINE PROPERTY SEARCH (Hosted by Xerox)
Claim Initiation and Claimant Property Research	Claim Processing	Claim Payment	Claim Initiation and Claimant Property Research	Claim Initiation and Claimant Property Research
Claim Processing	Holder Reporting and Receipt of Funds			
Claim Payment	Audit and Compliance Tracking			WORKFLOW (Developed In-House)
Holder Reporting and Receipt of Funds				Claim Processing
Audit and Compliance Tracking				Holder Reporting and Receipt of Funds
Management of Escheats Securities				Audit and Compliance Tracking

Applications   Business Processes

Appendix C – Business Application and Infrastructure Inventory and Roadmap

Department of State Treasurer - Application Roadmap

Office of the State Treasurer

	2016	2017	2018	2019	2020
NCTreasurer.com/SHP.org/COMPASS - SharePoint	Maintain	Enhance	Maintain	Maintain	Maintain
ClearPoint	Maintain	Maintain	Maintain	Maintain	Maintain
SalesForce.com	Maintain	Maintain	Maintain	Maintain	Maintain
WebTrends OnDemand	Maintain	Enhance	Maintain	Maintain	Maintain
iContact Pro	Maintain	Maintain	Maintain	Maintain	Maintain
AutoAudit	Maintain	Maintain	Maintain	Maintain	Maintain
Cision	Maintain	Maintain	Maintain	Maintain	Maintain

Retirement Systems Division

	2016	2017	2018	2019	2020
ORBIT (Online Retirement Benefits through Integrated Technology)	Enhance	Enhance	Enhance	Enhance	Enhance
MelissaData Smart Mover	Maintain	Maintain	Maintain	Maintain	Maintain
Microsoft BizTalk	Maintain	Maintain	Maintain	Maintain	Maintain
Adobe Forms	Maintain	Replace			
SQL Server Reporting Services	Maintain	Maintain	Maintain	Maintain	Maintain
C-Series	Enhance	Maintain	Maintain	Maintain	Maintain
SilentPrint	Enhance				
RSD-IDMS - Retirement Integrated Document Management System	Enhance	Maintain	Maintain	Maintain	Maintain
Retirement Data Warehouse	Maintain	Maintain	Maintain	Maintain	Maintain
Avaya - TeliOpti WFM Call Center	Maintain	Maintain	Maintain	Maintain	Maintain
Interactive Voice Response - Unify	Maintain	Maintain	Maintain	Maintain	Maintain

Unclaimed Property Division

	2016	2017	2018	2019	2020
UPS 2000 - Unclaimed Property Management System	Maintain	Replace			
e-Claims - Unclaimed Property Search and Claims	Maintain	Replace			
UPMS To-Be-Determined			Maintain	Maintain	Maintain
UPP-IDMS - Unclaimed Property Integrated Document Management System	Maintain	Replace			
Avaya - Call Center	Maintain	Enhance	Maintain	Maintain	Maintain
Address Verification - MelissaData	Maintain	Enhance	Maintain	Maintain	Maintain

State Health Plan Division

	2016	2017	2018	2019	2020
SAS - Healthcare Analytics	Enhance	Enhance	Enhance	Maintain	Maintain
LibertyNET Contract Management System	Retire				
EMC Documentum	Maintain	Replace			

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Department of State Treasurer - Application Roadmap

	2016	2017	2018	2019	2020
State and Local Government Finance Division					
CCH WorkPaper Manager - Audit Management	Maintain	Maintain	Replace		
Bond System	Maintain	Maintain	Replace		
EnABLE			Maintain	Maintain	Maintain	Maintain
Financial Condition Reporting Dashboard	Maintain	Maintain	Enhance	Maintain	Maintain
AFIR - Annual Financial Information Reports	Maintain	Maintain	Enhance	Maintain	Maintain
LeapFile	Maintain	Maintain	Replace		
Parity	Maintain	Maintain	Maintain	Maintain	Maintain
Mun-Ease Bond Manager	Maintain	Maintain	Replace		
Tvalue	Maintain	Maintain	Maintain	Maintain	Maintain
Investments Management Division					
BNY Mellon Workbench	Maintain	Maintain	Maintain	Maintain	Maintain
Bloomberg AIM	Maintain	Maintain	Maintain	Maintain	Maintain
Bloomberg Research	Maintain	Maintain	Maintain	Maintain	Maintain
PORTIA	Maintain	Replace			
CMS BondEdge	Maintain	Enhance	Maintain	Maintain	Maintain
FundCentral	Maintain	Maintain	Maintain	Maintain	Maintain
Albourne Castle	Maintain	Maintain	Maintain	Maintain	Maintain
Morningstar Direct	Maintain	Maintain	Maintain	Maintain	Maintain
Callan PEP	Maintain	Maintain	Maintain	Maintain	Maintain
Private i	Maintain	Maintain	Maintain	Maintain	Maintain
Private Informant	Maintain	Maintain	Maintain	Maintain	Maintain
Private iQ	Maintain	Maintain	Maintain	Maintain	Maintain
Man FRM Clarus	Maintain	Maintain	Maintain	Maintain	Maintain
MarketAxess	Maintain	Maintain	Maintain	Maintain	Maintain
TradeWeb	Maintain	Maintain	Maintain	Maintain	Maintain
SAS Portfolio Risk Analytics	Enhance	Enhance	Maintain	Maintain	Maintain
Matlab	Maintain	Maintain	Maintain	Maintain	Maintain
Backstop CRM	Maintain	Maintain	Maintain	Maintain	Maintain
Information Technology Division					
Helpdesk	Maintain	Maintain	Replace		
Microsoft Team Foundation Server	Enhance	Maintain	Replace	Maintain	Maintain
Microsoft Project Server	Retire				
SQL Server Reporting Services	Enhance	Maintain	Maintain	Maintain	Enhance

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Department of State Treasurer - Application Roadmap

Financial Operations Division

	2016	2017	2018	2019	2020
Core Banking - FlexCube FCC	Maintain	Maintain	Maintain	Enhance	Maintain
Business Objects XI	Maintain	Maintain	Maintain	Enhance	Maintain
External Banking - FlexCube @	Maintain	Maintain	Maintain	Enhance	Maintain
Check 21	Enhance	Maintain	Maintain	Maintain	Enhance
Bank Imaging - Unisys InfoImage	Enhance	Maintain	Maintain	Maintain	Enhance
Axway	Maintain	Maintain	Enhance	Maintain	Maintain
Dynamics Great Plains	Enhance	Maintain	Enhance	Maintain	Maintain
FTPManager/ConvManager	Maintain	Maintain	Maintain	Maintain	Maintain
Counter Scanner Application	Maintain	Maintain	Maintain	Maintain	Maintain

Vendor-Managed Software

Ancillary/Systems Software

Significant Enterprise Systems

Critical Systems

Vendor-Managed Software: The relationship with the software vendor is typically monitored outside of IT, typically due to the highly specialized nature of the application.

Ancillary System/Software: Enterprise systems or software managed by the IT department to support business objectives.

Significant Enterprise Systems: IT-Managed Software with a large operational cost and important to normal business operations.

Critical Systems: Significant IT-Managed Systems that must be recovered in the event of a disaster due to their criticality to business operations and impact on citizens and/or other governmental entities.

Appendix D – Initiatives by Division with Approximate Costs and Anticipated Completion Date

Office of the State Treasurer

Update Web Content Platform		
Upgrade to SharePoint 2016 On-Premise	*Internal*	*2Q 2017*
Migration of Intranet Sites to O365	*Internal*	*2Q 2018*
Migration of Public Site to Alternate Platform	***$500,000 - $1 Million***	***4Q 2018***
HR Document and Data Management	< $250,000	3Q 2017

Financial Operations Division

New Accounting Tools for Investment Management	**> $1 Million**	2Q 2018
Procurement and Contract Management Tool		
Conduct Procurement and Evaluation	*Internal*	*2Q 2017*
Implementation	***$500,000 - $1 Million***	***2Q 2018***
Long-Term Banking Strategy	Internal	4Q 2018

Investment Management Division

Implementation of Tools for Equity Index Trading		
Trading Platform	***> $1 Million***	***2Q 2018***
Middle-Office Tools	***> $1 Million***	***2Q 2018***
Electronic Document Management		
Analysis Phase	*Internal*	*2Q 2017*
Evaluation of Products	*Internal*	*3Q 2017*
Procurement and Implementation	***$500,000 - $1 Million***	***2Q 2018***
Digital Productivity Tools	< $250,000	4Q 2018
SAS Risk Management	**> $1 Million**	**4Q 2018**

Retirement Systems Division

ORBIT Self-Service Enhancements		
Security and Interface Updates	*$250,000 - $500,000*	*1Q 2017*
Application for Retirement	*$250,000 - $500,000*	*3Q 2017*
Refunds	*$250,000 - $500,000*	*3Q 2018*
Complete RSD-IDMS Upgrades		
Implement Workflow Changes	*Internal*	*1Q 2017*
Implement Scanning Software Replacement	*< $250,000*	*3Q 2017*
Fire/Rescue Enhancements	$250,000 - $500,000	3Q 2018
Disability Enhancements	< $250,000	4Q 2019
Completion of Contribution-Based Benefit Cap	Internal	2Q 2017
Auto-Enrollment for Defined Contribution	Internal	3Q 2018
Call Center Study	**$500,000 - $1 Million**	**4Q 2017**

Information Technology Division

Desktop/Laptop Refresh	$250,000 - $500,000	3Q 2017
Microsoft SQL Server Virtualization	Internal	2Q 2017
Replace Helpdesk and Enhance Application Lifecycle Mgmt.	< $250,000	4Q 2017
Expand Disaster Recovery Capabilities	< $250,000	4Q 2017
Enhance Infrastructure Services	Internal	4Q 2018
Expand Identity Management Services		
Active Directory Upgrade	*Internal*	*4Q 2017*
Azure AD Synchronization	*Internal*	*3Q 2017*
Relocate Server Operations	Internal	4Q 2018
Develop Long-Term Electronic Document Strategy		
Replace EMC Centera	*< $250,000*	*3Q 2017*
Evaluate Needs and Set Strategy	*Internal*	*1Q 2018*
Increase Mobility Capabilities	< $250,000	4Q 2018
Offer New Data Analytics Capabilities	$250,000 - $500,000	4Q 2018

State and Local Government Finance Division

Replacement for Debt and Fiscal Management System		
Debt Management Implementation	*$500,000 - $1 Million*	*1Q 2017*
Fiscal and Admin Management Implementation	*< $250,000*	*2Q 2017*
Enhancements for Remote Worker Support	< $250,000	3Q 2017
Improvements in Data Collection and Analytics	$250,000 - $500,000	3Q 2018
Multi-Tenant Financial System	**> $1 Million**	**2Q 2020**

State Health Plan Division

Communication Tool Enhancements		
Secure Tunnel for E-mail Interchange with BCBSNC	*Internal*	*4Q 2016*
New Report Management Portal	*Internal*	*2Q 2018*
Collaboration Portal	*Internal*	*2Q 2018*
Contract Management Replacement		
Product Evaluation	*Internal*	*1Q 2017*
Procurement	*< $250,000*	*3Q 2017*
Implementation	*$500,000 - $1 Million*	*2Q 2018*
Case Management System		
Product Evaluation	*Internal*	*3Q 2017*
Procurement	*< $250,000*	*2Q 2018*
Implementation	*$500,000 - $1 Million*	*4Q 2018*
Data Analytics Expansion	Internal	4Q 2018

Unclaimed Property Division

New Unclaimed Property Management System		
Procurement	*Internal*	*2Q 2017*
Implementation	*> $1 Million*	*2Q 2018*
Call Center Enhancements – IVR	< $250,000	3Q 2018
Implement New Scanning Solution	< $250,000	2Q 2017
Expansion of Data Matching Program with GDAC	Internal	4Q 2018

Appendix E – Timeline of Initiatives

	2017			
	1Q	2Q	3Q	4Q
Office of the State Treasurer				
Update Web Content Platform				
Upgrade to SharePoint 2016 On-Premise	●	●		
Migration of Intranet Sites to O365			●	●
HR Document and Data Management			●	●
Financial Operations Division				
New Accounting Tools for Investment Management			●	●
Procurement and Contract Management Tool				
Conduct Procurement and Evaluation	●	●		
Implementation			●	●
Long-Term Banking Strategy			●	●
Investment Management Division				
Implementation of Tools for Equity Index Trading				
Trading Platform			●	●
Middle-Office Tools			●	●
Electronic Document Management				
Analysis Phase	●	●		
Evaluation of Products			●	
Procurement and Implementation				●
Digital Productivity Tools	●	●	●	●
SAS Risk Management	●	●	●	●
Retirement Systems Division				
ORBIT Self-Service Enhancements				
Security and Interface Updates	●			
Application for Retirement	●	●	●	
Refunds				●
Complete RSD-IDMS Upgrades				
Implement Workflow Changes	●			
Implement Scanning Software Replacement		●	●	
Fire/Rescue Enhancements	●	●	●	●
Disability Enhancements				
Completion of Contribution-Based Benefit Cap	●	●		
Auto-Enrollment for Defined Contribution				●
Call Center Study				●
Information Technology Division				
Desktop/Laptop Refresh	●	●	●	
Microsoft SQL Server Virtualization	●	●		
Replace Helpdesk and Enhance ALM	●	●	●	●
Expand Disaster Recovery Capabilities	●	●	●	●
Enhance Infrastructure Services	●	●	●	●

	2017			
	1Q	2Q	3Q	4Q
Information Technology Division				
Expand Identity Management Services				
Active Directory Upgrade			■	■
Azure AD Synchronization		■	■	
Relocate Server Operations	■	■	■	■
Develop Long-Term Electronic Document Strategy				
Replace EMC Centera		■	■	■
Evaluate Needs and Set Strategy				■
Increase Mobility Capabilities	■	■	■	■
Offer New Data Analytics Capabilities	■	■	■	■
State and Local Government Finance Division				
Replacement for Debt and Fiscal Management System				
Debt Management Implementation	■			
Fiscal and Admin Mgmt. Implementation		■		
Enhancements for Remote Worker Support	■	■	■	
Improvements in Data Collection and Analytics			■	■
Multi-Tenant Financial System				■
State Health Plan Division				
Contract Management Replacement				
Product Evaluation	■			
Procurement		■	■	
Implementation				■
Case Management System				
Product Evaluation			■	
Procurement				■
Data Analytics Expansion	■	■	■	■
Unclaimed Property Division				
New Unclaimed Property Management System				
Procurement	■	■		
Implementation			■	■
Call Center Enhancements – IVR				
Implement New Scanning Solution	■	■		
Expansion of Data Matching Program with GDAC				

	2018			
	1Q	2Q	3Q	4Q
Office of the State Treasurer				
Update Web Content Platform				
Migration of Intranet Sites to O365	■	■		
Migration of Public Site to Alternate Platform	■	■	■	■
Financial Operations Division				
New Accounting Tools for Investment Management	■	■	■	■
Procurement and Contract Management Tool				
Implementation	■	■		
Long-Term Banking Strategy	■	■	■	■
Investment Management Division				
Implementation of Tools for Equity Index Trading				
Trading Platform	■	■		
Middle-Office Tools	■	■		
Electronic Document Management				
Procurement and Implementation	■	■		
Digital Productivity Tools	■	■	■	■
SAS Risk Management	■	■	■	■
Retirement Systems Division				
ORBIT Self-Service Enhancements				
Refunds	■	■	■	
Additional Functions - TBD			■	■
Fire/Rescue Enhancements	■	■	■	
Disability Enhancements			■	■
Auto-Enrollment for Defined Contribution	■	■	■	
Call Center Study	■			
Information Technology Division				
Enhance Infrastructure Services	■	■	■	■
Relocate Server Operations	■	■	■	■
Develop Long-Term Electronic Document Strategy				
Evaluate Needs and Set Strategy	■			
Increase Mobility Capabilities	■	■	■	■
Offer New Data Analytics Capabilities	■	■	■	■
State and Local Government Finance Division				
Replacement for Debt and Fiscal Management System				
Improvements in Data Collection and Analytics	■	■	■	
Multi-Tenant Financial System	■	■	■	■

	2018			
	1Q	2Q	3Q	4Q
State Health Plan Division				
Communication Tool Enhancements				
New Report Management Portal			■	■
Collaboration Portal			■	■
Contract Management Replacement				
Implementation	■	■	■	■
Case Management System				
Procurement	■	■		
Implementation			■	■
Data Analytics Expansion	■	■	■	■
Unclaimed Property Division				
New Unclaimed Property Management System				
Implementation	■	■		
Call Center Enhancements – IVR			■	■
Expansion of Data Matching Program with GDAC			■	■

Appendix F – Strategic Initiatives by Division

Office of the State Treasurer – 2017-2019 Strategic IT Initiatives			
Jan. 2017-Jun. 2017	Jul. 2017-Dec. 2017	Jan. 2018-Jun. 2018	Jul. 2018 – Dec. 2018

Update Web Content Platform
- Upgrade SharePoint On-Premise to SharePoint 2016
- Migrate Intranet Sites to Office 365
- Migrate Public Websites to Alternate Platform

HR Document and Data Management
- Procure and Implement SmartSheet & Other Tools

2017-2019

Financial Operations Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018-Jun. 2018	Jul. 2018-Dec. 2018
Procurement and Contract Management Tool	Conduct Procurement and Evaluation	Implement Departmental Procurement and Contract Mgmt. Tool		
New Accounting Tools for Investment Mgmt	Review Findings and Recommendations of IMD Trading Study	Evaluate and Procure New Accounting Tools	Implement New Accounting Tools for IMD Equity Index Trading	
Long-Term Banking Strategy	Monitor Progress and Direction of NCAS Replacement Project	Develop Long-Term Banking Strategy (Product Evaluations, Budgetary Estimates, Needs Assessments...)		

2017-2019

Investment Management Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018

Public Equity Index Trading

- Review Findings and Recommendations from Cutter Study
- Develop Procurement Documents for Systems
- Procure and Implement Trading Tools and Technologies
- Procure and Implement Back and Middle Office Tools (or Services

Electronic Document Management

- Analysis and Documentation of Requirements
- Product Evaluations
- Procurement and System Implementation

Digital Productivity Tools

- Tablet Pilot Project
- Integration of Mobility Services with Cloud Strategy Other Projects

SAS Risk Management

- Support and Additional Enhancements

Retirement Systems Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018- Dec. 2018
ORBIT Self-Service Expansion	Security and Interface Updates → Application for Retirement		Refund Processing and Additional Functions (To-Be Determined Based on Workload and/or Automation Value)	
RSD-IDMS Upgrades	Implement Workflow Changes → Scanning Software Replacement			
Fire & Rescue Enhancements	Fire/Rescue System Enhancements			
Disability Enhancements				Disability Enhancements
CBBC Completion	Complete Contribution-Based Benefit Cap Enhancements			
Auto-Enrollment for DC Plan	Pursue Authorization for Auto-Enrollment for Defined Contribution Plans	Implement Auto-Enrollment Functionality		
Call Center Study		Call Center Study		

State & Local Government Finance Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
Debt and Fiscal Management System	Debt Management Implementation Fiscal Management Implementation			
Enhancements for Remote Worker Support	Remote Worker Pilot Projects Gather Requirements for Remote Workers	Implement Enhancements and Tools for Field Staff		
Improve Data Collection and Analytics		Collect Requirements for New Data Collection Streams	Implement Data Analytics Enhancements	
Multi-Tenant Financial System		Investigate Options for Multi-Tenant Financial System	Develop Procurement Documents and Conduct Procurment	

State Health Plan – 2017-2019 Strategic IT Initiatives

	Jan. 2017- Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
Contract Management System	Product Evaluation → Procurement of a Contract Management System →	Implementation of Contract Management System		
Case Management System		Product Evaluation → Procurement of a Case Management Solution →		Implementation of Case Management
Data Analytics Expansion	Negotiation of Data Analytics MOU with GDAC	Execution of Data Analytics Expansion Strategy		
Communication Tool Expansion				Implementation of a Extranet Collaboration Portal / Implementation of Report Management Portal

Unclaimed Property Division – 2017-2019 Strategic IT Initiatives

	Jan. 2017-Jun. 2017	Jul. 2017 – Dec. 2017	Jan. 2018 – Jun. 2018	Jul. 2018 – Dec. 2018
New Unclaimed Property Management System	Conduct Procurement	Implementation of New Unclaimed Property Management System		
New Scanning Solution	Implement New Scanning Solution		Integration of Scanning Solution with New UPMS	
Call Center IVR				Implement IVR with UPMS Integration
Data Matching Program				Implement Data Matching Expansion with GDAC and new UPMS

North Carolina Department of State Treasurer

STRATEGIC PLAN

and

INFORMATION TECHNOLOGY PLAN
FY 2017 - 2019

By

Janet Cowell, North Carolina Department of State Treasurer
10/31/16

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Contents

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1. North Carolina Department of State Treasurer Strategic Plan Executive Summary

The Strategic Plan provides the vision, mission, strategic goals, and performance measures for ensuring the desired results for the Department of State Treasurer. The plan is a result of the assessment, goal setting, and planning process of the Department, designed to influence future success and achieve departmental goals.

Strategic Goals

The Department has identified the following strategic goals for the new Strategic plan:

Goal 1: Provide Public Leadership in Finance, Fiscal and Health Policy

Goal 2: Enhance Accountability of Department Services

Goal 3: Innovate and Modernize Operations

Goal 4: Maximize Our Talent

Strategic Goal 1: Provide Public Leadership in Finance, Fiscal and Health Policy

Consistent with DST's mission, government agencies have a responsibility of continuously improving the value of the services that citizens receive.

DST recognizes that in order to improve that value, it must continuously increase the standards by which it operates and collaborate and lead in both public and private initiatives that are serving the needs of North Carolinians.

Strategic Goal 2: Enhance Accountability of Department Services

DST, and all government agencies, have a fiduciary responsibility to the citizens we serve to see that their resources are used in accordance with the laws and regulations and to demonstrate that it serves the best interests of North Carolinians.

This is necessary to ensure public confidence and maintain public support for needed government services.

Strategic Goal 3: Innovate and Modernize Operations

It is important to balance resource investments in ensuring a stable and reliable business infrastructure while also leveraging new public or private solutions that could have a meaningful impact on the services that are provided to the citizens of North Carolina.

Creating and supporting a culture of innovation can also help attract the best talent to DST.

Strategic Goal 4: Maximize Our Talent

DST employees hold the keys to DST's successful pursuit of its mission. By maximizing talent, DST is able to add value to and instill confidence in the state's citizens, customers, and the financial community by providing exemplary oversight and customer service.

Strategic Measures of Success

DST will continuously develop its methodologies for measuring the effectiveness of its strategic plan. There is a spectrum of measures that can be used, ranging from process and milestone metrics to outcome-based metrics some of which DST may not be able to directly impact.

DST will identify measurable outcomes for which DST can directly impact but will seek to align those to measures of strategic importance for the state of North Carolina and its citizens. The following table depicts examples of measures across this spectrum to demonstrate the expected evolution of strategic measures for DST.

2. North Carolina Department of State Treasurer Quick Reference Guide

Goal 1 – Provide Public Leadership in Finance, Fiscal, and Health Policy		
Objective 1.1 - *Create a proactive strategy for the long-term sustainability of retirement and health benefits*		
1.1.1 – *Weighted average price of secondary sales prudent relative to intrinsic value and opportunity cost of proceeds; lowering of fund-of-fund fees; and reasonable administrative expenses for liquidating trust*	**Initiative**	*Evaluate restructuring/exiting Fund of Funds and legacy low-conviction funds/managers*
	Hire a third party advisor to conduct hold/sell analysis for Fund of Funds and legacy low-conviction funds/managers. Execute sales and restructurings as prudent, including in real estate, private equity, and inflation sensitive. Expect completion of process by June 2017.	
1.1.2 – *Timeliness; third-party assessment that fees, lock-ups, and terms are materially better than commingled market; and all-in cost of vehicles on MAP have at least 35bps savings versus commingled market*	**Initiative**	*Implement Managed Accounts Program and initial components of direct Hedged Equity program*
	On board first direct equity hedge funds in Spring/Summer 2016. Fees, transparency, and control aspects of such relationships are expected to be materially better than market.	
1.1.3 – *Select a third-party fiduciary at market competitive costs with contractual right to insource at option of DST*	**Initiative**	*Research and implement strategic co-investments program(s) and/or secondary program(s)*
	Conduct a systematic search for fiduciary(ies), including reviewing internal portfolio management capabilities by June 2017.	
1.1.4 – *Develop criteria for identifying small and emerging manager exposures within each asset class; staff Investment Committee review of historical track-record of*	**Initiative**	*Review Small and Emerging Manager programs across NCRS*
	Consistently apply identification criteria for small and emerging programs and direct engagements to understand use and effectiveness over time of the strategy. Complete by December 2017.	

effectiveness; and staff input on optimal role and design across DST funds		
1.1.5 – *Movement of index fund assets to internal management with returns consistent with external manager implementations*	**Initiative**	*Implement internal equity index fund*
	Working with Piedmont Advisors and other consultants, use peer benchmarking to target low-cost internalization of equity assets in 2018.	
1.1.6 – *No audit findings after implementation of new GASBs.*	**Initiative**	*Lead Planning & Implementation of New Technical Accounting Guidance*
	Lead the planning efforts and establish milestones for implementation of GASB 74 and 75 OPEB standards.	
1.1.7 – *Rate and year over year trend in participation*	**Initiative**	*Expansion of Health Engagement Program*
	Build on Healthy Lifestyles and Positive Pursuits to include additional chronic conditions and move towards incentivizing members for outcomes rather than just participation.	
1.1.8 – *Implementation of policies and environmental changes within public worksites in the State.*	**Initiative**	*Enhance Worksite Wellness*
	Award and implement a Worksite Wellness Contract to address comprehensive wellness within worksites.	
1.1.9 – *Health Status of participating members and non-participating measures via Spectrum of Health or Clinic Risk Group Analysis ; ROI estimation.*	**Initiative**	*Population Health Management Services*
	Award an implement a new Population Health Management Contract that assists members and providers in improving members' health and coordinate with the Plan's other vendor partners.	
1.1.10 – *Post Open Enrollment (OE) feedback from Members and HBRs as well as the types*	**Initiative**	*Improve Member Experience*
	Enhance the member enrollment workflow in eEnroll which is the online member enrollment portal provided through the Benefitfocus contract.	

and number of OE exception requests.		
1.1.11 – *Administer the benefits approved by the SHP Board of Trustees*	**Initiative**	*Third Party Administration (TPA) of Claims and related services RFP*
	Award an implement a new Population Health Management Contract that assists members and providers in improving members' health and coordinate with the Plan's other vendor partners.	
Objective 1.2 – *Grow the retirement system investments over the long-term with prudent risk management*		
1.2.1 – *Decrease the audit cycle from approximately 20 years to audit the DST Audit Universe to less than 6 years.*	**Initiative**	*Increase staff in the Internal Audit Division to provide adequate coverage of risk areas*
	Work with management to develop staffing plan as noted in the Quality Assurance Review completed by the Office of Internal Audit.	
Objective 1.3 – *Promote prudent financial decision making and conservative debt management*		
1.3.1 – *Reduce overpayments and more effectively collect on them when they occur*	**Initiative**	*Overpayment Overhaul*
	Evaluate policy and legislative proposals to prevent and more timely identify, collect overpayment balances owed to RSD.	
1.3.2 – *Increased traffic on Fiscal Management webpage; document usage of various products; survey users as to usefulness of materials*	**Initiative**	*Improve fiscal training materials available to local governments*
	Provide modern training and tools to local governments via the internet through the use of webinars, videos, and interactive websites	
1.3.3 – Members of the General Assembly who respond positively and favorably to 1) DST budget requests; 2) DST legislative requests; 3) DST views on proposed legislation	**Initiative**	*Protection of the Local Government Commission which provides leadership in public finance and fiscal management*
	Educate members of the General Assembly and local government officials on best-practices in debt management; Education of local government officials and staffs on prudent financial decision-making and fiscal responsibility.	
Objective 1.4 –*Integrate financial and health wellness resources in multiple aspects of Department outreach*		
1.4.1 – *Overall percentage of NC public servants on track to replace 80% of their salary by age 62*	**Initiative**	*Annual Benefit Statement project in support of retirement readiness*
	Oversee development of ABS and associated communications plan with the intent of educating members about their individual retirement needs.	

1.4.2 – *Legislation passed*	**Initiative**	*Auto-enrollment & auto-escalation legislation*
	Develop plan of action, strategy, who we can leverage, stakeholders to increase member participation in support of retirement readiness initiative.	
1.4.3 – *Overall percentage of NC public servants on track to replace 80% of their salary by age 62*	**Initiative**	*NC Save for Retirement Month*
	Oversee development and implementation of communications plan with the intent of educating our members about retirement readiness.	
1.4.4 – *Overall percentage of NC public servants on track to replace 80% of their salary by age 62*	**Initiative**	*NC State Fair*
	Oversee development and implementation of communications plan with the intent of educating our members about retirement readiness.	
1.4.5 – *Overall percentage of NC public servants on track to replace 80% of their salary by age 62*	**Initiative**	*Retirement planning conferences/tours*
	Work with Member Services and Financial Education Director to revise partner presentation to reflect new branding of NC Total Retirement Plans.	
1.4.6 – *Increased combined DC/DB counseling sessions, benefit fairs, etc.*	**Initiative**	*Total Retirement Plans*
	To totally integrate the Defined Contribution segment of retirement into a total package with the Defined Benefit plan and educate members on the importance of both.	
1.4.7 – *Successful implementation of NC ABLE Program*	**Initiative**	*NC ABLE (Achieving Better Life Experiences)*
	Develop and Implement this New Program	
1.4.8 – *Reduction of retiree outflows from SRP*	**Initiative**	*Reduce retiree outflows from the plans.*
	Leverage Retiree Advocate and other communication / education strategies to retain participants / assets in the plans and thereby maintain competitive participant fees and services.	
1.4.9 – *Overall percentage of NC public servants on track to replace 80% of their salary by age 62*	**Initiative**	*Retirement readiness Initiative*
	Support retirement readiness initiative with ongoing NC Total Retirement Plans communications efforts.	
1.4.10 – *Number of members participating in roadshows, tele-town halls, and*	**Initiative**	*Pre-65 Outreach*
	Educate members turning 65 in the next year regarding their SHP benefits and Medicare.	

other outreach events.		
1.4.11 – *Number of members participating in different SHP 101 activities.*	**Initiative**	*SHP 101 Webinar Series*
	Educate members on a variety of health plan literacy topics in an effort to help them understand their benefits.	
1.4.12 – *Track attendance and feedback at quarterly events and monthly webinars. Seek HBR feedback through online surveys.*	**Initiative**	*HBR Outreach and Education*
	Increase HBR education and training opportunities by providing both quarterly regional HBR training, monthly webinars and better web tools.	
Objective 1.5 – *Support comprehensive strategies around K-12, community colleges and university education*		
1.5.1 – *# of Employees trained and later impact on Financial Compliance*	**Initiative**	*Community College local government training program pilot*
	In January, a course to train local government employees in the basics of required financial procedures will be offered in four pilot locations across the State. If the pilot is successful there may be a need for additional resources.	
Goal 2 – Enhance Accountability of Department Services		
Objective 2.1 – *Promote and improve transparency and ethical processes*		
2.1.1 – *New Treasurer adopts new policies, after IAC consultation, as statutorily required*	**Initiative**	*Finalize IAC consultation, updating, and Treasurer approval of IMD policies/procedures*
	Comprehensively review and update IMD policies and procedures, creating/eliminating to enhance effectiveness. June 2017.	
2.1.2 – Ability to identify, monitor, reduce, and eliminate risk is strengthened.	**Initiative**	*Enhance capacity of Internal Audit Division in order to address risk areas.*
	Hire 2 auditors in the Internal Audit Division. *NOTE: 2 FTEs will be a proposed budget expansion item.*	
Objective 2.2-*Strengthen board and committee oversight*		
2.2.1 – Design, development and implementation of department wide agendas, board books, and board member on-boarding materials	**Initiative**	Board Document Consistency
	Development of more similarly structured documents for all DST boards and commissions to help ensure better transparency and constancy throughout the organization.	
	Initiative	Board Self-Assessment

2.2.2 – Design, development and implementation of board annual self-assessments.	Development of board assessments to better understand board's view on supporting the department's mission and vision, building and monitoring strategy, overseeing programs, services, and reports, board-management relationships, advocacy, participation and board behavior.	
Objective 2.3 -Enhance constituent relationships-including members, customers, Department, government, stakeholders & citizens		
2.3.1 – *Closed accounts, accounts setup for retirement, deaths processed*	**Initiative**	*Identify and contact Fire and Rescue members who are 53 and over and have Pension Fund monies/service in the fund.*
	Identify members that are eligible to retire and get them set up for retirement. Identify members over 70 ½ who have contributions in the system and must take a distribution/refund. Identify members who are deceased, but not reported to our office; process any return of contributions due to death. Identify members who have contributions in the system and will never meet retirement eligibility; process a refund	
2.3.2 – *Create a reliable and reasonably priced system to enhance transparency and operational effectiveness.*	**Initiative**	*Financial system for local governments*
	Work with UNCC to develop an RFP for a Financial system for local governments that meets all State and Federal requirements.	
2.3.3 – If win-win achieved then pilot will lead to other opportunities.	**Initiative**	*Work with Wayne County and three towns to make all sewer operations more sustainable and affordable.*
	Eureka, Fremont, Goldsboro and Wayne County have agreed to look at a win-win solution to improve the efficiency of all sewer operations in the County. If the pilot is successful there may be a need for additional resources.	
Objective 2.4 – *Effectively manage risk, resources and compliance*		
2.4.1 – I*ncreased beneficiary updates and reduced contested cases*	**Initiative**	*Beneficiary update initiative*
	Oversee development and implementation of communications plan to assist members with ensuring their beneficiaries are correct.	
2.4.2 – *Successfully develop a critical task timeline tracker to ensure continuity of business with the appropriate checks and balances*	**Initiative**	*Continuous Compliance Monitoring*
	Develop a comprehensive approach to tracking compliance-related milestones (i.e., legal mandates, key ORBIT updates, deadlines related to member engagement).	
2.4.3 – *Policies & Procedures are developed and updated timely*	**Initiative**	*Internal policy development and monitoring*
	Timely updates, revise, and develop internal policies and procedures to conform with legislative, policy, and Rulemaking applicable to the RSD.	
2.4.4 – *Successfully pass legislation that effectively balances the needs of the members while*	**Initiative**	*Sick Leave Policy*
	Evaluate policy proposals for more effective sick leave administration for possible legislation.	

protecting the integrity of the NC Retirement Systems		
2.4.5 – *Higher percentage of payrolls received in "good order" and being processed*	**Initiative**	*To lower employer payroll errors of member records submitted to the Retirement System*
	The team is working towards upgrading certain critical errors that would reduce the volume of errors on a monthly basis. They are working towards making the reports available on line for the employers. Additionally, they have restructured their metric evaluation to focus on memberships and not errors so that members' records are corrected first due to adverse impact membership records can have on the system.	
2.4.6 – *Progress towards project completion*	**Initiative**	*Establish 3 (38) style "delegated manager" for 401(k) / 457 Glidepath*
	Resulting in an enhanced glidepath and investment plan design to enhance participant outcomes.	
2.4.7 – *Number of service audits of member data*	**Initiative**	*Continue working with IT to cleanse the Fire/Rescue data so we will have accurate data to upload into the new ORBiT module once developed.*
	Data cleanse work will continue on a daily basis until we are confident we have data our members can rely on to be correct in our system. This will rebuild our integrity within the Firefighter and Rescue Squad Workers' community (Member Satisfaction)	
2.4.8 – *Maintain a stable work force with appropriate number of staff to meet compliance requirements and mitigate risk.*	**Initiative**	*Training and Development of Personnel*
	Hire 2 new accountants. Put Cross Training & Backup plans in place. *Hire 2 FTEs for Unclaimed Property Division.* *NOTE: 4 FTEs will be a proposed budget expansion item.*	
2.4.9 – *Standardized risk reporting provided to staff Investment Committee on a quarterly basis; and design of risk budget*	**Initiative**	*Implement total fund risk systems and processes*
	Materially complete by December 2017.	
Goal 3 – Innovate and Modernize Operations		
Objective 3.1 – *Improve data analytic and use of metrics in decision-making processes*		
3.1.1 – *Successful leverage of data to target message to members*	**Initiative**	*Leverage Marketing Research data analytics to enhance communications*
	Targeted Communications have proved to be highly effective in driving actions by participants and employers.	
Objective 3.2-*Strategically implement technology-based applications*		
3.2.1 – *Migration of IMD records and implementation of*	**Initiative**	*Implement Records Retention IT application*
	Dependent on State IT processes and approvals.	

effective retention schedules.		
3.2.2 – *Successfully migrate to one data base for all emails and increase the number of emails for active members and retirees*	**Initiative**	*Database merger project*
	Develop a plan to merge iContact and ORBIT data into one database so that we can better communicate with our members.	
3.2.3 – *Increased usage of core knowledge*	**Initiative**	*Core Knowledge Upgrade*
	Implement a process to indexes information and allows for a more efficient, user-friendly experience for the end user.	
3.2.4 – *Progress towards project completion*	**Initiative**	*Applying for Retirement Online Project*
	The Retirement Systems Division anticipates a "Retirement Boom" in coming year; retirements are projected to increase 43% from 2012 through 2024. The Applying for Retirement through Self Service project will enhance the Online Retirement Benefits through Integrated Technology (ORBIT) self-service portal, to allow members to apply for retirement benefits online.	
3.2.5 – *Progress towards project completion*	**Initiative**	*Develop/Implement Self-Service Pension Fund module for Fire & Rescue department/squads and their members.*
	First initiative that we want to implement in Self Service is the ability for depts/squads to enter member's annual contributions online and pay electronically. We hope to implement this by 2017 first quarter.	
3.2.6 – *Successful implementation of workforce management tool to accurately identify trends, etc.*	**Initiative**	*Implement a Workforce Management solution*
	To accurately create a staffing model as well as track and monitor schedule adherence.	
3.2.7 – *Progress towards project completion*	**Initiative**	*Execute System enhancement with Benefit focus for health billing*
	Goal is to get BenefitFocus, Cobra Guard and Retirement System aligned from a software perspective to improve accuracy of premium deductions for health insurance.	
3.2.8 – *Progress towards project completion*	**Initiative**	*Fire and Rescue Project*
	The project was initiated due to new legislation. RSD took this opportunity to enhance ORBiT to be more customer friendly for members and agencies by improving information available through self-service, providing an online solution to processing contributions with real time data, adding EFT ability and helping to ensure roster compliance	
3.2.9 – *Progress towards project completion*	**Initiative**	*ORBiT re-write of the Fire/Rescue Pension Fund production processing module.*
	Continue working with IT to gather the applicable information so IT can begin writing code for this new ORBiT production module. Work alongside of IT when testing is required until we can get to implementation of the product.	
	Initiative	*Upgrade Workflow*

3.2.10 – *Progress towards project completion*	*RSD is working with IT and the vendor to gather requirements, test and prepare for the Workflow upgrade.* *Workflow is a pertinent part of RSD business operations. Workflow manages the flow of business processes throughout RSD and has many processes open at one time related to refunds, retirements, and other activities.*	
3.2.11 – *100% of new hires by beginning CY 2017 are provided the link for the new e-onboarding site*	**Initiative**	*Talent Acquisition and Management*
	Electronic Onboarding platform - the site is utilized to create a more streamlined and efficient onboarding process during their Day 1 activities	
3.2.12 – *Progress towards project completion.*	**Initiative**	*Applying for Other Benefits Online Project*
	The Applying for Other Benefits Online project expands on the Applying for Retirement Online project through the addition of several new modules to accommodate additional online transactions through the ORBiT self-service portal. Proposed modules include electronic applications for refunds of contributions, declaring and updating retirees' beneficiaries and contact information online, and electronic submission of annual statement of income forms to ensure compliance with disability statutes and prevent overpayments more efficiently.	
Objective *3.3* - *Continuously improve core functions and programs*		
3.3.1 – *Migration of IMD records and implementation of effective retention schedules.*	**Initiative**	*Formalize Operating Committee charter and develop an IMD strategic plan*
	Finalize committee charter by December 2016, after onboarding new Director of Investment Operations. IMD Strategic Plan to be finalized in 2017.	
3.3.2 – *Reduction in not in good order; quicker turnaround for forms maintenance*	**Initiative**	*Forms and letters process review*
	Review and update process with stakeholders to streamline process.	
3.3.3 - Implementation of automated invoicing, where possible	**Initiative**	*Invoice System Upgrades*
	Explore IT and other systems upgrades to improve invoicing process for RSD functions and increase automation.	
3.3.4 – *Successfully transition NC 403(b) Program from TIAA to Prudential*	**Initiative**	*NC 403(b) Record Keeper (RK) Transition*
	Transition the Program to a new RK resulting in increased resources, improved marketing / communication capabilities and consistent pricing across all Plans / Programs	
3.3.5 – *Successful implementation of Divisions projects and processes with FOD assistance.*	**Initiative**	*Maintain focus on core operational functions.*
	All areas of FOD are relied upon by other divisions/agencies to perform its operational responsibilities accurately and consistently.	
	Initiative	*Talent Acquisition and Management*

3.3.6 – *WF is successfully implemented*	Transition all hiring and salary related paperwork to an electronic workflow (WF) that allows one central staff person to log the WF and appropriately assign the action thereby updating HR metrics for the SLA and TAT	
3.3.7 – *Receive and return unclaimed property to rightful owners in the timeframe required by NC General Statute 116B.*	**Initiative**	Manage increasing volume of Unclaimed Property receipts and claims
	Hire 2 FTEs in the Unclaimed Property Division. The additional positions will allow UPD to perform the key functions of receiving and returning unclaimed property to rightful owners in the timeframe required by NC General Statute 116B. NOTE: 2 FTEs will be a proposed budget expansion item.	

Goal 4 – Maximize our Talent

Objective 4.1 – Enrich our workforce through the effective use of strategic talent acquisition and retention

4.1.1 – *Reward and retain Division staff*	**Initiative**	*Maximize talent by offering market-based compensation*
	Determine market-based compensation package for Division Staff; Implementation of self-directed compensation process based on receipts-supported status.	
4.1.2 – EEO Officer is permanent staff member who operates in an autonomous fashion	**Initiative**	*Diversity and Inclusion*
	Hire an EEO Officer who reports into the HR Office	
4.1.3 – Complete all necessary salary and reclassification transactions with OSHR, OSBM and OSC's assistance no later than the Spring of 2017	**Initiative**	*Total Rewards*
	Implement new 3 stand-alone compensation plans within the DST - ensure that framework is created to all comp and classification plans are able to be maintained appropriately well into the future	
4.1.4 – Provide feedback for managers and to help retain staff	**Initiative**	*Employee Relations*
	Implement electronic incoming and exit surveys for staff in order to assess and more readily benchmark data	

Objective 4.2- Develop an integrated talent management system

4.2.1 – *Finalized career development plan and curriculum*	**Initiative**	*Institute 360 degree feedback for senior management and career development program for team leaders, portfolio managers, and analysts*
	360 Degree feedback was completed Spring 2016. Career development program in progress with material completion expected in 2017.	
4.2.2 –*Successful completion of OSHR's LAAL curriculum*	**Initiative**	*Middle Management Development*
	Professionally grow and develop RSD middle managers	
4.2.3 – *Increase number of employees who can*	**Initiative**	*Payroll Services*
	Continue to cross train to ensure continuity business	

perform similar services		
Objective *4.3* - *Promote a culture of engagement and collaboration*		
4.3.1 – *Improved engagement scores/results*	**Initiative**	*Support employee engagement survey results*
	Oversee development and implementation of new RSD newsletter communications plan.	
4.3.2 –*Development of RSD Action Plan and progress towards its completion*	**Initiative**	*Engagement Action Plan*
	Develop Engagement Action Plans in support of growing engagement of RSD staff	
4.3.3 – *Development and delivery of a Diversity and Inclusion training*	**Initiative**	*Diversity and Inclusion*
	Successfully implement the launch of a new Diversity and Inclusion team led by the EEO Officer – incorporate Diversity and Inclusion training for all DST staff	
4.3.4 – *Lunch and Learns are developed and then delivered to staff*	**Initiative**	*Learning and Development*
	Launch Lunch and Learns for Management and Staff on a variety of HR topics that coincide with all functional areas	
4.3.5 –*Funds are truly dedicated to the HR on an annual basis for training and certifications - the HR team does not have to seek sponsorship for attendance at trainings from other divisions*	**Initiative**	*Learning and Development*
	Create a budget to allow all HR staff to attend HR training	

4. Enterprise Opportunities

The purpose of this section is to learn about additional initiatives that your agency envisions possible joint funding opportunities that the agency may be planning with other agencies, and other funding sources that could be utilized at the enterprise level. Please consider both IT and non-IT initiatives. Most initiatives that are enterprise in nature will likely require both business and IT resources.

3.1. Potential Initiatives

We will need additional resources if we are to successfully create an automated financial management system capable of serving all local governments in the State.

3.2. Collaborative Opportunities

<u>State and Local Government Division</u>
Our partners include the School of Government at UNC, the NC League of Municipalities, the NC Association of County Commissioners, the NC Government Finance Officers, the NC Department of Commerce, the NC Department of Environmental Quality, the Funder's Forum, the Large City/County Finance Officers and the NC General Assembly.
<u>State Health Plan</u>
The Integrated Health Management (IHM) team in the State Health Plan is working on a coordinated report with DHHS Division of Medical Assistance and Division of Public Health to address Diabetes and Chronic Diseases in the States required by Session Laws 2013-207 and 2013 -192
IHM works with Division of Public Health to raise awareness on Pre-diabetes and the risks of diabetes and promote the appropriate self-management for Hypertension.
IHM works with Office of State Human Resources (OSHR) to promote worksite wellness and build leadership in worksite wellness.

5. North Carolina Department of State Treasurer Vision, Mission, and Values

4.1 Vision

Our vision is to create and maintain a healthy, prosperous and financially sound North Carolina.

4.2 Mission

Our mission is to add value to and instill confidence in the state's citizens, customers, and the financial community by providing exemplary oversight and customer service.

4.3 Values

At the heart of the Department's work are its core values, which are implemented consistently at all levels and across all Divisions. These include:

- Customer Orientation

    Focus on our customers, the citizens of the state of North Carolina

- Diversity

    Recognize and value the benefits of diverse ideas, perspectives, and people

- Integrity

    Establish and maintain the highest level of integrity and ethics

- Long-Term View

    Maintain a big picture perspective and strategic approach

- Performance-Driven

    Operate with performance excellence to achieve optimum results

- Transparency

    Structure and conduct all aspects of our work with an open and transparent policy, promoting both trust and accountability

6. North Carolina Department of State Treasurer Goals, Objectives, and Measures of Success

Goal 1 - Provide Public Leadership in Finance, Fiscal and Health Policy

Consistent with DST's mission, government agencies have a responsibility of continuously improving the value of the services that citizens receive.

DST recognizes that in order to improve that value, it must continuously increase the standards by which it operates and collaborate and lead in both public and private initiatives that are serving the needs of North Carolinians.

1.1 Objective - Create a proactive strategy for the long-term sustainability of retirement and health benefits

1.1.1 Measures of Success

1.1.1.1 -Weighted average price of secondary sales prudent relative to intrinsic value and opportunity cost of proceeds; lowering of fund-of-fund fees; and reasonable administrative expenses for liquidating trust

Related to initiative: 1.1.2.1

1.1.1.2 -Timeliness; third-party assessment that fees, lock-ups, and terms are materially better than commingled market; and all-in cost of vehicles on MAP have at least 35bps savings versus commingled market

Related to initiative: 1.1.2.2

1.1.1.3 -Select a third-party fiduciary at market competitive costs with contractual right to insource at option of DST

Related to initiative: 1.1.2.3

1.1.1.4 -Develop criteria for identifying small and emerging manager exposures within each asset class; staff Investment Committee review of historical track-record of effectiveness; and staff input on optimal role and design across DST funds

Related to initiative: 1.1.2.4

1.1.1.5 -Movement of index fund assets to internal management with returns consistent with external manager implementations

Related to initiative: 1.1.2.5

1.1.1.6 -No audit findings after implementation of new GASBs.

Related to initiative: 1.1.2.6

1.1.1.7 -Rate and year over year trend in participation

Related to initiative: 1.1.2.7

1.1.1.8 -Claims experience and self-reported Health Status of participating members and non-participating measures

Related to initiative: 1.1.2.7

1.1.1.9 -New vendor is fully implemented and in place for 1/1/2018 or start of contract

Related to initiative: 1.1.2.8

1.1.1.10 - Implementation of policies and environmental changes within public worksites in the State.

Related to initiative: 1.1.2.8

1.1.1.11 -New vendor is fully implemented and in place for 1/1/2018 or start of contract

Related to initiative: 1.1.2.9

1.1.1.12 -Health Status of participating members and non-participating measures via Spectrum of Health or Clinic Risk Group Analysis ; ROI estimation.

Related to initiative: 1.1.2.9

1.1.1.13 -Post Open Enrollment (OE) feedback from Members and HBRs as well as the types and number of OE exception requests.

Related to initiative: 1.1.2.10

1.1.1.14 -Select TPA(s) that are willing to partner with the Plan to meet the goals and initiatives outlined in the Strategic Plan. The successful bidder must have the systems and processes required to administer the benefits approved by the SHP Board of Trustees.

Related to initiative: 1.1.2.11

1.1.2 Strategies/Initiatives -

1.1.2.1- Evaluate restructuring/exiting Fund of Funds and legacy low-conviction funds/managers: Hire a third party advisor to conduct hold/sell analysis for Fund of Funds and legacy low-conviction funds/managers. Execute sales and restructurings as prudent, including in real estate, private equity, and inflation sensitive. Expect completion of process by June 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.1

1.1.2.2- <u>Implement Managed Accounts Program and initial components of direct Hedged Equity program:</u> On board first direct equity hedge funds in Spring/Summer 2016. Fees, transparency, and control aspects of such relationships are expected to be materially better than market.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.2

1.1.2.3- <u>Research and implement strategic co-investments program(s) and/or secondary program(s):</u> Conduct a systematic search for fiduciary(ies), including reviewing internal portfolio management capabilities by June 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.3

1.1.2.4- <u>Review Small and Emerging Manager programs across NCRS:</u> Consistently apply identification criteria for small and emerging programs and direct engagements to understand use and effectiveness over time of the strategy. Complete by December 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.4

1.1.2.5- <u>Implement internal equity index fund:</u> Working with Piedmont Advisors and other consultants, use peer benchmarking to target low-cost internalization of equity assets in 2018.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.5

1.1.2.6- <u>Lead Planning & Implementation of New Technical Accounting Guidance:</u> Lead the planning efforts and establish milestones for implementation of GASB 74 and 75 OPEB standards.

Division Responsible: Financial Operations Division

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.6

1.1.2.7- <u>Expansion of Health Engagement Program:</u> Build on Healthy Lifestyles and Positive Pursuits to include additional chronic conditions and move towards incentivizing members for outcomes rather than just participation.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.7 & 1.1.1.8

1.1.2.8- <u>Enhance Worksite Wellness:</u> Award and implement a Worksite Wellness Contract to address comprehensive wellness within worksites.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.9 &1.1.1.10

1.1.2.9- <u>Population Health Management Services</u>: Award an implement a new Population Health Management Contract that assists members and providers in improving members' health and coordinate with the Plan's other vendor partners.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.11 &1.1.1.12

1.1.2.10- <u>Improve Member Experience:</u> Enhance the member enrollment workflow in enroll which the online member enrollment portal is provided through the Benefitfocus contract.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.13

1.1.2.11- <u>Third Party Administration (TPA) of Claims and related services RFP:</u> Issue TPA RFP and award contract that includes criteria to improve the members' experience and ensure financial stability through mechanisms such as alternative payment strategies, and value based benefits The RFP will also evaluate the programs available to improve members' health. Services under the new contract(s) targeted to begin January 1, 2019.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.1.1.14

1.2 Objective – Grow the retirement system investments over the long-term with prudent risk management

1.2.1 Measures of Success -

1.2.1.1 -To decrease the audit cycle from approximately 20 years to audit the DST Audit Universe to less than 6 years. Adding four additional staff (to current staff of three) will allow us to achieve this goal. The Office of Internal Audit recommended a staff total of 12 which would increase our staff by nine. Because of our work with Compliance, we feel that we can adequately address risks with a total staff of seven instead of 12.

Related to initiative: 1.1.2.11

1.2.2 Strategies/Initiatives -

1.2.2.1- <u>Increase staff in the Internal Audit Division to provide adequate coverage of risk areas:</u> Work with management to develop staffing plan as noted in the Quality Assurance Review completed by the Office of Internal Audit. Budget: Budget Expansion

Division Responsible: Office of State Treasurer- Audit Section

Budget: Current Operating Budget

Related to Measure(s): 1.2.1.1

1.3 Objective – Promote prudent financial decision making and conservative debt management

1.3.1 Measures of Success -

1.3.1.1- Reduce overpayments and more effectively collect on them when they occur

Related to initiative: 1.3.2.1

1.3.1.2- Increased traffic on Fiscal Management webpage; document usage of various products; survey users as to usefulness of materials

Related to initiative: 1.3.2.2

1.3.1.3- Members of the General Assembly who respond positively and favorably to 1) DST budget requests; 2) DST legislative requests; 3) DST views on proposed legislation

Related to initiative: 1.3.2.3

1.3.2 Strategies/Initiatives -

1.3.2.1- <u>Overpayment Overhaul:</u> Evaluate policy and legislative proposals to prevent and more timely identify, collect overpayment balances owed to RSD.

    Division Responsible: Retirement Systems Division

    Budget: Current Operating Budget

    Related to Measure(s): 1.3.1.1

1.3.2.2- <u>Improve fiscal training materials available to local governments:</u> Provide modern training and tools to local governments via the internet through the use of webinars, videos, and interactive websites

    Division Responsible: State and Local Government Finance Division

    Budget: Current Operating Budget & may request funds through legislature

    Related to Measure(s): 1.3.1.2

1.3.2.3- <u>Protection of the Local Government Commission which provides leadership in public finance and fiscal management:</u> Educate members of the General Assembly and local government officials on best-practices in debt management; Education of local government officials and staffs on prudent financial decision-making and fiscal responsibility.

    Division Responsible: State and Local Government Finance Division

    Budget: Current Operating Budget

    Related to Measure(s): 1.3.1.3

1.4 Objective – Promote prudent financial decision making and conservative debt management

    1.4.1 Measures of Success –

    1.4.1.1- Overall percentage of NC public servants on track to replace 80% of their salary by age 62

        Related to initiative: 1.4.2.1, 1.4.2.3, 1.4.2.4, 1.4.2.5, &1.4.2.9

    1.4.1.2 Auto-enrollment & auto-escalation legislation passed

        Related to initiative: 1.4.2.2

    1.4.1.3- Increased combined DC/DB counseling sessions, benefit fairs, etc.

        Related to initiative: 1.4.2.6

    1.4.1.4- Successful implementation of NC ABLE Program

        Related to initiative: 1.4.2.7

    1.4.1.5- Reduction of retiree outflows from SRP

Related to initiative: 1.4.2.8

1.4.1.5- Number of members participating in roadshows, tele-town halls, and other outreach events.

Related to initiative: 1.4.2.10

1.4.1.7- Number of members participating in different SHP 101 activities.

Related to initiative: 1.4.2.11

1.4.1.8- Track attendance and feedback at quarterly events and monthly webinars. Seek HBR feedback through online surveys.

Related to initiative: 1.4.2.12

1.4.2 Strategies/Initiatives –

1.4.2.1- <u>Annual Benefit Statement project in support of retirement readiness:</u> Oversee development of ABS and associated communications plan with the intent of educating members about their individual retirement needs.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.1

1.4.2.2- <u>Auto-enrollment & auto-escalation legislation:</u> Develop plan of action, strategy, who we can leverage, stakeholders to increase member participation in support of retirement readiness initiative.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.2

1.4.2.3- <u>NC Save for Retirement Month:</u> Oversee development and implementation of communications plan with the intent of educating our members about retirement readiness.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.1

1.4.2.4- <u>NC State Fair:</u> Oversee development and implementation of communications plan with the intent of educating our members about retirement readiness.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.1

1.4.2.5- <u>Retirement planning conferences/tours:</u> Work with Member Services and Financial Education Director to revise partner presentation to reflect new branding of NC Total Retirement Plans.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.1

1.4.2.6- <u>Total Retirement Plans:</u> To totally integrate the Defined Contribution segment of retirement into a total package with the Defined Benefit plan and educate members on the importance of both.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.3

1.4.2.7- <u>NC ABLE (Achieving Better Life Experiences):</u> Develop and Implement this New Program

Division Responsible: Retirement Systems Division

Budget: Requesting Budget Expansion

Related to Measure(s): 1.4.1.4

1.4.2.8- <u>Reduce retiree outflows from the plans:</u> Leverage Retiree Advocate and other communication / education strategies to retain participants / assets in the plans and thereby maintain competitive participant fees and services.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.5

1.4.2.9- <u>Retirement readiness Initiative:</u> Support retirement readiness initiative with ongoing NC Total Retirement Plans communications efforts.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.1

1.4.2.10- <u>Pre-65 Outreach:</u> Educate members turning 65 in the next year regarding their SHP benefits and Medicare.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.6

1.4.2.11- <u>SHP 101 Webinar Series:</u> Educate members on a variety of health plan literacy topics in an effort to help them understand their benefits.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.7

1.4.2.12- <u>HBR Outreach and Education:</u> Increase HBR education and training opportunities by providing both quarterly regional HBR training, monthly webinars and better web tools.

Division Responsible: State Health Plan

Budget: Current Operating Budget

Related to Measure(s): 1.4.1.8

1.5 Objective – Support comprehensive strategies around K-12, community colleges and university education

1.5.1 Measures of Success -

1.5.1.1- Number of employees trained and later impact on Financial Compliance

Related to initiative: 1.5.2.1

1.5.2 Strategies/Initiatives -

1.5.2.1- <u>Fiscal & Debt Management Community College local government training program pilot:</u> In January a course to train local government employees in the basics of required financial procedures will be offered in four pilot locations across the State. If the pilot is successful there may be a need for additional resources.

Division Responsible: State and Local Government Finance Division

Budget: Requesting Budget Expansion

Related to Measure(s): 1.5.1.1

Goal 2 - Enhance Accountability of Department Services

DST, and all government agencies, have a fiduciary responsibility to the citizens we serve to see that their resources are used in accordance with the laws and regulations and to demonstrate that it serves the best interests of North Carolinians.

This is necessary to ensure public confidence and maintain public support for needed government services.

2.1 Objective - Promote and improve transparency and ethical processes

2.1.1   Measures of Success –

2.1.1.1- New Treasurer adopts new policies, after IAC consultation, as statutorily required

Related to initiative: 2.1.2.1

2.1.1.2- Ability to identify, monitor, reduce, and eliminate risk is strengthened.

Related to initiative: 2.1.2.2

2.1.2 Strategies/Initiatives –

2.1.2.1- <u>Finalize IAC consultation, updating, and Treasurer approval of IMD policies/procedures:</u> Comprehensively review and update IMD policies and procedures, creating/eliminating to enhance effectiveness. June 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 2.1.1.1

2.1.2.2- <u>Enhance capacity of Internal Audit Division in order to address risk areas:</u>

Hire 2 auditors in the Internal Audit Division.

NOTE: 2 FTEs will be a proposed budget expansion item

Division Responsible: Office of State Treasurer – Internal Audit

Budget: Current Operating Budget and Budget Expansion Request

Related to Measure(s): 2.1.1.2

2.2 Objective – Strengthen board and committee oversight

2.2.1 Measures of Success –

2.2.1.1- Design, development and implementation of department wide agendas, board books, and board member on-boarding materials

>Related to initiative: 2.2.2.1

2.2.1.2- Design, development and implementation of annual board self-assessments.

>Related to initiative: 2.2.2.2

2.2.2 Strategies/Initiatives –

2.1.2.1- <u>Board Document Consistency:</u> Development of more similarly structured documents for all DST boards and commissions to help ensure better transparency and constancy throughout the organization.

>Division Responsible: Office of the State Treasurer – Program Office

>Budget: Current Operating Budget

>Related to Measure(s): 2.2.1.1

2.1.2.2- <u>Board Self-Assessment:</u> Development of board assessments to better understand board's view on supporting the department's mission and vision, building and monitoring strategy, overseeing programs, services, and reports, board-management relationships, advocacy, participation and board behavior.

>Division Responsible: Office of State Treasurer – Internal Audit

>Budget: Current Operating Budget

>Related to Measure(s): 2.2.1.2

2.3 Objective – Enhance constituent relationships-including members, customers, Department, government, stakeholders & citizens

>**2.3.1 Measures of Success –**

2.3.1.1- Closed accounts, accounts setup for retirement, deaths processed

>Related to initiative: 2.3.2.1

2.3.1.2- Create a reliable and reasonably priced system to enhance transparency and operational effectiveness.

>Related to initiative: 2.3.2.2

2.3.1.3- If win-win achieved then pilot will lead to other opportunities.

>Related to initiative: 2.3.2.3

Strategies/Initiatives -

2.3.2.1- <u>Identify and contact Fire and Rescue members who are 53 and over and have Pension Fund monies/service in the fund:</u> Identify members that are eligible to retire and get them set up for retirement. Identify members over 70 ½ who have contributions in the system and must take a distribution/refund. Identify members who are deceased, but not reported to our office; process any return of contributions due to death. Identify members who have contributions in the system and will never meet retirement eligibility; process a refund

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 2.3.1.1

2.3.2.2- <u>Financial system for local governments:</u> Work with UNCC to develop an RFP for a financial system for local governments that meets all State and Federal requirements.

> Division Responsible: State and Local Government Finance Division

> Budget: Current Operating Budget & Potential Budget Expansion Request

> Related to Measure(s): 2.3.1.2

2.3.2.3- <u>Work with Wayne County and three towns to make all sewer operations more sustainable and affordable:</u> Eureka, Fremont, Goldsboro and Wayne County have agreed to look at a win-win solution to improve the efficiency of all sewer operations in the County. If the pilot is successful there may be a need for additional resources.

> Division Responsible: State and Local Government Finance Division

> Budget: Current Operating Budget & Potential Budget Expansion Request

> Related to Measure(s): 2.3.1.3

2.4 Objective – Effectively manage risk, resources and compliance

2.4.1 Measures of Success -

2.4.1.1- Increased beneficiary updates and reduced contested cases

> Related to initiative: 2.4.2.1

2.4.1.2- Successfully develop a critical task timeline tracker to ensure continuity of business with the appropriate checks and balances

> Related to initiative: 2.4.2.2

2.4.1.3- Policies & Procedures are developed and updated timely

Related to initiative: 2.4.2.3

2.4.1.4- Successfully pass legislation that effectively balances the needs of the members while protecting the integrity of the NC Retirement Systems

Related to initiative: 2.4.2.4

2.4.1.5- Higher percentage of payrolls received in "good order" and being processed

Related to initiative: 2.4.2.5

2.4.1.6- Progress towards project completion

Related to initiative: 2.4.2.6

2.4.1.7- Number of service audits of member data

2.4.1.8- Maintain a stable work force with appropriate number of staff to meet compliance requirements and mitigate risk.

Related to initiative: 2.4.2.7

2.4.1.9- Standardized risk reporting provided to staff Investment Committee on a quarterly basis; and design of risk budget

Related to initiative: 2.4.2.8

2.4.2 Strategies/Initiatives - Repeat as Necessary.

2.4.2.1- Beneficiary update initiative: Oversee development and implementation of communications plan to assist members with ensuring their beneficiaries are correct.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 2.4.1.1

2.4.2.2- Continuous Compliance Monitoring: Develop a comprehensive approach to tracking compliance-related milestones (i.e., legal mandates, key ORBIT updates, deadlines related to member engagement).

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 2.4.1.2

2.4.2.3- <u>Internal policy development and monitoring :</u> Timely update, revise, and develop internal policies and procedures to conform with legislative, policy, and Rulemaking applicable to the RSD.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 2.4.1.3

2.4.2.4- <u>Sick Leave Policy:</u> Evaluate policy proposals for more effective sick leave administration for possible legislation.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 2.4.1.4

2.4.2.5- <u>To lower employer payroll errors of member records submitted to the Retirement System:</u> The team is working towards upgrading certain critical errors that would reduce the volume of errors on a monthly basis. They are working towards making the reports available on line for the employers.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 2.4.1.5

2.4.2.6- <u>Establish 3 (38) style "delegated manager" for 401(k) / 457 Glidepath:</u> Additionally, they have restructured their metric evaluation to focus on memberships and not errors so that members' records are corrected first due to adverse impact membership records can have on the system.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 2.4.1.6

2.4.2.7- <u>Continue working with IT to cleanse the Fire/Rescue data so we will have accurate data to upload into the new ORBiT module once developed:</u> Resulting in an enhanced glidepath and investment plan design to enhance participant outcomes. Data cleanse work will continue on a daily basis until we are confident we have data our members can rely on to be correct in our system. This will rebuild our integrity within the Firefighter and Rescue Squad Workers' community (Member Satisfaction)

> Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 2.4.1.7

2.4.2.8- <u>Training and Development of Personnel:</u> "Hire 2 new accountants. Hire 2 FTEs for Unclaimed Property Division. Put Cross Training & Backup plans in place.

Division Responsible: Financial Operations Division and Unclaimed Property

Budget: 4 FTEs will be a requested budget expansion item

Related to Measure(s): 2.4.1.8

2.4.2.9- <u>Implement total fund risk systems and processes:</u> Materially complete by December 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 2.4.1.9

Goal 3- Innovate and Modernize Operations

It is important to balance resource investments in ensuring a stable and reliable business infrastructure while also leveraging new public or private solutions that could have a meaningful impact on the services that are provided to the citizens of North Carolina.

Creating and supporting a culture of innovation can also help attract the best talent to DST.

3.1 Objective - Improve data analytic and use of metrics in decision-making processes

3.1.1   Measures of Success –

3.1.1.1 Successful leverage of data to target message to members

Related to initiative: 3.1.2.1

3.1.2   Strategies/Initiatives –

3.1.2.1- Leverage Marketing Research data analytics to enhance communications: Targeted Communications have proved to be highly effective in driving actions by participants and employers.

Division Responsible: Retirement Systems Division
Budget: Current Operating Budget
Related to Measure(s): 3.1.1.1

3.2 Objective – Strategically implement technology-based applications

3.2.1 Measures of Success -

3.2.1.1Migration of IMD records and implementation of effective retention schedules.

Related to initiative: 3.2.2.1

3.2.1.2 Successfully migrate to one data base for all emails and increase the number of emails for active members and retirees

Related to initiative: 3.2.2.2

3.2.1.3Increased usage of core knowledge

Related to initiative: 3.2.2.3

3.2.1.4 Progress towards project completion

Related to initiative: 3.2.2.4, 3.2.2.5, 3.2.2.7, 3.2.2.8, 3.2.2.9, 3.2.2.10, & 3.2.2.12

3.2.1.5 Successful implementation of workforce management tool to accurately identify trends, etc.

Related to initiative: 3.2.2.6

3.2.1.7 100% of new hires by beginning CY 2017 are provided the link for the new e-onboarding site and then the site is utilized to create a more streamlined and efficient onboarding process during their Day 1 activities

Related to initiative: 3.2.2.11

3.2 .2 Strategies/Initiatives -

3.2.2.1- <u>Implement Records Retention IT application:</u> Dependent on State IT processes and approvals.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 3.2.1.1

3.2.2.2- <u>Database merger project:</u> Develop a plan to merge iContact and ORBIT data into one database so that we can better communicate with our members.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 3.2.1.2

3.2.2.3- <u>Core Knowledge Upgrade:</u> Implement a process to indexes information and allows for a more efficient, user-friendly experience for the end user.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 3.2.1.3

3.2.2.4- <u>Applying for Retirement Online Project:</u> The Retirement Systems Division anticipates a "Retirement Boom" in coming year; retirements are projected to increase 43% from 2012 through 2024. The Applying for Retirement through Self Service project will enhance the Online Retirement Benefits through Integrated Technology (ORBIT) self‐service portal, to allow members to apply for retirement benefits online.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 3.2.1.4

3.2.2.5- <u>Develop/Implement Self-Service Pension Fund module for Fire & Rescue department/squads and their members:</u> First initiative that we want to implement in Self Service is the ability for depts/squads to enter member's

annual contributions online and pay electronically. We hope to implement this by 2017 first quarter.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.2.1.4

3.2.2.6- <u>Implement a Workforce Management solution:</u> To accurately create a staffing model as well as track and monitor schedule adherence.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.2.1.5

3.2.2.7- <u>Execute System enhancement with Benefit focus for health billing:</u> Goal is to get BenefitFocus, Cobra Guard and Retirement System aligned from a software perspective to improve accuracy of premium deductions for health insurance.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.2.1.4

3.2.2.8- <u>Fire and Rescue Project:</u> The project was initiated due to new legislation. RSD took this opportunity to enhance ORBiT to be more customer friendly for members and agencies by improving information available through self-service, providing an online solution to processing contributions with real time data, adding EFT ability and helping to ensure roster compliance

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.2.1.4

3.2.2.9- ORBiT re-write of the Fire/Rescue Pension Fund production processing module: Continue working with IT to gather the applicable information so IT can begin writing code for this new ORBiT production module. Work alongside of IT when testing is required until we can get to implementation of the product.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.2.1.4

3.2.2.10- <u>Upgrade Workflow:</u> RSD is working with IT and the vendor to gather requirements, test and prepare for the Workflow upgrade.

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 3.2.1.4

3.2.2.11- <u>Talent Acquisition and Management:</u> Workflow is a pertinent part of RSD business operations. Workflow manages the flow of business processes throughout RSD and has many processes open at one time related to refunds, retirements, and other activities.

> Division Responsible: Office of State Treasurer- Human Resources

> Budget: Current Operating Budget

> Related to Measure(s): 3.2.2.7

3.2.2.12- <u>Applying for Other Benefits Online Project:</u> The Applying for Other Benefits Online project expands on the Applying for Retirement Online project through the addition of several new modules to accommodate additional online transactions through the ORBiT self-service portal. Proposed modules include electronic applications for refunds of contributions, declaring and updating retirees' beneficiaries and contact information online, and electronic submission of annual statement of income forms to ensure compliance with disability statutes and prevent overpayments more efficiently.

> Division Responsible: Retirement Systems Division and Information Technology

> Budget: Budget Expansion Request

> Related to Measure(s): 3.2.2.4

3.3 Objective – Continuously improve core functions and programs

3.3.1 Measures of Success -

3.3.1.1 Adoption of final Operating Committee charter by Treasurer; and publication of IMD Strategic Plan after input from IAC

> Related to initiative: 3.3.2.1

3.3.1.2 Reduction in not in good order; quicker turnaround for forms maintenance

> Related to initiative: 3.3.2.2

3.3.1.3 Implementation of automated invoicing, where possible

Related to initiative: 3.3.2.3

3.3.1.4 Successfully transition NC 403(b) Program from TIAA to Prudential

Related to initiative: 3.3.2.4

3.3.1.5 Successful implementation of Divisions projects and processes with FOD assistance.

Related to initiative: 3.1.2.5

3.3.1.6 WF is successfully implemented - paperwork and email dependency for HR actions is reduced - manual reporting in HR is drastically reduced or eliminated

Related to initiative: 3.1.2.6

3.3.1.7 Receive and return unclaimed property to rightful owners in the timeframe required by NC General Statute 116B.

Related to initiative: 3.1.2.7

3.3.2 Strategies/Initiatives -

3.3.2.1- <u>Formalize Operating Committee charter and develop an IMD strategic plan:</u> Electronic Onboarding platform

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 3.3.1.1

3.3.2.2- <u>Forms and letters process review:</u> Finalize committee charter by December 2016, after onboarding new Director of Investment Operations. IMD Strategic Plan to be finalized in 2017.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 3.3.1.2

3.3.2.3- <u>Invoice System Upgrades:</u> Review and update process with stakeholders to streamline process.

Division Responsible: Retirement Systems Division

Budget: Current Operating Budget

Related to Measure(s): 3.3.1.3

3.3.2.4- <u>NC 403(b) Record Keeper (RK) Transition:</u> Explore IT and other systems upgrades to improve invoicing process for RSD functions and increase automation.

> Division Responsible: Retirement Systems Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.3.1.4

3.3.2.5- <u>Maintain focus on core operational functions:</u> Transition the Program to a new RK resulting in increased resources, improved marketing / communication capabilities and consistent pricing across all Plans / Programs

All areas of FOD are relied upon by other divisions/agencies to perform its operational responsibilities accurately and consistently.

> Division Responsible: Financial Operations Division
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.3.1.5

3.3.2.6- <u>Talent Acquisition and Management:</u> Transition all hiring and salary related paperwork to an electronic workflow (WF) that allows one central staff person to log the WF and appropriately assign the action thereby updating HR metrics for the SLA and TAT

> Division Responsible: Office of State Treasurer- Human Resources
>
> Budget: Current Operating Budget
>
> Related to Measure(s): 3.3.1.6

3.3.2.7- <u>Manage increasing volume of Unclaimed Property receipts and claims:</u>

Hire 2 FTEs in the Unclaimed Property Division. The additional positions will allow UPD to perform the key functions of receiving and returning unclaimed property to rightful owners in the timeframe required by NC General Statute 116B.

NOTE: 2 FTEs will be a proposed budget expansion item.

> Division Responsible: Unclaimed Property
>
> Budget: Current Operating Budget and Budget Expansion Request
>
> Related to Measure(s): 3.3.1.7

Goal 4- Maximize Our Talent

DST employees hold the keys to DST's successful pursuit of its mission. By maximizing talent, DST is able to add value to and instill confidence in the state's citizens, customers, and the financial community by providing exemplary oversight and customer service.

4.1 Objective - Enrich our workforce through the effective use of strategic talent acquisition and retention

4.1.1 Measures of Success –

4.1.1.1 Reward and retain Division staff

Related to initiative: 4.1.2.1

4.1.1.2 EEO Officer is permanent staff member who operates in an autonomous fashion - direct reporting line to the HR Director

Related to initiative: 4.1.2.2

4.1.1.3 Obtain BoT and Treasurer approval of all 3 new compensation and classification plans by end of 2016 CY; ensure framework for legacy updates are stored on SharePoint or shared file for HR staff; complete all necessary salary and reclassification transactions with OSHR, OSBM and OSC's assistance no later than the Spring of 2017; launch the Exempt staff handbook/policy on Compass no later than the end of FY 2016 with appropriate legal review as a resource for Exempt staff throughout DST

Related to initiative: 4.1.2.3

4.1.1.4 The surveys are created, launched and sent to appropriate staff, results are regularly analyzed and data is used to help improve onboarding for new hires, provide feedback for managers and to help retain staff

Related to initiative: 4.1.2.4

4.1.2 Strategies/Initiatives -

4.1.2.1- Maximize talent by offering market-based compensation: Determine market-based compensation package for Division Staff;   Implementation of self-directed compensation process based on receipts-supported status.

Division Responsible: State and Local Government Finance Division

Budget: Current Operating Budget

Related to Measure(s): 4.1.1.1

4.1.2.2- Diversity and Inclusion: Hire an EEO Officer who reports into the HR Office

Division Responsible: Office of State Treasurer- Human Resources

Budget: Budget Expansion Request

Related to Measure(s): 4.1.1.2

4.1.2.3- Total Rewards: Implement new 3 stand-alone compensation plans within the DST - ensure that framework is created to all comp and classification plans are able to be maintained appropriately well into the future

Division Responsible: Office of State Treasurer- Human Resources

Budget: Current Operating Budget

Related to Measure(s): 4.1.1.3

4.1.2.4- Employee Relations: Implement electronic incoming and exit surveys for staff in order to assess and more readily benchmark data

Division Responsible: Office of State Treasurer- Human Resources

Budget: Current Operating Budget

Related to Measure(s): 4.1.1.4

4.2 Objective – Develop an integrated talent management system

4.2.1 Measures of Success -

4.2.1.1 Finalized career development plan and curriculum

Related to initiative: 4.2.2.1

4.2.1.2 Successful completion of OSHR's LAAL curriculum

Related to initiative: 4.2.2.2

4.2.1.3 Increase number of employees who can perform similar services

Related to initiative: 4.2.2.3

4.2.2 Strategies/Initiatives –

4.2.2.1- Institute 360 degree feedback for senior management and career development program for team leaders, portfolio managers, and analysts: 360 Degree feedback was completed Spring 2016. Career development program in progress with material completion expected in 2017.

Division Responsible: Investment Management Division

Budget: Current Operating Budget

Related to Measure(s): 4.2.1.1

4.2.2.2- <u>Middle Management Development:</u> Professionally grow and develop RSD middle managers

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 4.2.1.2

4.2.2.3- <u>Payroll Services:</u> Continue to cross train to ensure continuity business

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 4.2.1.3

4.3 Objective – Promote a culture of engagement and collaboration

> **4.3.1 Measures of Success** -

4.3.1.1 Improved engagement scores/results

> Related to initiative: 4.3.2.1

4.3.1.2 Development of RSD Action Plan and progress towards its completion

> Related to initiative: 4.3.2.2

4.3.1.3 Diversity and Inclusion team is created and meets regularly with authentic purpose - replaces the action currently being performed by the CRE team for the EEO officer - development and delivery of a Diversity and Inclusion training (if not provided by OSHR) which is assigned via the LMS and then supplemented with additional Lunch and Learns throughout DST - training is mandatory and compliance is tracked

> Related to initiative: 4.3.2.3

4.3.1.4 Lunch and Learns are developed and then delivered to staff - several are optional and some will be mandatory - ideally, online training will also be created for the LMS which will help reinforce the content of the Lunch and Learn topic and serve as an additional resource

> Related to initiative: 4.3.2.4

4.3.1.5 Funds are truly dedicated to the HR on an annual basis for training and certifications - the HR team does not have to seek sponsorship for attendance at trainings from other divisions

> Related to initiative: 4.3.2.5

4.3.2 Strategies/Initiatives -

4.3.2.1- <u>Support employee engagement survey results:</u> Oversee development and implementation of new RSD newsletter communications plan.

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 4.3.1.1

4.3.2.2- <u>Engagement Action Plan:</u> Develop Engagement Action Plans in support of growing engagement of RSD staff

> Division Responsible: Retirement Systems Division

> Budget: Current Operating Budget

> Related to Measure(s): 4.3.1.2

4.3.2.3 - <u>Diversity and Inclusion:</u> Successfully implement the launch of a new Diversity and Inclusion team led by the EEO Officer – incorporate Diversity and Inclusion training for all DST staff

> Division Responsible: Office of State Treasurer- Human Resources

> Budget: Current Operating Budget

> Related to Measure(s): 4.3.1.3

4.3.2.4- <u>Learning and Development:</u> Launch Lunch and Learns for Management and Staff on a variety of HR topics that coincide with all functional areas

> Division Responsible: Office of State Treasurer- Human Resources

> Budget: Current Operating Budget

> Related to Measure(s): 4.3.1.4

4.3.2.5- <u>Learning and Development:</u> Create a budget to allow all HR staff to attend HR training (annual conferences - national and state, specific topics that are relevant to projects, training for certifications, and areas of interest for the DST) which will create a workforce who think and work in a strategic manner and are able to have a stronger and more uniform base of knowledge throughout the entire HR team

> Division Responsible: Office of State Treasurer- Human Resources

> Budget: Current Operating Budget

> Related to Measure(s): 4.3.1.5

7. North Carolina Department of State Treasurer Information Technology Plan Executive Summary

The past two years have been a period of incredible change for the Department of State Treasurer, with no greater change than the relocation of the entire department to new offices on Atlantic Avenue in Raleigh. The Department had occupied the Albemarle Building since the 1970s, and vacating it was no small feat. Over a period of five months in the summer of 2015, the entire IT Division conducted a phased migration of all critical information technology to the Longleaf Building. This migration, which entailed seven weekend shutdowns of business applications, was successfully concluded in September of 2015 with only three hours of planned outage time during normal business hours. In the midst of this relocation project, the Department also implemented a major upgrade to the Core Banking Platform, a critical system for statewide financial operations.

With the relocation complete, the IT Division turned its attention to enhancements and upgrades, virtualizing the database infrastructure of the agency and implementing upgrades to systems used in the Retirement Systems Division and the Financial Operations Division. Work is also being completed on an overhaul of the IT systems of the State and Local Government Finance Division with the rollout of a new Debt Management System in early 2017.

Looking ahead to the next two years, the Department is faced with another period of dramatic change. In 2017, for the first time in eight years, North Carolina will have a new State Treasurer, and with it, new strategic directions. The IT Division expects to continue efforts to improve self-service technologies and data analytics capabilities, but expects new initiatives to emerge with the change in Department leadership. The IT Division is also facing a new technology landscape, with Platform-as-a-Service, Infrastructure-as-a-Service, and hyper-converged systems offering new models for the delivery of IT systems and services. The IT Division must remain focused on completing ongoing projects, respond to new initiatives, and navigate the changing technology landscape in the years ahead.

8. North Carolina Department of State Treasurer Information Technology Quick Reference Guide

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 1 Maintain a stable and secure IT infrastructure to support business operations.	Objective 1.1 Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.	Initiative 1.1.1 Desktop and Laptop Refresh	Complete delayed refresh of laptop and desktop hardware with upgrade to 64-bit OS	Receipts	3Q 2017
	Objective 1.2 Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10%	Initiative 1.2.1 Enhance DR Capabilities	Implement replication to Western Data Center with high-availability database clusters for hot-site recovery capabilities for critical applications.	Receipts	4Q 2017
		Initiative 1.2.2 Enhance Infrastructure Services	Expand use of Microsoft System Center, explore use of Hyper-V, converged systems, and IaaS/PaaS as alternative platforms	Receipts	4Q 2018

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
	of all initiatives focused on innovative activities developing new IT services for the Department				

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 2 Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Objective 2.1 Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.				
	Objective 2.2 Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative	Initiative 2.2.1 Increase Mobility Capabilities	Expand Enterprise Mobility Services for remote workers and field personnel. Implement mobility services for boards and commissions.	Receipts	4Q 2018
		Initiative 2.2.2 Replace Helpdesk and Enhanced App. Lifecycle Management	Replace Departmental Helpdesk system. Expand use of Team Foundation Server and/or Visual Studio Team Services for development backlog management, build/deploy/test management	Receipts	4Q 2017

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
	activities developing new IT services for the Department				

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 3 Secure DST electronic information and systems by employing an IT risk management methodology, a well-sponsored State-compliant Security Program, enterprise grade monitoring and detection security services, and audits and reviews.	Objective 3.1 Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.				
	Objective 3.2 Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on	Initiative 3.2.1 Expand Identity Management Services	Upgrade existing on-premise Active Directory. Establish synchronization with Azure and O365. Leverage Azure AD for integration with SaaS products.	Receipts	4Q 2017

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
	innovative activities developing new IT services for the Department				

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 4 Plan, design and implement new technology solutions to meet changing business needs and objectives.	Objective 4.1 Implement initiatives in the project portfolio meeting project planning targets of +/- 10% in budget, scheduling, and defined requirements in the interest of customer service.				
	Objective 4.2 Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10%	Initiative 4.2.1 Long-Term Electronic Document Strategy	Develop strategy to consolidate electronic document management platforms. Replace EMC Centera. Explore DIT services, alternative products to EMC solutions.	Receipts	1Q 2018
		Initiative 4.2.2 Relocate Server Operations	Begin migration to equipment to Eastern Data Center and/or Western Data Center. Explore SaaS replacements for existing applications. Pursue IaaS/PaaS where appropriate	Receipts	4Q 2018

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
	of all initiatives focused on innovative activities developing new IT services for the Department				

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 5 Procure and manage contractual relationships with technology and staffing vendors critical to the delivery of IT services.	Objective 5.1 Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.				

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
Goal 6 Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Objective 6.1 Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.	Initiative 6.1.1 SQL Server Virtualization	Virtualization of SQL Server platform. Upgrades to SQL Server 2014 or 2016. Setup for high-availability clusters	Receipts	2Q 2017
	Objective 6.2 Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative	Initiative 6.2.1 New Data Analytics Capabilities	Expand data analytics capabilities of agency. Implement new tools for visualization and analysis. Expand data feeds to GDAC. Establish project governance	Receipts	4Q 2018

Goal	Objective	Initiative	Brief Description	Funding Mechanism	Anticipated Completion Date
	activities developing new IT services for the Department				

9. North Carolina Department of State Treasurer IT Vision, Mission, and Values

8.1 IT Vision

The vision of the North Carolina Department of State Treasurer is to create and maintain a fiscally sound and economically prosperous North Carolina.

8.2 IT Mission

The Information Technology Division's mission is to deliver comprehensive technology solutions that allow the Department of State Treasurer to achieve a fiscally sound and prosperous North Carolina.

8.3 IT Values

- **Reliability**
  Maintain a stable and secure IT infrastructure to support business operations.

- **Innovation**
  Identify and capitalize on opportunities for enhancement to existing systems to reduce risk and increase operational efficiencies.

- **Service Orientation**
  Expand technology services to support improvements in customer and citizen services.

- **Expertise**
  Develop and maintain the capacity of IT personnel to effectively deliver IT services in accordance with industry standards for project management, operational service delivery, software development, and information security.

- **Collaboration**
  Advise and execute the expansion of measurement and analysis of information to achieve higher levels of operational effectiveness.

10. North Carolina Department of State Treasurer IT Goals, Objectives, and Measures of Success

Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.

1.1 Objective - Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

1.1.1 Initiative – Desktop and Laptop Refresh

In 2015, the IT Division initiated a refresh of desktop hardware which had been delayed as a result of the building relocation project. The older computers had reached end-of-life, according to departmental policies related to refresh cycles. Computer failure rates were increasing, as were maintenance costs, as vendor support had expired on many units. Employee productivity was also being negatively impacted due to slow performance as a result of insufficient hardware resources. The newer computers deployed to the department offer faster speed with multiple core processors, better graphics for handing video, improved energy efficiency, and an overall improvement in user experience. The hardware refresh also opened the door to software improvements by utilizing a 64-bit operating system that supports many of the 64-bit applications used by the agency.

1.2 Objective – Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology

systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department.

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

1.2.1 Initiative - Enhance DR Capabilities

For over seven years, the Department of State Treasurer has utilized a "warm-site" configuration at the State of NC Western Data Center (WDC) for the recovery of critical business systems. A collection of physical database servers and virtualized application servers have been maintained in a ready state and in the event of a disaster, recovery of current data and some minor reconfiguration are all that are necessary to restore systems. Despite the ready state of these systems, a large volume of data must be moved to the WDC for recovery, whether it involves the physical transport of tape backups or the electronic transfer of large files. A great deal of system recovery time involves data transport, and this is an area upon which the IT Division can make improvements.

Utilizing technologies such as SAN replication, as well as application synchronization capabilities in products like Microsoft SQL Server, issues with data transport can be addressed and the WDC can be reconfigured to a "hot" site, ready to be utilized quickly in the event of a disaster. By maintaining system and data replication, it may also be possible to expand the critical services to be recovered in the event of a disaster. Bi-directional synchronization and replication will also address long-standing issues involving the return of normal operations to the Raleigh area following the resolution of a disaster situation.

Moving toward "hot site" disaster recovery capabilities has long been a goal of the IT Division and the technology environment of the Department of State Treasurer is almost in a position to support this configuration. As part of the

Building Move and Consolidation initiative, the IT Division developed a great deal of experience in site-to-site SAN replication of data and virtual machines. This was the foundation of the successful building move and can serve as the basis upon which a new DR infrastructure can be developed.

The IT Division has moved a SAN device to the State's Western Data Center (WDC) and this SAN is being used to house data and virtual machines that are required for disaster recovery. Due to the age of existing hardware at the WDC and the desire to move to a fully virtualized environment, aligned with the ongoing database server virtualization efforts in the Raleigh office, new hardware for the WDC must be procured and installed. Once in place, along with some network reconfiguration activities, the implementation of replication with site recovery services can take place.

Critical virtual servers in Raleigh will be replicated to the WDC and poised to come online in the event of a disaster. Bi-directional replication will permit a recovery to normal operations at end of a disaster event. Due to the unique nature of database servers, technologies such as high-availability clustering will be implemented to allow little-to-no data loss during a cutover of operations between Raleigh and the WDC.

1.2.2 Initiative - Enhance Infrastructure Services

There is a great deal of growth in the technologies available for information technology infrastructure. Some of these technologies include converged and hyper-converged solutions, software defined networking, software defined storage, automation and cloud computing, as well as on premise solutions. These technologies and others will be evaluated for their potential to enhance service delivery of desktop, server and infrastructure solutions while decreasing deployment times and complexities.

Key areas of research will include alternative virtualization platforms and converged solutions. While the IT Division currently uses VMWare for virtualization, Microsoft Hyper-V is a virtualization solution that runs on Windows Server 2008 R2 and may reduce cost while increasing IT agility and flexibility across on-premises and cloud resources. Converged solutions require an entirely different way of looking at infrastructure solutions. Converged infrastructure will leverage our existing virtual technologies while reducing resources, lowering cost, reducing system management, faster provisioning, and providing an easier path to cloud-based infrastructure. Outside of on-premise solutions, the IT Division will continue to monitor and evaluate Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PasS) and hybrid solutions. The IT Division

has a had great deal of success deploying SaaS solutions for focused business needs and the implementation of more SaaS products is expected to continue.

The IT Division will also seek to expand the current use of Microsoft System Center to provide a unified management solution for provisioning, monitoring, and securing the infrastructure while eliminating the use of multiple third party solutions providing these services.

Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.

2.1 Objective - Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

2.2 Objective - Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

2.2.1 Initiative - Increase Mobility Capabilities

The Department of State Treasurer has experienced an increase in the number of personnel working remotely, whether resulting from work-related travel or as

a permanent assignment as a division field representative. Simultaneously, the IT Division has seen an increase in requests for Enterprise Mobility Services, tools and technologies that will permit staff to remain connected and permit access to departmental systems at any time.

The Department of State Treasurer, like many State agencies, also conducts business with a large number of boards and commissions. The Local Government Commission, the Investment Advisory Committee, and the Teachers' and State Employees' Retirement System Board of Trustees are just a few of the boards and commissions for which the agency must prepare volumes of physical documents for each meeting. The preparation process is time-consuming and inefficient, especially as board and committee members have expressed a desire to move to the use of electronic media for meeting material.

With the increase in the mobile workforce, the IT Division must develop an infrastructure to meet these demands. Appropriate policies must be developed and tools identified to ensure compliance with public record retention while balancing personal privacy. Cloud-based technologies to support collaboration and information sharing among staff and external entities must be researched and implemented, again, balancing the data security requirements of the agency with the need to expand access to data across a variety of platforms.

2.2.2 Initiative - Replace Helpdesk and Enhanced App. Lifecycle Management

As part of the effort to improve overall service delivery, and in accordance with the recommendations of the IT Operational Study, the IT Division will seek to replace the current Helpdesk system used by the Department of State Treasurer. The current Helpdesk system is a custom developed application, first released in 2007. It has become challenging to maintain, drawing development resources from other pressing needs, and it lacks many features necessary for better operational performance management.

The IT division will be exploring both on-premises and cloud solutions to replace our Helpdesk system. Ideally, the new system will have scalable components to include custom reporting, a knowledge base, asset management capabilities, change management capabilities, and process control and workflow for incidents and service requests. The selection of a commercial product with minimal customization will also impose industry best-standard practices upon the IT Division for incident and service request management.

The current Helpdesk system has also been designed to perform application lifecycle management (ALM) functions and serves as the IT Division's development backlog and tracking system. The Systems Development group has been using Microsoft Team Foundation Server (TFS) for source control

management for almost eight years, and many of the ALM functions of TFS could be leveraged to replace functions performed by the Helpdesk system. Work items for development requests and defects can be created and routed for analysis, coding and code review, and when combined with source code control, an ALM system can ensure only well-tested and vetted changes are pushed into a Production environment. It may also be possible to leverage features of TFS for automated deployment, eliminating the human error risk involved in production changes. The migration from on-premise TFS to the Microsoft Azure Visual Studio Team Services (VSTS) will also be explored.

Goal 3 - Secure DST electronic information and systems by employing an IT risk management methodology, a well-sponsored State-compliant Security Program, enterprise grade monitoring and detection security services, and audits and reviews.

3.1 Objective - Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

3.2 Objective - Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

3.2.1 Initiative - Expand Identity Management Services

Over the last eight years, almost all growth in the Department of State Treasurer's Application Portfolio has involved systems delivered in a software-as-a-service (SaaS) model. This trend will continue, as SaaS products provide value with little up-front costs and faster implementation time. For the IT division, the use of SaaS products also limits infrastructure maintenance and allows resources to focus on development and maintenance of software unique to the agency that cannot be purchased in an open market.

At the same time, the use of SaaS products introduces new risks in the areas of user access and data management and complicates oversight of security policy compliance and cyber-threat response capabilities. Often times, SaaS products do not easily integrate with the department's Active Directory for user authentication and authorization. Users often have multiple accounts, or identities, spread across many different systems. As a result, it is difficult to control and monitor the permissions granted to an application user and ensure access is terminated at appropriate times, such as employee separation or reassignment. The use of SaaS products also creates challenges for data management as external systems host sensitive and critical data such as social security numbers, bank records, and health information. Identity and access governance and data management challenges are intertwined, and addressing these are critical to continued expansion of the department's application portfolio.

With the proliferation of Software-as-a-Service (SaaS) business systems, along with the deployment of new mobile devices, identity management continues to be a challenge for the IT Division. It is no longer possible to merely deactivate a single account in Active Directory and remove all access to critical business systems. Management of access required more advanced tools and technologies. Tools like Azure Active Directory, when synchronized with on-premise AD, can provide single sign-on functionality and a single point of management for both on-premise and SaaS applications. Tools like Azure AD can also be leveraged to provide self-service password management and centralized management of mobile devices.

As a necessary precursor to expanding identity management capabilities, the IT Division must upgrade its existing Active Directory to both maintain ongoing vendor support and leverage new features in AD 2012. Active Directory Domain Services (AD DS) in Windows Server 2012 includes new features that will make it simpler and faster to deploy domain controllers (both on-premises and in the cloud), more flexible and easier to both audit and authorize access to files with Dynamic Access Control, and easier to perform administrative tasks at scale, either locally or remotely, through consistent graphical and scripted

management experiences. The enhanced DFS Namespaces and DFS Replication in Windows Server 2012 will provide new management functionality as well as interoperability with Direct Access and Data Deduplication.

Tools must also be leveraged to improve processes surrounding the provisioning of user access. Today, DST uses a process initiated with a paper form and routed through the existing Helpdesk system with practically no workflow control. It is a time-consuming process to monitor and creates a number of opportunities for error, whether adding access or removing it. Utilizing toolkits to electronically collect access requests and automate the provisioning of access where possible will streamline the access provisioning process, provide better accountability and monitoring of user access, and eliminate errors and delays in provisioning that frustrate users and hamper employee productivity.

In the long-term, the IT Division must review identity management in the selection of all new business systems, as well as upgrades to existing systems. Special consideration must be given to systems that can leverage centralized identity management tools and existing on-premise systems such as ORBIT should be examined for possible integration with an identity management toolkit.

Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.

4.1 Objective - Implement initiatives in the project portfolio meeting project planning targets of +/- 10% in budget, scheduling, and defined requirements in the interest of customer service.

Measures of Success

- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.
- Implement initiatives in the project portfolio meeting project planning targets of +/- 10% in budget, scheduling, and defined requirements in the interest of customer service.

4.2 Objective - Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department.

Measures of Success

- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.
- Implement initiatives in the project portfolio meeting project planning targets of +/- 10% in budget, scheduling, and defined requirements in the interest of customer service.

4.2.1 Initiative - Long-Term Electronic Document Strategy

The Department of State Treasurer utilizes at least five different electronic document management tools. Three of these tools are in the Documentum product line, offered by EMC, recently acquired by Dell. The future of the Documentum product line is in question since the acquisition. The Department also utilizes an EMC Centera device for WORM-based storage of document content for two systems. This product line has been discontinued by EMC and a replacement storage technology must be identified and implemented.

No later than the end of 2017, the IT Division seeks to implement a replacement to the EMC Centera and has started evaluating potential solutions. The IT Division will be monitoring developments in the electronic document management product space closely over the next two years. The IT Division will be developing a strategy for electronic document management services by identifying alternative products for electronic document management while also seeking to minimize the number of platforms of use across the agency. As a

Documentum customer, DIT is also impacted by the Dell acquisition of EMC and the IT Division will work closely with DIT to monitor the future direction of DIT electronic document management services and utilize them if possible.

4.2.2 Initiative – Relocate Server Operations

The Department of State Treasurer was granted an exception by the Department of Information Technology (DIT) to move equipment to a server room at the agency's new Atlantic Avenue facility on January 13, 2015. This exception was granted with the stipulation that DST develop a plan by mid-2016 to move server operations to a DIT data center. DST has a 10-year lease in the new facility, which includes a brand new Uninterruptable Power Supply (UPS), diesel generator, and air conditioning units. As a result, there is no urgent need to move equipment; however, DST must relocate server operations before the end of the lease in 2024.

In January 2016, DIT published a Data Center Consolidation Plan, and while DST is not one of the eleven agencies described within the scope of this plan, the agency has taken steps to eliminate all instances of MS Server 2003, reduce physical servers in use, and meet an 80% virtual to physical server ratio. The IT Division anticipates a virtual-to-physical server ratio of over 85% at the completion of the Microsoft SQL Server Virtualization Project. At the conclusion of the consolidation of the eleven agencies listed in the plan, DST has also agreed to the study and evaluation of applications as candidates for server consolidation.

The IT Division will continue work to relocate server operations from the Atlantic Avenue facility before the end of the lease period. As noted earlier, the department has seen a rise in the use of SaaS applications and the IT Division will continue to evaluate SaaS solutions as alternatives to on-premise solutions. Notably, the IT Division is exploring the use of O365 for Sharepoint-based intranet services and potentially electronic mail and communication services. The IT Division will also be exploring the use of cloud-based infrastructure providers such as Microsoft Azure and Amazon Web Service as an alternative to on-premise server implementations.

Those applications that cannot utilize cloud-based delivery, whether for cost or technology limitations, will be evaluated for migration to a DIT data center. The IT Division has utilized floor hosting at the DIT Western Data Center for disaster recovery, and will continue to do so; however, floor hosting at the DIT Eastern Data Center, as well as DIT managed services, will also be explored as alternatives to reduce server operations in the Atlantic Avenue facility.

Goal 5 - Procure and manage contractual relationships with technology and staffing vendors critical to the delivery of IT services.

5.1 Objective - Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Measures of Success

- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.
- Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.

6.1 Objective - Reduce risks and operate 95% of all business systems on vendor-supported software platforms by the end of the 2016 calendar year.

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.
- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
- Ticket closure with incident resolution not prompting a re-opened ticket in 95% of all incident reports.
- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

6.1.1 Initiative – SQL Server Virtualization

In 2016, the IT Division began work to virtualize the department's SQL Server infrastructure. A VMWare virtual environment has been constructed and the migration of servers to this environment is underway and expected to conclude in May of 2017. As a part of the virtualization effort, all database servers are being upgraded to SQL Server 2014 or SQL Server 2016, ensuring maintenance for the next eight to ten years on these platforms. Virtualizing the SQL Server environment has reduced the number of physical servers in use, shrinking the data center footprint and physical hardware support. Virtualization of these servers also saves energy, enables quicker recoverability from failures and faster server provisioning, and will ultimately improve disaster recovery efforts.

6.2 Objective - Reduce risk by executing at least 80% of the defined project portfolio within three years, with 90% of all initiatives focused on edifying existing technology systems and 10% of all initiatives focused on innovative activities developing new IT services for the Department

Measures of Success

- Critical system uptime of 99% during business hours minus scheduled maintenance.

- Successful application of all Critical-level patches to each production server within seven days of release and High-Level patches every 30 days.
- Response to 99% of Very High/Emergency Tickets within one hour, and 99% of High Tickets within four hours.
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- Customer Rating of 4-star or higher for 90% of rated Helpdesk tickets.
- Annual IT Customer Survey Results to be positive (80% and above) for quality, timeliness, professionalism and helpfulness.

6.2.1 Initiative – New Data Analytics Capabilities

The Department of State Treasurer seeks to utilize data analytics more expansively in agency operations and the IT Division plays an important role in meeting this requirement. Before each division can embrace data-driven decision making in normal operational practices, analysts across the department must have the tools necessary to access business data to inform decision making. The IT Division has been deploying a number of tools across the agency, such as Microsoft PowerQuery for SLGFD and MATLAB for IMD, to aid in data analysis. It is unlikely that any single toolkit will meet the needs of each division and the IT Division must continue to keep abreast of developments in the industry and apply the appropriate technologies to each specific analytics challenge. Leveraging the resources of the Government Data Analytics Center (GDAC) to assist in the development and support of analytics platforms for SHP has also been an effective strategy that should be considered for other divisions.

The IT Operational Study identified deficiencies in the staff capacity to implement and support division-wide data analytics. DST has neither enough staff, nor staff with the appropriate skills, to successfully conduct enterprise-wide data management, analytics, visualization, and reporting. Working across the entire agency, the IT Division must formulate a strategy to address these personnel needs, through new positions and training opportunities for existing staff. By addressing both the skills and capacity gaps that exist within the organization, the agency should be poised to make rapid advancement towards the integration of analytics across all department operations.

SHP is currently conducting a strategic evaluation of their analytics program. In addition to defining and prioritizing divisional initiatives around analytics, they are performing a comprehensive review of resourcing, including staff, skills, tools, and data used in analysis. The division is also defining governance structures for the ongoing oversight and prioritization of analytics projects to ensure continued value from initiatives and clarify priorities across the organization. This work being conducted in SHP may potentially serve as a model

for other divisions that are seeking to bring more order to their analytics programs.

There is a demand for increased use of data analytics to support business operations across the entire department; however, implementation of new governance structures, tools, personnel and processes are a necessary precursor to these efforts. Without these structures in place, it will be impossible to prioritize analytics efforts among all the other work that is requested of the IT Division, and there is no guarantee that any projects selected will truly be beneficial without strong project justification methodologies in place.

There are a number of initiatives underway at the current time – IMD has been working with the SAS Institute on a project related to investment portfolio risk analytics, SHP has partnered with the GDAC for the construction of a health claims data warehouse, and SLGFD, IMD, and RSD are all experimenting with ad-hoc analytics to various degrees. Conducting an analysis of the successes and failures of these initiatives will be an important guide to all future endeavors. Due to the varied nature of the operational imperatives of the various DST divisions, there is no single method, process, or toolkit that will have division-wide applicability; however, replicating areas of success with modifications and avoiding known problems will improve future implementations. The strategic planning activities related to analytics that conducted in SHP have been valuable for that division and it is a model of planning and organization that the IT Division will seek to replicate across the Department.

The use of the GDAC for operational data analytics must be carefully considered to balance the mission and purpose of the GDAC with the needs of the Department of State Treasurer. The GDAC is a Statewide service and must deliver this service equitably to all State agencies. At the same time, the specific data analytics needs of each division of DST must be met in some fashion. DST is currently facing this challenge, as SHP and the GDAC are working to meet the expanding needs of SHP with the resources and capabilities available through the GDAC. As other divisions within DST expand their data analytics requirements in a similar manner, this will continue to be a challenge for the GDAC and each DST division. While DST would like to continue to leverage the expertise of the GDAC, other avenues must be considered.

In order to truly achieve benefits from data analytics, it will not be enough to engage in traditional business intelligence-type activities of merely counting transactions or elements. Utilizing predicative analytics and modeling to unlock patterns and business insights will allow management to make informed decisions about resource allocation and utilizations. For instance, predicting the seasonal load of claims on escheated property will allow for the effective

utilization of temporary staff. Understanding the total retirement portfolio of a State employee or teacher will allow RSD to develop and promote programs designed to help ensure sufficient savings and income for retirement.

Unfortunately, DST is limited in the number of staff that can perform this type of analysis. Identifying strategies for training additional staff, as well as augmenting existing staff with some specialized skillsets will make this possible. Understanding the scope of these efforts and the finances involved will be critical to allocating or requesting funds toward this effort. The importance of governance and project justification cannot be understated as it pertains to this effort. Procuring high-value professional services and training, as well as funding new positions, can only be justified and secured for the most beneficial projects. An effective governance body that prioritizes these efforts will make sure scarce departmental resources are not wasted.

11. North Carolina Department of State Treasurer IT Organizational Structure

North Carolina Department of the State Treasurer
Division of Information Technology Services
Updated 6/13/2016

12.   Enterprise IT Opportunities

Potential Initiatives

Collaborative Opportunities

Digital Commons Initiative: DST will explore use of the DIT Digital Commons as a platform for public, non-transactional websites such as nctreasurer.com and shpnc.org.

Procurement and Contract Management: Multiple divisions within the agency seek tools and technologies to support workflow and collaboration for procurement documents (RFP, RFQ, IFB), as well as house final contracts, addenda, side letters, etc. DST would like to participate in any Statewide system that may be offered by the Dept. of Administration or another agency.

Multi-Tenant Financial System & Long-Term Banking Strategy: As part of the development of the long-term Core Banking strategy, DST seeks to partner with OSC and OSBM in the evaluation of a new Statewide accounting platform. There are some platforms that may offer Banking modules that can be used, rather than a stand-alone system that must be integrated with the eventual NCAS replacement.

Additionally, the selection of a new Statewide accounting platform may afford the opportunity to provide financial accounting software to local units of government that they could not otherwise afford. By configuring a new system for multi-tenant capabilities, the State, as well as each local unit, may be able to leverage a single platform for GL, AP, AR functions.

Interactive Voice Response (IVR): DST worked with DIT Telecommunications to successfully implement an IVR for the Retirement Systems Division Call Center. Following the implementation of a new Unclaimed Property Management System, DST will seek to work with DIT to implement a similar system for the UPD Call Center.

Case Management System: Both RSD and SHP seek to implement a case management system for the management and monitoring of exception requests. Case management is not a function unique to the Department of State Treasurer, and the agency seeks to partner with other agencies that may have implemented case management tools to look for opportunities to share a new or existing system.

Cloud Strategy: The IT Division is developing a strategy around the use of O365, IaaS, and PaaS as an alternative to current on premise solutions. DST seeks to partner with any and all agencies in the development of this strategy to leverage shared knowledge and increase economies of scale.

Helpdesk: The IT Division seeks to implement a new Helpdesk system for Incident and Service Request management and is looking to partner with other agencies for shared knowledge and opportunities to share a new or existing system.

Data Analytics: DST seeks to expand use of the GDAC as an analytics infrastructure for divisions beyond the SHP. Additionally, DST seeks to partner with agencies that have implemented departmental programs for analytics for strategy guidance and knowledge transfer.

Appendix A: North Carolina Department of State Treasurer Major IT Projects

Initiative/ Project	Short Description (indicate if >$500,000)	Related Goals and Objectives	Funding Mechanism	Anticipated Benefits	Anticipated Completion Date
Initiative/Project Name	*Provide a short description of this item (Please also indicate if this is a project or application with a cost over $500,000).*	*To what agency goals and objectives and/or SCIO goals does this project relate?*	*Please identify funding strategy (expansion, grant, etc.)* *For existing projects, note whether they are fully funded or require expansion.*	*Provide a summary of any anticipated benefits.*	*Provide an estimated completion date for the project.*
New Initiatives/Projects					
Update Web Content Platform	Upgrade on-premise SharePoint to SP2016, migrate public website to alternative platform, move intranet sites to O365 **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improved communication with constituents, lower operating costs	4Q 2018

HR Document and Data Management	Implement tools for HR-related document management to support hiring and onboarding.	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improve HR performance; compliance with onboarding policies	3Q 2017
Implement New Accounting Tools for Investment Management	Implement new systems and tools to support accounting related to internal equity trading activities. **(> $500K)**	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Lower investment management costs	2Q 2018

Procurement and Contract Management Tool	Implement new systems and tools for procurement workflow management and contract monitoring and management. **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improved policy and code compliance, increased operational efficiency, improved records management related to procurement activity.	2Q 2018
Develop a Long-Term Banking Strategy	Develop long-term strategy for upgrades/replacement of Statewide Core Banking platform. Explore integration with new Statewide accounting system project.	DST Goal 3 – Innovate and Modernize Operations IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives	Receipts	Lower operating costs, consolidation of statewide financial systems.	4Q 2018

Implementation of Tools for Equity Index Training	Implement tools to support trading and reconciliation for equity index trading by IMD personnel. **(> $500K)**	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Lower investment management costs	2Q 2018
Electronic Document Management and Records Retention	Identify and implement tools for electronic document storage and retention, particularly legal documents and content related to IMD operations. **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations	Receipts	Improved compliance, quicker response for public records, reduction of risk in legal proceedings	2Q 2018

Digital Productivity Tools	Identify tools and technologies to increase productivity of IMD personnel	DST Goal 3 – Innovate and Modernize Operations IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives	Receipts	Increased operational efficiency, improvements in record retention	4Q 2018
Disability Enhancements	Implement modifications to ORBIT for more faster and more accurate processing of Disability claims.	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations	Receipts	Increased operational efficiency, reduction in overpayments, faster processing times, improved payment accuracy	4Q 2019

Auto-Enrollment for Defined Contribution	Integrate with Defined Contribution providers for automatic enrollment and deduction for 401(k), 403(b) and 457 plans	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Receipts	Improve participation in supplemental retirement plans, increase retirement readiness of employees	3Q 2018
Call Center Study	Conduct study of call center operations and implement findings. **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Increase operational efficiencies, reduce operating costs, improve customer service	4Q 2017

Replace Helpdesk and Enhanced App. Lifecycle Management	Replace Departmental Helpdesk system. Expand use of Team Foundation Server and/or Visual Studio Team Services for development backlog management, build/deploy/test management	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations	Receipts	Improve customer service and incident response, improve system uptime, improve overall system reliability, reduce change management risk	4Q 2017
Expand Disaster Recovery Capabilities	Implement replication to Western Data Center with high-availability database clusters for hot-site recovery capabilities for critical applications.	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Reduce operational risk, improve recovery time	4Q 2017

Enhance Infrastructure Services	Expand use of Microsoft System Center, explore use of Hyper-V, converged systems, and IaaS/PaaS as alternative platforms	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Decrease operational costs, increase uptime and recovery time	4Q 2018
Expand Identity Management Services	Upgrade existing on-premise Active Directory. Establish synchronization with Azure and O365. Leverage Azure AD for integration with SaaS products.	DST Goal 2 – Enhance Accountability of Department Services IT Goal 3 - Secure DST electronic information and systems by employing an IT risk management methodology, a well-sponsored State-compliant Security Program, enterprise grade monitoring and detection security services, and audits and reviews.	Receipts	Reduction of operational risk	4Q 2017

Develop Long-Term Electronic Document Management Strategy	Develop strategy to consolidate electronic document management platforms. Replace EMC Centera. Explore DIT services, alternative products to EMC solutions.	DST Goal 2 – Enhance Accountability of Department Services IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Reduce operational risk with hardware replacement, improve efficiency, lower costs	1Q 2018
Relocate Server Operations	Begin migration to equipment to Eastern Data Center and/or Western Data Center. Explore SaaS replacements for existing applications. Pursue IaaS/PaaS where appropriate	DST Goal 3 – Innovate and Modernize Operations IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Decrease operational costs, increase uptime and recovery time	4Q 2018

New Data Analytics Capabilities for Department of State Treasurer	Expand data analytics capabilities of agency. Implement new tools for visualization and analysis. Expand data feeds to GDAC. Establish project governance	DST Goal 3 – Innovate and Modernize Operations IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Receipts	Improve decision-making, improve communication and transparency	4Q 2018
Enhancements for Remote Worker Support	Implementation of tools and technology to support SLGFD field representatives	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Improved operational efficiency in data collection, improved outreach with local units	3Q 2017

| Improvements in Data Collection and Analytics for SLGFD | Enhancements to data collection conducted by SLGFD on local units. Implementation of tools to support econometric analysis | DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making. | Receipts | Improved decision-making and oversight of local unit finance | 3Q 2018 |
| **Multi-Tenant Financial System** | Implement and operate a multi-tenant financial system to be used by local units for GL, AP, FA, AR and other accounting functions. **(> $500K)** | DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives. | Receipts | Improve local government financial management practices | 2Q 2020 |

Contract Management Replacement	Replace aged system for SHP Contract Management. **(> $500K)**	DST Goal 2 – Enhance Accountability of Department Services IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Improve record management, contract oversight	2Q 2018
Case Management System	Implement a system for the management of benefit and enrollment exceptions. **(> $500K)**	DST Goal 2 – Enhance Accountability of Department Services IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Improved legal compliance, improved customer service	4Q 2018
UPD Call Center Enhancements	Implement IVR functionality for Unclaimed Property	DST Goal 3 – Innovate and Modernize Operations IT Goal 4 - Plan, design and implement new technology solutions to meet changing business needs and objectives.	Receipts	Improved customer satisfaction, call center operational efficiencies	3Q 2018

Replace UPD Document Scanning Solution	Replace UPD document scanning platform with a new supported system	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Lower operational risk, improved record accuracy, increase in operational performance	2Q 2017
Expansion of UPD Data Matching Program with GDAC	Utilize GDAC to identify property owners in other repositories of State data (DMV, DOR, ESC)	DST Goal 3 – Innovate and Modernize Operations IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Receipts	Increase in claim payment and overall customer satisfaction	4Q 2018

Existing Initiatives/Projects					
SAS Risk Management	Utilize and enhance SAS Risk Management platform for total portfolio risk analysis. **(> $500K)**	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 5 - Procure and manage contractual relationships with technology and staffing vendors critical to the delivery of IT services.	Receipts	Increase portfolio returns, lower portfolio risk	4Q 2018
ORBIT Self-Service Enhancements	Expand self-service functionality offered through ORBIT Self-Service for processes such as Apply for Retirement, Apply for Refund of Contributions, Apply for Death and Survivor Benefits. Improve application security and extend platform to mobile devices. **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improved operational efficiency, quicker response times, improved accuracy of processing through automation, reduced risk of fraudulent activity	3Q 2018

Complete RSD-IDMS Upgrades	Complete implementation of WorkflowXtender. Upgrade document scanning platform.	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Lower risk of operational failure. Improved monitoring of operational performance.	3Q 2017
Completion of Contribution-Based Benefit Cap Enhancements	Complete development of ORBIT enhancements to allow units to pay CBBC liabilities through normal contribution remittance.	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improved recovery of pension liability from units	2Q 2017
Desktop/Laptop Refresh	Complete delayed refresh of laptop and desktop hardware with upgrade to 64-bit OS	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Increased reliability and operational efficiency, reduced risk of equipment failure	3Q 2017

Fire/Rescue Enhancements	Complete overhaul of Fire/Rescue processing modules and clean-up of member data	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations.	Receipts	Improved payment accuracy, lower risk of overpayment, improved operational performance, increase in customer satisfaction	3Q 2018
Microsoft SQL Server Virtualization	Virtualization of SQL Server platform. Upgrades to SQL Server 2014 or 2016. Setup for high-availability clusters	DST Goal 3 – Innovate and Modernize Operations IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Receipts	Improved operational performance, lower security and operational risk by running on recent supported platforms, improve capabilities for DR	2Q 2017

Increase Mobility Capabilities	Expand Enterprise Mobility Services for remote workers and field personnel. Implement mobility services for boards and commissions.	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Improved operational efficiency, reduction of physical records	4Q 2018
Replacement for Debt and Fiscal Management System	Complete implementation of system for Debt Management and Fiscal Management functions performed by SLGFD. **(> $500K)**	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations	Receipts	Improved record keeping, operational efficiency, improved communication with local units	2Q 2017
Communication Tool Enhancements	Setup secure tunnels for e-mail interchange with key SHP partners. Establish extranet portals for reports and collaboration.	DST Goal 3 – Innovate and Modernize Operations IT Goal 1 - Maintain a stable and secure IT infrastructure to support business operations.	Receipts	Improved record keeping, operational efficiency, improved communication with contractual partners and units that participate in the SHP	2Q 2018

SHP Data Analytics Enhancements	Expand the data analytics platform of SHP. Incorporate new sources of data, visual analytics, and new modelling tools.	DST Goal 1 – Provide Public Leadership in Finance, Fiscal and Health Policy IT Goal 6 - Securely manage and deliver the data components of DST operations and integrated systems and coordinate the analysis of data for business decision making.	Receipts	Improve SHP management, plan policy, actuarial analysis, and population health management	4Q 2018
Implement New Unclaimed Property Management System	Replace the current UPMS with a new system utilizing web-based technologies, providing more self-service capabilities, more automated processing, and document management and workflow functionality. **(> $500K)**	DST Goal 3 – Innovate and Modernize Operations IT Goal 2 - Deliver and support reliable and high-performing business technology systems utilized by DST divisions in the execution of operations	Receipts	Increase operational efficiency, improved accuracy of claim and holder report processing, improved claim processing times, increase in customer satisfaction, more accurate record-keeping	2Q 2018

Appendix B: North Carolina Department of State Treasurer IT Accomplishments and Progress Review

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
Goal 1 **Provide Public Leadership in Finance, Fiscal, and Health Policy**	Objective 1.2 *Maximize Risk Adjusted Return of the Investment Portfolio*	Initiative 1.2.5 - Complete comprehensive update of investment policies • Implement AP System for Investment Accounting (FOD) • Enhance Reporting of Investment Performance and Issue Financial Statements (IMD) • Internal Management of Publicly Traded Investments – Global Equity Index Positions (IMD) • Leverage Third-Party Automation Tools for Manual Processes (IMD)	*In Planning*	*2Q 2018*

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
Goal 2 **Enhance Accountability of Department Services**	Objective 2.1 *Promote and improve transparency and ethical processes*	Initiative 2.1.4 - Develop, analyze and implement departmental policies and standard operating procedures • Tools for Governance Management (OST)	*Not Relevant*	
	Objective 2.2 *Strengthen Board and Committee Oversight*	Initiative 2.2.3 - Provide consistent meeting formats, presentation of materials and records across Department for all boards and commissions chaired by the Treasurer • Digital Imaging and Document Warehousing (OST)	*In Planning*	2Q 2018
	Objective 2.4 *Effectively manage risk, resources and compliance*	Initiative 2.4.6 - Establish a departmental strategy for procurement and contract management	*In Planning*	2Q 2018

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
Goal 3 **Innovate and Modernize Operations**	Objective 3.1 *Improve data analytics and use of metrics in decision-making processes*	Initiative 3.1.1 - Create scorecards and performance measurement standards for each division and core service area. • Business Process Automation Modifications (UPD)	*Not Relevant*	
		Initiative 3.1.2 - Develop departmental and divisional policies and processes for data capture, analytics and sharing • Replacement of Documentum with New Report Management Portal (SHP) • Execute Data and Analytics Strategy (SHP) • Departmental Analytics Program (IT)	*Strategy - Complete* *Portal – Not Started* *Departmental Analytics Program – In Planning*	Portal - 2Q 2018 Analytics Program – 4Q 2018
	Objective 3.2 *Strategically Implement Technology-Based Applications*	Initiative 3.2.2 - Enhance e-communications abilities and strategies to be more responsive and interactive with members and customers • Develop an Extranet Portal for Collaboration with External Vendors (SHP) • Website Redesign and Other Communications Initiatives (SLGFD)	*SLGFD Website Redesign – Complete* *SHP Extranet Portal – Not Started*	Portal - 2Q 2018

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
		Initiative 3.2.3 - Assess cross-functionality and best practices across departmental call centers and implement necessary upgrades • Replace and/or Upgrade Aging Technology Systems (RSD)	*In Process*	3Q 2017
		Initiative 3.2.4 - Complete modernization of SLGFD business systems and infrastructure • Debt Management System Replacement (SLGFD) • Administrative Management System (SLGFD)	*In Process*	2Q 2017
		Initiative 3.2.5 - Implement a new Core Banking System with cash management functionality • Complete upgrade of existing FlexCube system and replacement of OSC's CMCS system. (FOD) • Upgrade to Bank Imaging System. (FOD)	*Complete*	
		Initiative 3.2.6 – Increase availability, quality, and use of self-service technologies • Complete Implementation of Claims Fast-Tracking Initiative (UPD)	*Fast-Track – Complete* *Online Forms – Not Relevant*	

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
		• Workflow and Online Forms for Web Infrastructure (OST)		
	Objective 3.3 *Continuously Improve Core Functions and Programs*	Initiative 3.3.8 - Reassess the organizational structure of Legal, IT and SLGFD • Implement the Recommendations of the IT Operational Review (IT)	*In Process*	4Q 2017
		Other • Modifications to ORBIT for Firefighters' and Rescue Squad Workers' Pension Fund (RSD) • Complete Compliance Initiatives (RSD) • Continue Data Matching Efforts (UPD) • Evaluate Unclaimed Property Management Systems (UPD) • Alternative Methods of System Delivery (IT)	*Fire/Rescue – In Process* *RSD Compliance – Complete* *UPD Data Matching – On Hold* *Evaluate Unclaimed Property System – In Process* *Alternative Methods of Delivery – In Planning*	Fire/Rescue – 3Q 2018 UPD Data Matching – 4Q 2018 UPMS – 2Q 2018 System Delivery - 4Q 2018

FY15-17 Goal	FY15-17 Objective	FY15-17 Initiative	Progress Review	Anticipated Completion Date
Goal 4 **Maximize the Talent of our People**		Execute a Successful Building Move and Office Consolidation (IT)	*Complete*	