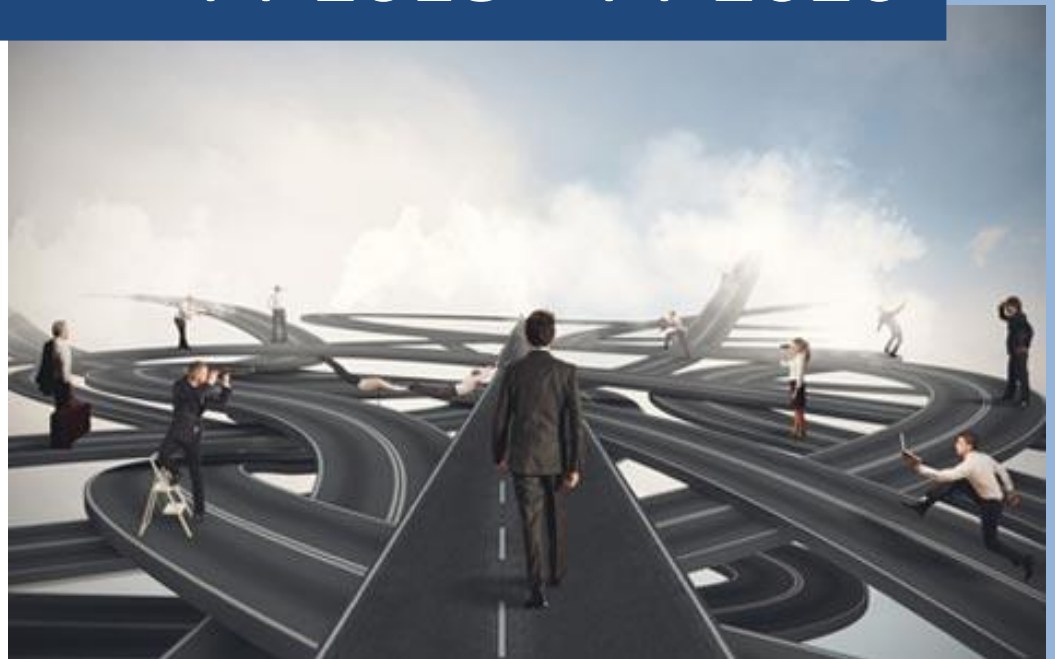


3-Year
Strategic
Plan

INFORMATION SERVICES
FY 2018 – FY 2020



CUMBERLAND
★ **COUNTY** ★
NORTH CAROLINA

Technology
Roadmap

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Strategic Plan Executive Summary



Cumberland County, the fifth most populous county in North Carolina, is a diverse and growing community. For our county government to remain effective, our Information Services Department, with a workforce of 24 diligent and hard-working staff members, must continue to deliver a vital, integral service for more than 30 county departments. The purpose of the IS Department is to provide efficient, accurate, reliable, secure, and cost-effective technology for Cumberland County in alignment with the County's strategic goals and objectives. To achieve these goals, we embrace and implement technology solutions that improve business response to our citizens, streamline internal business processes, and enhance high quality County services.

Beginning in fiscal year 2018, we are providing a strategic plan that will map out our approach to meet and stay ahead of the challenges of major emerging technology needs and trends facing the County in the next three years. We will routinely evaluate and adjust this document as needed. It will guide us as we define, develop and maintain a portfolio of technology solutions that can effectively be supported to meet business expectations, ensure continuous improvement, and serve the citizens.

This strategic plan reviews the County's need for technology, our ability to accommodate those needs, and a collaborative prioritization of technology efforts. We want to put in understandable terms our approach to business and technology projects from initial concept to active system, using a centralized process to enhance collaborative efforts from departments and the IS Department. We will lay out our approach to developing this strategic plan including our analysis of our department's strengths and weaknesses as well as our opportunities and external pressures. We will then detail our long-term goals and objectives and convey some initiatives that will help us achieve success in these areas.

Looking forward, we will continue to standardize our IT service and delivery through governance processes and procedures. We recognize that the future is filled with change and we will continue to replace antiquated equipment with modern technologies, maintain alignment with County strategic goals and objectives, restructure the organization, and continue to focus on our core mission. To successfully accomplish this, we recognize these essential elements: management support, open collaboration, and energized partnerships with our fellow departments and vendors.

Therefore, we encourage all to read and review our strategic plan.

Mission, Vision & Values

MISSION

Our mission is to provide efficient, accurate, reliable, secure, cost-effective technology for Cumberland County in alignment with Cumberland County's Strategic Plan.

VISION

Our vision is to provide progressive leadership and support for Information Technology to support the County's Vision.

VALUES

SERVING CUMBERLAND COUNTY CITIZENS WITH **PRIDE**

PROFESSIONALISM

Operate in accordance with the highest ethical standards in all relations with citizens, employees, environment, suppliers and community. Maintain a proactive approach to citizen safety and services.

RESPECT

Support the County in its efforts to respond to citizens accurately and quickly, showing respect to all encountered.

INTEGRITY WITH **A**CCOUNTABILITY

Minimize taxpayer burden with innovative technologies and information systems. Assure the safety of all technology assets.

DIVERSITY

Support customer service to our customers, both citizens and employees, recognizing that all people are different.

EXCELLENT CUSTOMER SERVICE

Maintain secure, reliable, efficient, cost-effective information systems, with a focus upon providing excellent customer service to our citizens.

Strategic Planning Process

The IT Strategic Planning process consists of seven phases. These phases allow us to utilize a standard methodology to review prior success factors and develop a strategic plan that will serve as a living document and provide a technology roadmap for upcoming initiatives.

Phase 1: Initial Review & Analysis

The purpose of the Initial Review & Analysis is to review and evaluate the previous goals and objectives and address known technology needs to be considered for upcoming initiatives. During this phase, the IS management team conducts a collaborative session to gauge current year performance and successes, identify critical needs for the department and County, and determine long-term goals to be considered for the new strategic plan.



Phase 2: SWOT Analysis

In phase 2, the internal and external environments are analyzed and organizational resources and capabilities are reviewed. During this process, all IS non-management department staff are recruited to participate in brainstorming sessions with the Chief IS Director to share their ideas and where they feel we can improve as a department. The output of this session is a draft of a SWOT Analysis outlining a list of strengths, weaknesses, opportunities and threats. The IS management team reviews and contributes to this list and begins to develop the IT Strategic Plan.

Phase 3: Collaboration & Strategic Planning

The goals of the Collaboration & Strategic Planning phase are to make decisions on and prioritize upcoming initiatives, revise objectives as needed, determine new strategies, and establish SMARTER goals. SMARTER goals require that they be **S**pecific, **M**easurable, **A**chievable, **R**elevant, **T**ime Bound, **E**valuated, and **R**eviewed. These goals include the critical success factors (CSFs) and key performance indicators (KPIs) that can be used to identify the baselines and provide benchmarks to ensure successful implementation of the new strategies.

Phase 4: Develop Implementation Plan

During phase 4, implementation strategies are established related to governance. Procedures are identified to monitor and control the strategic plan and standard practices are implemented for evaluating performance and managing timelines, schedules and resources.

Phase 5: Publish Strategic Plan

Phase 5 involves the finalization and approval of the IT Strategic Plan. The plan encompasses a term of three years and is accepted by all members of the IS management team with the final approver being the Chief IS Director. It is reviewed annually in conjunction with an Annual Technology Report (ATR) that serves to provide a progress report for the prior year's performance and upcoming year's initiatives.

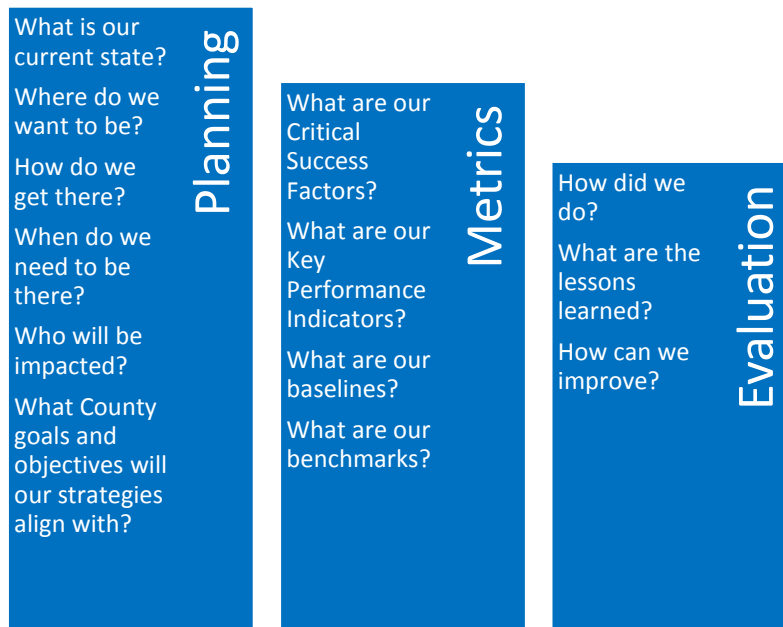
Phase 6: Implementation

The initiatives identified in the IT Strategic Plan are implemented during Phase 6. This phase is ongoing throughout the 3-year term and is evaluated bi-annually to determine adjustments that need to be made. Quarterly status meetings are held to review and discuss the strategic plan and ensure ongoing alignment.

Phase 7: Evaluate & Improve

Phase 7 occurs at the end of each fiscal year. The previous year is reviewed and evaluated, lessons learned are discussed and opportunities for improvement are identified. This phase supports our department-wide approach to continuous improvement. Metrics are analyzed to determine which strategies worked well, which ones fell short or failed, and which strategies should be considered going forward.

Throughout the strategic plan cycle, the following questions are driving factors that guide the development, implementation and continuous improvement of our goals and objectives.



The SWOT Analysis below represents where the Information Services Department stands on four key strategic areas – strengths, weaknesses, opportunities and threats. The strategic goals and objectives that follow connect the items in the SWOT Analysis with an actionable technology roadmap that will provide direction and guidance through Fiscal Year 2020.

Cumberland County Information Services

SWOT Analysis



Information Services Strategic Goals & Objectives



Goal 1: Security & Risk Management

Includes strategies to remain focused on department goals, data protection and security threats.

Objectives:

1. Establish redundancies to all critical elements of our systems.
2. Maintain security systems and application updates.
3. Enhance cyber security strategies and strengthen related internal controls.
4. Continue security awareness training for end users.
5. Develop/Maintain training plan for employees on technology systems.
6. Build a test environment for system testing and development.
7. Finalize and document IT processes, policies and procedures.

Goal 2: Quality & Service Delivery

To maintain positive relationships with County departments, support continuous improvement and ensure service continuity.

Objectives:

1. Explore the adoption of industry standards in IT Service Management, such as ITIL, to follow a cohesive set of best practices.
2. Develop service level management processes to quantify and clearly demonstrate the true value of IT services.
3. Forecast, respond to and influence the demand for IT services while minimizing cost and service disruption.
4. Develop build vs buy strategy to accommodate decision-making challenges and define selection criteria.

Goal 3: Disaster Recovery & Business Continuity

Methods, plans, procedures and architectures that support Disaster Recovery and Business Continuity solutions.

Objectives:

1. Maintain updated versions of Disaster Recovery and Business Continuity planning documents.
2. Establish redundant network links to major facilities.
3. Create and maintain a disaster recovery testing schedule.
4. Evaluate disaster recovery options to include DRaaS (Disaster Recovery as a Service).

Goal 4: Business Intelligence & Data Analytics

Research, analysis and communication of improving business processes and procedures.

Objectives:

1. Drive enterprise development through comprehensive business process reviews.
2. Build and maintain critical business intelligence partnerships with County departments.
3. Continue to monitor and enhance established business process management methodology of continuous improvement.
4. Utilize a blend of approaches to streamline processes and eliminate wastes in resources.
5. Strengthen business intelligence and data analytics to develop performance metrics for planning and decision-making.

Goal 5: Application Modernization

Roadmap to migrate from the IBM mainframe and dependent systems to a more modern and accessible environment.

Objectives:

1. Replace remaining mainframe systems for Planning, Solid Waste and Tax.
2. Enable ad-hoc reporting for departments to run their own electronic reports.
3. Build websites and web applications using responsive design to improve mobility.
4. Replace or upgrade applications and systems that are not meeting business requirements.
5. Expand document management.

Goal 6: Mobility

Strategy to enable the County to integrate and deliver new innovative business services through mobile-friendly applications.

Objectives:

1. Leverage the rise of mobile devices that are transforming how citizens interact with government agencies.
2. Mobilize operations for County employees allowing them to complete work in the field.
3. Research and explore mobile application management.
4. Invest in wireless infrastructures to enable county users and customers to access resources securely and efficiently.

Goal 7: Enterprise Vision

Roadmap and tools needed to communicate the Information Services vision to County management and customer base.

Objectives:

1. Maintain a 3-year technology plan through collaboration with departments.
2. Produce Annual Technology Report (ATR) to communicate progress.
3. Utilize IS staff to train end users on new applications and technologies.
4. Expand enterprise applications for improved processes and lower support cost.
5. Enable and expand document management and collaboration tools and uses.
6. Obtain feedback through various forums to identify needed County services.
7. Establish engagement strategy for departmental technology roadmapping.
8. Continue annual GIS Day and identify other IT day opportunities, such as Laserfiche Day.

Goal 8: Budget & Cost Control

Ways and means of managing the County's overall growing technology needs while remaining fiscally responsible.

Objectives:

1. Continue cost savings initiatives through continuous review of our technology spend and leveraging opportunities such as bulk purchasing when possible.
2. Work with various departments to fund personnel and technology training.
3. Leverage cost saving opportunities to fund new technology initiatives through collaboration with the Budget Division.
4. Continue to monitor and approve all technology purchases through the budgeting and procurement process.
5. Work to develop a technology capital improvement plan to stabilize operations and budget.

Goal 9: Consolidation & Optimization

Strategies that can assist with consolidating and/or optimizing technology solutions throughout the County.

Objectives:

1. Minimize duplicated efforts and overlapping technologies throughout the County.
2. Consolidate data backup centers to eliminate redundant equipment and support.
3. Enhance interconnectivity between the VoIP infrastructure and external systems.
4. Optimize operational efficiencies and increase scalability through standardization of equipment and processes.
5. Identify opportunities to standardize County websites and leverage existing county-wide technologies for workflows, approvals, and web content management.

Goal 10: Project Management

Forward-thinking strategies to deliver technology projects to meet County strategic goals and objectives.

Objectives:

1. Establish project prioritization to determine the needs and direction of technology solutions and business process improvements.
2. Implement an agile approach to project management based on project requirements.
3. Establish Project management office (PMO) to help prioritize projects and resources.
4. Implement project management process to include project requests, prioritization, PMO policies, procedures, scheduling, and the complete management of projects.
5. Implement new project portfolio management (PPM) solution for the collaborative management of projects across the portfolio.
6. Develop a project portfolio management method and strategy for use.

Goal 11: Staffing & Training of IS Department

Blueprint for continuous development to optimize performance and ensure alignment of skill set with new technologies.

Objectives:

1. Develop training plan and continue to budget for training for IS staff.
2. Leverage cross training opportunities to enhance job satisfaction, increase communication and improve operational redundancies.
3. Reorganize IS workforce as we move towards more modern applications and business intelligence initiatives.
4. Use all available medium and forums to research best practices and find available training opportunities.
5. Implement and utilize an employee recognition program.

Goal 12: Governance & Accountability

IT governance framework that provides active oversight and ensures alignment with County strategic goals and objectives.

Objectives:

1. Outline roles, responsibilities, decision-making authority and accountability assigned to individuals and groups of individuals within the IT governance framework.
2. Explore adoption of industry governance standards such as COBIT, ITIL and other best practices.
3. Achieve Center of Excellence status to ensure quality, promote collaboration, and substantiate intelligent and consistent use of best practices and methodology.
4. Define weighted selection criteria for project requests to establish project prioritization.
5. Improve transparency of IS projects.

Planned Initiatives for FY 2018 – FY 2020

Information technology capabilities are essential for efficient, productive staff, and to support the County's strategic goals and objectives requiring a focus in technology, business process improvements, and enhanced services for Cumberland County citizens. To strengthen and support the financial sustainability of the County, the innovations, initiatives and projects below will be considered or implemented during FY 2018 – 2020.

1. Establish refresh cycle to consider alternative network switches

- Lower cost per switch.
- All-inclusive pricing on some models includes enterprise support.

2. Consolidate GIS systems

- Eliminate file conversions and work-around requirements between systems.
- Allow full utilization of existing County GIS system.
- Reduce duplicated work, cost and overlapping staff tasks.

3. Consolidate data centers

- Eliminate redundant equipment and support.
- Reduce cost of disaster recovery solutions.

4. Review options available regarding VoIP Infrastructure as a Service

- Increase control and automation over VoIP services provisioning.
- Better operations management.

5. Review options available regarding Session Initiated Protocol (SIP)

- More reliable and cost effective than traditional voice trunks.
- Inherent redundancy within the technology.

6. Continue to consider cloud-based systems

- Consider as part of the initial review to determine most cost-effective approach.
- Develop policies and procedures that address unique security requirements for these systems.

7. Expand document management

- Reduce usage and cost of paper and storage.
- Increase automation or workflows and processes.
- Share information across departments.

8. Adopt industry standards and best practices such as COBIT and ITIL

- Reduce total cost of ownership (TCO) for IS projects.
- Facilitate proactive approach to manage projects, define IS solutions and services, and continuously review aging assets.
- Effective governance of IT activities and management framework of policies, internal controls and defined practices.

9. Ongoing pursuit of efficiencies and continuous improvements

- Proactively identify and assess opportunities for operational efficiencies and organizational restructuring to reduce costs.
- Explore merger of County technology functions.
- Adopt strategy to consider outsourcing specific tasks and/or technologies.
- Analyze positions as they become vacant to ensure rightsizing to create resiliency and stabilization to better respond to future changes.
- Continue investment in technology and application modernization.
- Prioritize business process reviews and commit to long-term path of continuous improvement.

10. Eliminate IBM mainframe, software and backup services

- Ability to operate on a newer, more accessible platform.
- Implement technology more aligned with internal and external support staff.
- Reduction of operational responsibilities, print services, and special paper stock.
- Eliminate mainframe hardware maintenance and supplies.
- Eliminate burster for mainframe print jobs.

11. Enhance cyber security strategies

- Restrict access to network based on identity or security posture of remote device or user.
- Replace or upgrade several firewalls to leverage new security features and functionality.
- Implement a posture assessment system to ensure connected devices comply with network security measures.

12. Implement ERP systems to enhance operational efficiencies

- Replace existing legacy solutions for Planning (Land Management), Central Permits, Environmental Health, and Tax Administration.
- Allow sharing of data between land management system, GIS, and tax property system.
- Provide extensive online services for citizens.
- Allow mobile functionality for staff to complete work while in the field.
- Allow staff to pull data as needed for reporting, comparisons, public requests, etc.

Information Services Department

April 2017

Information Services Technology Department

