

Cabarrus County Digital Strategy 2018-2023



Executive Summary



CABARRUS COUNTY
America Thrives Here

Contents

Introduction	3
County Vision Mission Values	4
Digital Strategy Principles	5
Four Focus Areas	
1) Transportation, Connection and Mobility	6
2) Programs, Funding and Services	7
3) Planning, Growth and Economic Development	8
4) Communication and Education	9
Program Strategies	10
FY18 Projects and Associated Focus Areas	12
FY19 Projects and Associated Focus Areas	14

Introduction

This technology strategic plan represents a common vision for moving Cabarrus County forward and preparing for future technology utilization. This document serves as the County's blueprint for the implementation and management of technology over the next 3 to 5 years.

Technology infrastructure provides the foundation for all County operations. This plan focuses on maintaining and further developing this foundation so that it is a secure, highly available and resilient infrastructure that supports current and future requirements.

Departments within the County continue to demonstrate the need for additional technology services to effectively collaborate with partners and support citizen/business services. Technology and data are critical assets for the County and it is important to ensure the necessary technology is provided as an enabler of transparent, accountable, responsible and collaborative government services.

Requirements for technology change and technology itself changes at a rapid pace. This requires constant monitoring of this change to ensure the County is appropriately aligned with the County's goals and industry best practices for the planning, implementation and management of technology.

Trending Technologies

Three major emerging technologies are changing how IT enables business processes; mobility, cloud technology, and data analytics. These three technologies have become a major government IT focus as governments modernize and enhance IT capabilities.



Mobility. Mobile applications help governments become more efficient and enable real time access to data. Additionally, pervasive public mobile device adoption is an opportunity for government services to become more accessible to the public and authorized stakeholders



Cloud Technology. The emergence and adoption of cloud technology has forced cross-industry reevaluation of how IT supports business functions. Cloud technology enables continuous availability of services, scalable computing power and storage. Governments will continue to move, build, and buy applications, systems, and infrastructure in the cloud. The County's owned and operated cloud infrastructure has also increased in use as departments continue to move toward shared and managed services.



Data Analytics. Increased data analytic capabilities are a continued focus across governmental agencies as organizations recognize data can be better collected, categorized, and analyzed for data driven decision-making.

Realizing The County Vision

The County's Digital Strategy identifies key goals and disciplines aligning with the County's values for accomplishing the County's mission and realizing its vision. To be effective, the goals that the Digital Strategy sets and the resources that are allocated are consistent with the purpose of the organization. The context for all strategic and operational planning is provided by the County's Values, Vision and Mission. The County Vision, Mission and Values provide broad organization-wide goals and help prioritize specific County digital efforts and programs.

Vision

Cabarrus County is a thriving community where well-managed growth supports the balance of family, faith, collaboration and tradition.
America Thrives Here

Mission

Guided by our organizational values, we uphold our statutory duties, support public safety, embrace growth and improve the quality of life for all citizens.

Values

Responsibility, Accountability, Transparency, Collaboration, Respect

Responsibility We base decisions on fact-based research and expert guidance. We fully understand the matters before us and consider the implications of decisions on our employees, residents, businesses and the greater community.

Accountability We uphold our statutory obligations and abide by the law. We create and follow policies that establish expectations of our staff, and define processes and procedures. We deliver quality work in a timely manner.

Transparency We conduct business openly and honestly. We support the disclosure of public information and address requests in a timely manner. We proactively make information accessible through our website and share information on actions, programs and services through multiple channels.

Collaboration Collaboration is at the center of our community's values and our work processes. We identify and create opportunities for education, dialogue, input and feedback between the County and our stakeholders.

Respect We expect and encourage healthy debate and diversity of opinions. We communicate with a high level of civil decorum and unite through our shared vision, mission and values.

Principle of the Digital Strategy

Strategy

The County's Digital Strategy is anchored in the vision, mission, values and focus areas of the Cabarrus County Board of Commissioners. Technology is the common thread that enables County departments to accomplish their respective goals. Technology is an essential element for the County to provide services and serves as a catalyst for business innovation. During the annual budget process departments identify their goals for achieving the County's vision and the Technology Services department presents digital innovation to improve delivery of services to meet these goals.

Focus Areas

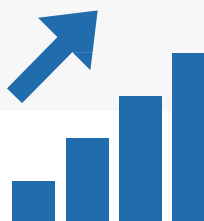
The following four focus areas were identified by the Cabarrus County Board of Commissioners to support the County's Mission to be guided by our organizational values, uphold our statutory duties, support public safety, embrace growth and improve the quality of life for all citizens



Transportation
Connection and
Mobility



Programs
Funding and
Services



Planning
Growth and
Economic Development



Communication
and
Education



Transportation, Connection and Mobility

Provide an IT environment that enhances connections among County employees their partners, peers and customers.

Enhanced connectivity and mobility increases efficiency in departmental business operations. Prudent use of technology enables the County to deliver services that are more convenient to customers, enables employees to perform work tasks away from traditional brick and mortar offices and provides real time information for routing of buses and public safety vehicles. The County's transportation, connection and mobility digital strategy focus is on reducing public safety response times, increasing the volume of business transactions completed remotely, and connecting customers to the right services.

The County will accomplish this by focusing on:

- Using mobile devices, GPS and geographic mapping.
- Offering more internet-delivered services, video and audio communication options as an alternative to services typically conducted in-person.
- Providing more robust online customer self-service capabilities, including requests for information or service, status tracking, payments and inquiry.
- Reorienting the public website services for multi-device use, providing a citizen-centric experience.
- Application programming interfaces (APIs) for system and application integrations

The County is evaluating, is currently implementing, or is already utilizing the following technologies to expand capabilities:

- Cloud office software and email
- Cloud Intranet
- Cloud mobile enabled website
- Business virtual meetings
- Online Chat
- Single Sign On
- Customer Relationship Management System
- Responsive design of web sites and mobile apps
- Online payments
- Vehicle modems and GPS
- Geographic Information Systems (GIS)
- Mobile device management



Programs, Funding and Services

Leverage technology and innovation to increase the speed and accuracy of business processes and service delivery.

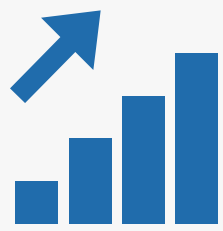
Employees, citizens and customers expect government technology and services to be as open, engaging and innovative as those provided by companies to consumers. Technology advances are driving increased expectations for fast turnaround times and getting things done at internet speed. The County's programs, funding and services digital strategy focus is on making technology intuitive and easy to use and creating an environment where work and collaboration are seamless

The County will accomplish this by focusing on:

- Reduce wait times on phone, online, and in line, for both employees and the public
- Enable customers to complete an end-to-end process entirely online
- Make services available on the fastest, most convenient media and devices
- Anticipating change by developing and implementing technologies with an eye to the future
- Proactively make information accessible to the public, businesses and other jurisdictions.
- Explore possibilities to work with business partners, vendors, academics, and start-ups

The County is evaluating, is currently implementing, or is already utilizing the following technologies to expand capabilities:

- Approval and workflow systems
- Mobile enabled websites and apps
- Internet of things, IoT
- Artificial Intelligence, AI
- Electronic Forms
- Digital Signatures
- Government Relationship Manager
- Digital signage
- Lobby management
- Automatic call distribution
- Open data
- Software as a service
- Business Intelligence and Data Analytics



Planning, Growth and Economic Development

Build scalable, reliable, secure technology infrastructures that supports growth and innovation.

Governments require secure, flexible and reliable technology infrastructure to keep up with the needs of citizens and employees. Data and technology services have risen to the top as two of the most critical government assets. Just as consumers expect utilities such as power and water to be available 24/7, IT infrastructure must be able to seamlessly support the increasing demands of governmental services. The County's planning, growth and economic development digital strategy focus is on delivering a reliable technology infrastructure that protects information integrity and provides a platform for government transformation.

The County will accomplish this by focusing on:

- Partnering with external service vendors to meet innovation and growth challenges
- Increasing agility and reliability with a hybrid cloud-based environment
- Enhancing security through prevention and detection.
- Expanding wireless availability at County facilities, for both employees and the public
- Increasing bandwidth and storage capacity to meet video requirements
- Modernizing IT infrastructure to support the transition to future innovation

The County is evaluating, is currently implementing, or is already utilizing the following technologies to expand capabilities:

- Security operations center services
- Cloud infrastructure services
- Area Storage Network
- Data and network redundancy
- Hyper-converged infrastructure
- Cyber-security awareness training
- Virtualization
- Endpoint protection
- Identity Access Management
- Secure application delivery
- Loadbalancing
- Patch management
- Secure access for BYOD Bring your own device



Communication and Education

Provide technology resources for building collaborative and participatory relationships among citizens and stakeholders.

People expect to be able to connect with their local government through the channels they are most comfortable with. Modern citizens now communicate via mobile smart devices, social media, email, web browsers, and more. To meet this expectation the county must implement multiple technology communication channels that facilitate improved citizen engagement. The County's communication and education digital strategy focus is on providing technology resources that boost government program delivery and make it visible to citizens and stakeholders.

The County will accomplish this by focusing on:

- Sharing data across departments and jurisdictions
- Balancing open and secure access to data
- Resilient emergency communications and public notifications
- Electronic communication channels
- Technology services that give citizens a chance to connect with government
- Providing citizens with direct access to assistance for a variety of situations
- Integration and simplification of government processes across departments and jurisdictions

The County is evaluating, is currently implementing, or is already utilizing the following technologies to expand capabilities:

- Citizen request management tools
- Transparency and dashboards
- Unified Communications
- Social network archive
- Dashboards and transparency sites
- Streaming video
- Social Media
- Digital Virtual Assistant
- Shared departmental/jurisdictional services
- Electronic

IT Program Strategies with Focus Areas



Review county departments' processes and operational requirements, make technology recommendations based on requirements, and approve all technology related expenditures.

- Attend County department staff meetings for awareness of departmental challenges and issues
- Meet with every department during the annual budget process to review technology budget projects and expenditures.
- Research, recommend, and implement technology solutions that support county-wide work flow processes, eliminate departmental data silos, and increase government transparency.



Engage with customers to improve communication.

- Host regular project meetings to review expectations, issues, and statuses.
- Provide easily assessable project meeting documentation on intranet.
- Create an annual technology work plan project calendar.
- Provide easy interactive communication channels to customers.



Reduce duplicate expenditures through collaboration and shared technology services with schools, municipalities, volunteer fire districts, and non-profit organizations.

- City of Concord Planning and Zoning Hosting Services
- Town of Harrisburg Zoning Hosting Services
- City of Kannapolis Planning and Zoning Hosting Services
- GIS County Wide Addressing Hosting Services
- Kannapolis City Schools Datacenter and Network Services
- Cabarrus County Schools Datacenter Services
- Mt. Pleasant, Harrisburg, and Midland Mobile Public Safety Services
- Volunteer Fire Mobile Public Safety Services
- Concord and Kannapolis E911 Public Safety Answering Points (PSAPs)
- Union County E911 Regional Back-Up Services
- Rowan County E911 Regional Back-Up Services
- Cabarrus County Partnership for Children Managed Technology Services
- Cabarrus Arts Council Voice and Data Services
- Harrisburg and Kannapolis Fire Electronic Plan Review Services



IT Service Management (ITSM) Best Practices.

- Provide customers with easy methods to report issues and incidents.
- Offer easy method for customer feedback on services provided by IT.
- Follow up with all unsatisfied customers and at least 10 other customers a week and discuss their customer service perception.
- Track and report incidents and problem resolutions.
- Record IT service metrics and display via dashboards.
- Provide change management process to ensure changes are vetted, tested, and user-approved before implementing into the production environment.



Application Development and Implementation

- Maintain website to provide mobile device access, enriched user experience, featured economic development, standardized content structure, and consistently deliver transparent government information and communication with customers.
- Process improvements through development of internal and external electronic forms with workflow and electronic signature.
- Implement a new staff timekeeping solution that provides multipoint input, including time clocks, mobile, and desktop access.
- Human Resources recruiting, employment applications, on/off boarding and employee evaluations software as a service.



Design, implement, and maintain technology infrastructure.

- Budget for and implement desktop, mobile, server, storage, and network hardware to support growth, new software requirements, and preserve security.
- Provide software releases to improve functionality, apply bug fixes, and enhance security.
- Provide end point devices with virus protection, detect intrusions, and provide recovery services when needed.
- Implement an enterprise physical security system integrated with door access controls, video surveillance, beacon alerts, panic buttons, and paging systems.

FY18 Projects and Associated Focus Areas



Enriched citizen engagement.

- Redesign of County website to provide access for all device types.
- Improved website user experience by using analytics to provide highly visible top calls to actions for the most frequently used services.
- Enhanced customer support with an added a chat feature on the website for visitors to interact directly with support technicians.



Automated forms submission process to improve customer service and increase staff efficiencies. PDF forms were converted to online services with detailed instructions, internal workflows and electronic signature. These services are accessible via the new website and also organized in a mobile friendly forms service portal.



Increased Government Transparency.

- Created an online service for submission and management of public records requests.
- Implemented an online service for website customers to ask questions that are automatically routed to the appropriate department.
- Added additional data sets to the County's open data portal that provide easy access to information for geographical mapping, data analysis and reporting.



Deployed Business Intelligence (BI) applications for data aggregation and visualization to facilitate data driven decision making and transparency. Applications include:

- Park and open space planning tool to facilitate park development and greenspace management.
- Density map showing Naloxone deployments by EMS, measuring and tracking opioid epidemic.
- Crime Data application to map, measure and track crime and public safety service trends.
- Election Polling Place application to display and track wait times county's polling places.
- Financial transparency site for expenditure, revenue and budget information.



Security projects to protect people, property and data.

- Employee cyber security training and testing.
- New digital security cameras at Human Services and Kannapolis library.
- New Detention Center security system, camera system and digital recorders.
- New door access card management system.
- New offsite disaster recovery point, vital database backups pushed to cloud storage.
- New Alertus beacons deployed in Governmental Center for customer and employee notification of emergency situations.
- New Door Card Access controls at Senior Center and Cooperative Extension.
- Upgrade of data center core switch for redundancy.



New implementations and upgrades for operational improvements:

- New DSS Day Sheets to improve staff reporting of time that qualifies state/federal reimbursements.
- New Payroll time clocks and time tracking software, replacing custom timesheet application.
- New Human Resources application for employee recruitment, evaluations and on/off boarding.
- Migration to SharePoint online for department common folders
- Upgrade of Enterprise Resource Planning (ERP) System.
- Upgrade of Planning and Permitting System.
- Upgrade and expansion of Storage Area Network.
- Upgrade virtual desktop environment and virtual server environment.
- New people counters installed at libraries and senior center.
- E911 upgrade at Cabarrus County Sheriff Site, Backup Site, Kannapolis PD Site, Concord PD Site.
- Library wireless access coverage upgrades.
- DSS backbone switch upgrades for increased bandwidth.
- Co-operative Extension building network cable upgrade and centralized main data closet.



New or Expanded Collaborations and Shared Services.

- Expanded Sheriff's E911 backup center at the Human Services Center to provide a regional E911 backup center in partnership with Union and Rowan Counties.
- Added the City of Kannapolis to the joint municipal planning, zoning and permitting system.
- Network services for Kannapolis City Schools:
 - Configured and installed 30 new network switches.
 - Created server redundancy and increased bandwidth.
 - Upgraded firewall.
 - Upgraded intercom at George Washing Carver School.
 - Upgrade switches to create 10 gig backbone at A. L. Brown School.
 - Configured and installed network infrastructure for New Kannapolis Middle School; 100+ phones, 95 wireless access points, 10 data switches, 1 core switch, 100+ extensions for intercom.

FY19 Projects and Associated Focus Areas



Enriched citizen engagement and Increased Government Transparency

- Biodiversity Dashboard displays crowd-sourced County conservation data from iNaturalist.
- Mental Health Website resources for connecting people to mental health and drug abuse programs.
- Recollect and Waste Wizard App provides waste collection schedules and recycling information.
- Animal Shelter social media and e-newsletter crowd sources outreach for lost and adoptable animals.
- Animal Shelter lobby kiosk with story map makes viewing animals available to all visitors.
- Online tax appeals and tax listings web application simplifies citizen access to tax processes.
- Public Tax Dashboard gives insight into parcel sales, price/ratio, zoning and annual property taxes.



Deployed Business Intelligence (BI) applications for data aggregation and visualization to facilitate data driven decision making and transparency. Applications include:

- Polling Place Wait Time App collects, aggregates and reports wait times to local and state board.
- Plan Review Dashboard provides visibility status of plans in review for management and resource allocation.
- 911 Center web application for continuing operations in event of computer aided dispatch (CAD) outage.
- Tax Dashboard visualization of impact of property sales and market value in tax district for tax valuation.
- Public notification application uses GIS to streamline Land Records property owner notification process.



Security projects to protect people, property and data.

- Incorporated new cameras and door access with new security system at multiple locations.
- Continued deployment of in-car cameras to Sheriff Patrol units.
- New outdoor access points for Patrol Car Camera video uploads.
- Upgraded Sheriff mobile connections to FirstNet Priority services.
- New cloud strategy for critical data backup designed for added data protection.
- New offsite security operations center to augment IT staff and enhance our ability to monitor cyber threats.



New implementations and upgrades for operational improvements:

- New Mobile Frank Liske Park Boat Waiver form, 913 waivers collected on tablet device summer 2018.
- Moved Novus Agenda to the Cloud for improved access and navigation of meeting agendas & materials.
- Added credit card processing for Library patron printing services and online payment of fines.
- New Risk Management workers compensation portal streamlines accident and workers compensation forms process.
- New hardware and software to support the counties printing, copying, scanning and fax needs, providing improved integration with document imaging systems and increased options for desktop faxing.
- Migrated to Tyler Content Management for integration of document management and Finance processes.



New or Expanded Collaborations and Shared Services.

- New CHA Septic Collector App collects geo-located septic permit information in the field.
- New VFD Budget App for budget requests and aggregated reporting to Fire Marshal.
- Merged County & municipal Plan Review processes into one site workflow and one building workflow.
- New City Fiber agreement for connectivity to new Parking Deck and Concord Senior City.
- New Child Welfare Intake secure website for community, school and physician reporting of abuse, neglect, dependency and exploitation of children.