



2015

Technology Department Overview

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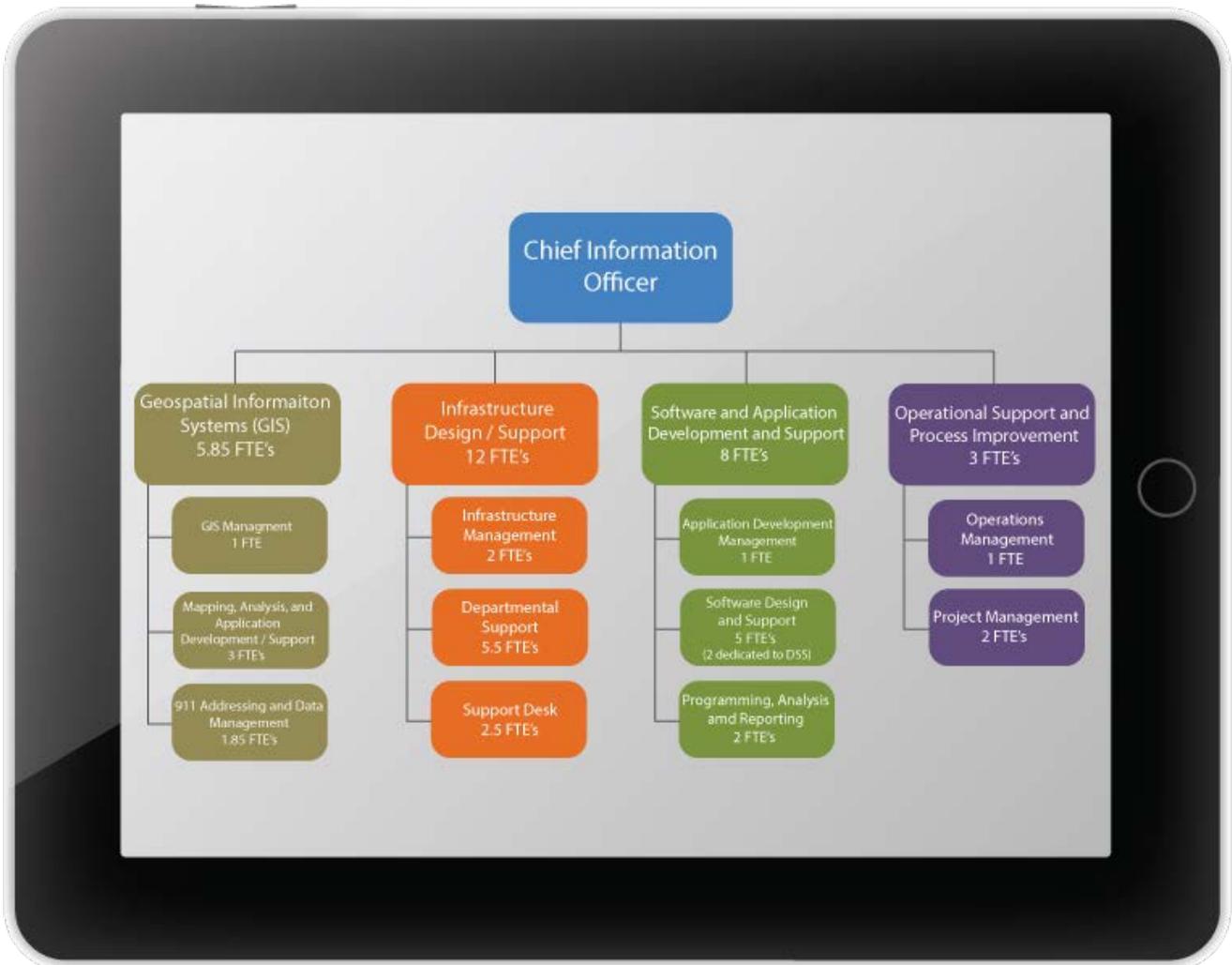
Organizational Chart

ITC Statement of Purpose

Provide the technology to enhance the delivery of County government services and increase the access to, and quality of, vital government data which facilitates commerce and enhances quality of life in our community. This will be accomplished in a spirit of customer service, partnership, and consultation with our stakeholders. Our guiding principles are to leverage partnerships and resources, empower internal and external customers, and transform services and processes through innovation.

GIS Statement of Purpose

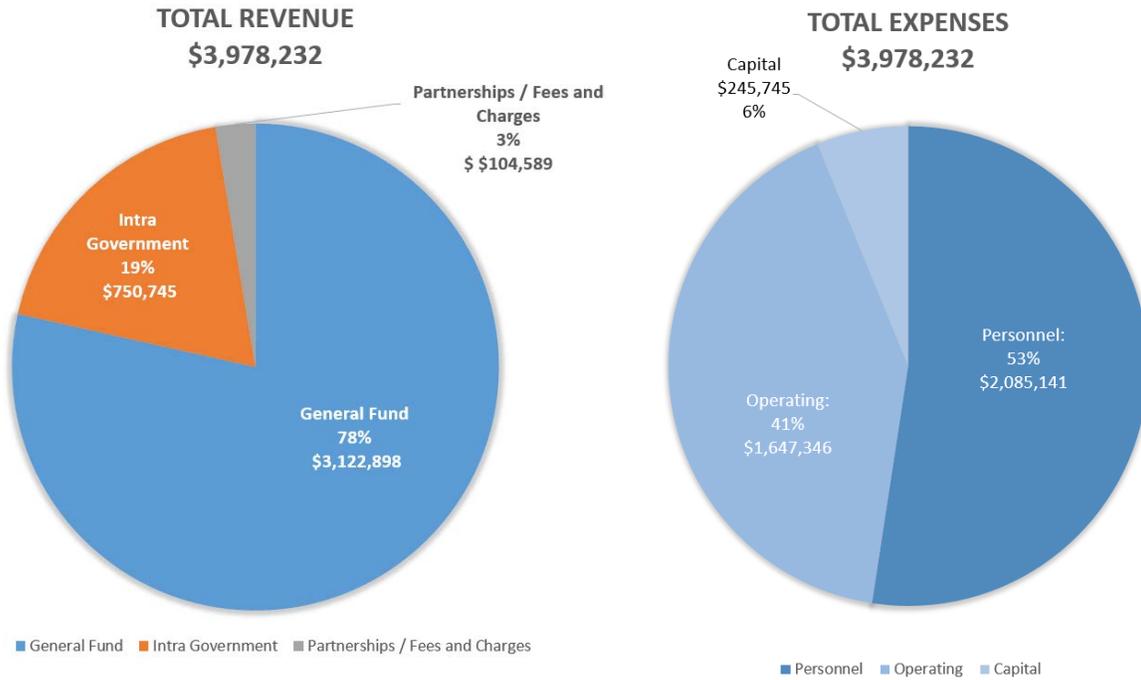
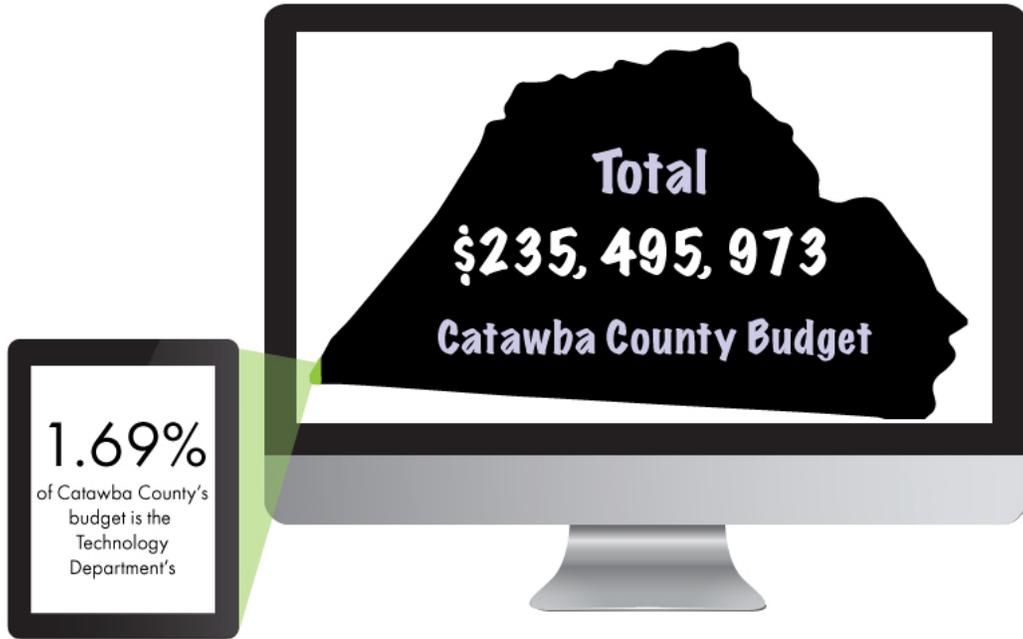
Geospatial Information Services (GIS) provides tools to the user community to enhance and improve the quality of geographically related services including but not limited to planning, building inspections, environmental health, emergency services, economic development, infrastructure, management, facilities' management, and parcel mapping. GIS will promote good government as a multi-jurisdictional project involving the integration of resources from the County and the participating municipalities.



*includes 1.85 FTE's funded through e-911 funds

Budget FY 15/16

The Technology Department encompasses two main areas, the Information Technology Center (ITC) and Geospatial Information Services (GIS). In FY 2015-16 the department's budget was \$3,978,232, an increase of 6.2%. This increase was due to a capital purchase - a SAN (Storage Area Network). Both personnel and operational costs had no overall increase.



Information Technology Center (ITC)

Outcomes

1. To ensure continued reliability of the County's network and move toward best in class access, the department will replace 67 percent of existing core network switches, which will increase network speed/capacity from 100MB to 1GB during Fiscal Year 2015/16.
2. To ensure the County's network remains secure and reliable, Technology will block at least 99 percent of all security risks at the perimeter of the network during Fiscal Year 2015/16.
3. To ensure maximum productivity and citizen access, provide a minimum of 99 percent network availability as measured by Solar Winds and Pingdom during Fiscal Year 2015/16.
4. To further engage the public, realize a 20 percent increase in the County's mobile facing presence (iCatCo), by enhancing current location based information during Fiscal Year 2015/16.
5. Increase knowledge and empower the County's workforce through relevant trainings, by realizing 95 percent (380 of 400) positive customer feedback on training surveys during Fiscal Year 2015/16.
6. To ensure consumers are treated professionally and courteously, ITC will realize an average rating of no less than 93 percent satisfaction, as measured by random customer satisfaction surveys, during Fiscal Year 2015-16.
7. To help ensure maximum staff efficiency, 90 percent (5850 of 6500) of service requests will be complete within 2 business days during Fiscal Year 2015/16.

Geospatial Information Services (GIS)

Outcomes

1. To support and enhance business operations and economic development, the geospatial information residing on the GIS Web sites will be available to stakeholders (approximately 14,500/ month), at least 99 percent of the time during Fiscal Year 2015/16.
2. To support county-wide decision making for economic development, public safety, and other initiatives complete at least 97 percent of map and data requests from all sources within 24 hours of target deadline during Fiscal Year 2015/16
3. To support appropriate allocation of Public Safety resources based on crime statistics, we will reduce the time it takes to report statistics by 50 percent through automating reports during Fiscal Year 2015/16.

Customers

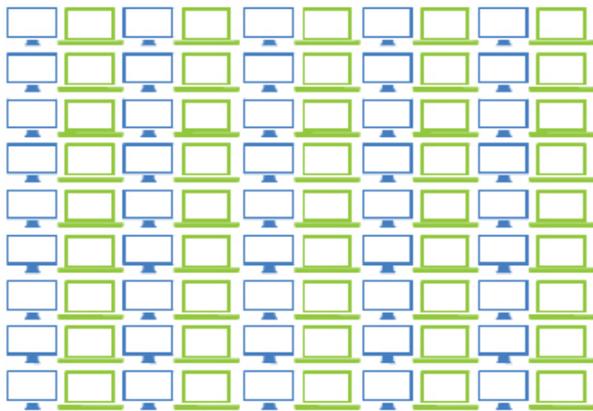
The Technology Department is unique in that we serve a wide variety of customers. In the graphic below, you will see just some of the customers we serve in Catawba County.



Support Services

The Help Desk Team is responsible for receiving, managing, tracking, and ensuring a response to assistance calls during the work day. These 2.5 staff man a centralize phone and email account that enables every County department, as well as several outside agencies and municipalities (those that use our network or that we house their information) to communicate requests from anywhere/anytime.

- Requests for assistance can be made via email, text, or phone
- Supports the enterprise 24/7
- Responds to an average of 850 calls/ month
- Of the 850, almost 700 are resolved within 24 hrs



Each icon = 20 desktops or laptops that we support



~850 support requests a month

Projects / Project Management

The department provides technical project management services for all major projects to help assure that best practices and processes are being implemented. Project managers also provide a single point of contact for communication with vendors, departments, and technology staff.

The following describes some of the major projects that the Technology Department has been involved with, is currently involved with, and will be involved with in the near future.

50+
Ongoing
Projects

Justice Center Expansion

The Justice Center expansion incorporates advanced technology components. As part of the construction project team, the Technology Department has assisted with planning, detail specifications, and scheduling. Moving forward, we will coordinate and manage the technology portions of the new facility, including:

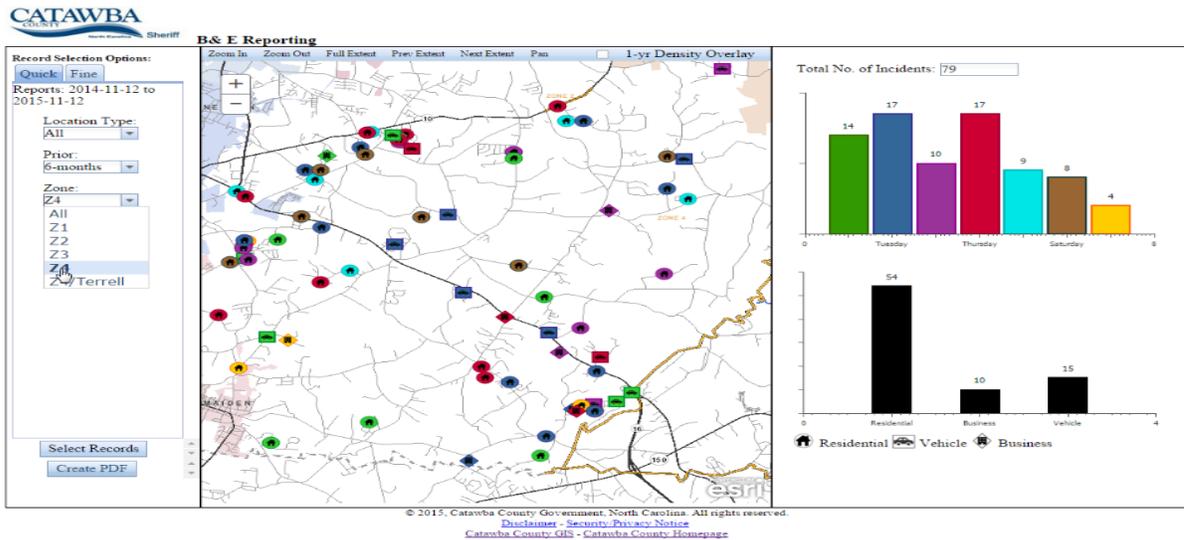
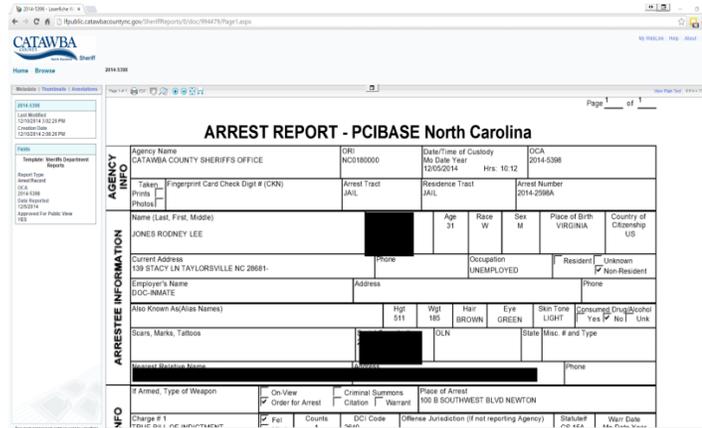
- State of the art e911 Communications Center
- State of the art e911 Data Center
 - Separate but redundant servers, databases, Storage Area Network (SAN), and heating and cooling
- Local and Wide Area Network Connectivity
- Wireless Network Coverage
- VoIP Phone Services
- Surveillance and safety Systems - cameras
- Digital Signage/projection systems
- Desktop and Peripheral Devices (PCs, Scanners, Printers, etc...)
- Mobile Devices - procure and support



Public Safety

Provide 24x7 technical support to all Catawba County public safety agencies: Sheriff, Emergency Services, and Communications Center (e911).

- Online Incident Reports and Arrest Records - Provides self-service, 24x7 access to Incident Reports for individuals, media and insurance companies.
 - Reduce staff processing time
 - Reduce paper usage
 - Reduce travel for citizens/media requesting reports/records
- B&E inter-active web map provides officers the ability to search a specific timeframe in any, or all, of the Sheriff's Zones and display the B&E crimes for that timeframe, and area, on a map. The map can be viewed for a quick reference or it can be printed if necessary.
 - reduces staff time producing maps each week
 - reduces email storage, maps can be produced on the fly instead of producing and emailing pdf files as was the previous method



- Surveillance/DVR System for Jail - Replaced outdated surveillance system for the County jail
- Video Arraignment - Remote communication solution provides a connection between the jail, courthouse, and other remote locations to provide safety and cost efficiency.
 - Arraignment completed without moving the inmate from secure detention
 - Reduced transportation costs
- Public Safety hardware and software upgrades are performed bi-annually to improve functionality and provide more seamless sharing of information with medical/public safety providers

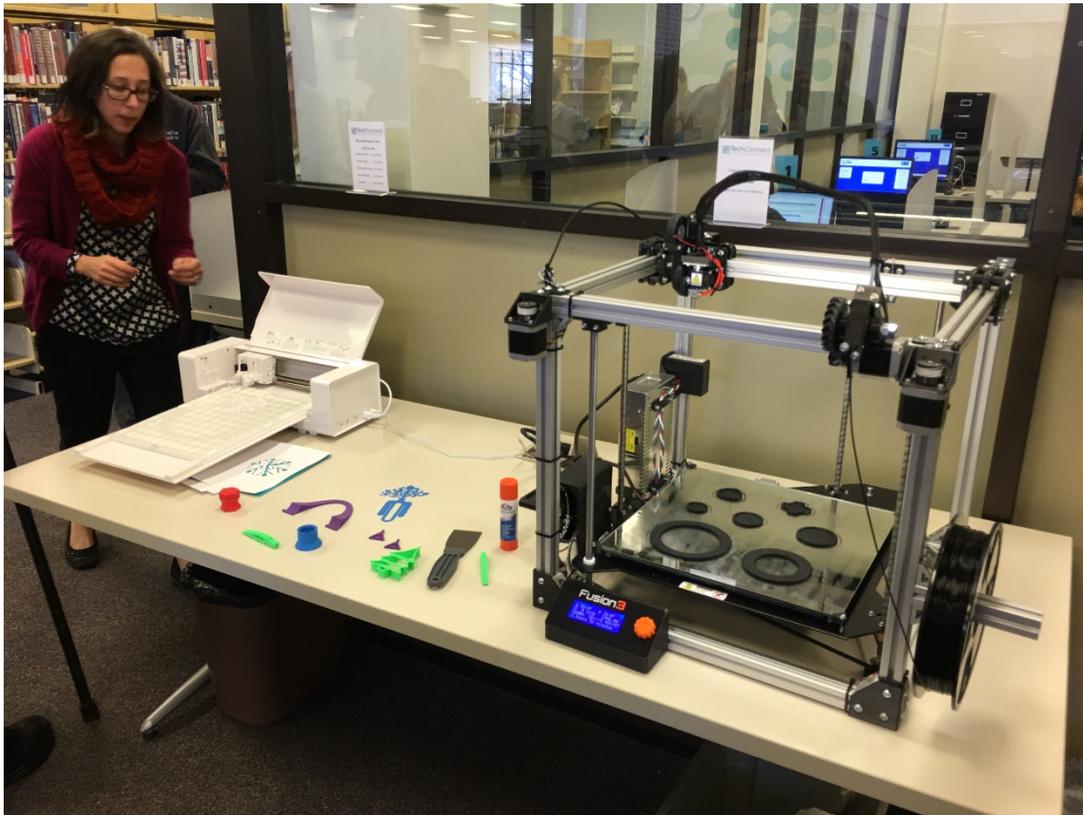
Library Services

The Technology Department provides technical support for the seven branches of the Catawba County Library System. The department continues to collaborate with Library Services to support the Library System's Strategic Plan as it relates to technology enhancements. Support for the strategic plan includes:

- Upgrading network infrastructure to support expanding technologies
- Development of a bring your own device wireless printing solution
- Enhanced internet connectivity
- Upgrading desktop computers and mobile devices
- Infrastructure for the new Sherrills-Ford/Terrell Library: public access devices, network/Internet access, cameras, phone services.



Library Services continues to align its services to the needs of the community by meeting current and anticipated future needs in many areas including technology. At the main library site located in Newton, citizens can utilize technologies such as 3D printing and scanning, Digital Cutting, and advanced engineering and design software just to name a few.



Board of Elections (BOE)

Technology is a main component of successfully managing the election process by providing support to 40 polling locations, and early voting sites.

- Prepare 100 laptops for use by poll workers
- Troubleshoot and correct errors or problems
- Post election results to the County BOE Web Site



Infrastructure



Within the IT Infrastructure department we support the county network, phone, storage, wireless, security cameras and server environment. This consists of over 250 virtual and physical servers, over 125 network devices and over 100 wireless access points. We also manage two Storage Area Networks which provides over 80 TB's of data storage for the county.

Recent Projects:

- Installed three new core communication switches throughout the enterprise, replacing aged equipment and allowing us to grow IT infrastructure, improve overall network performance, and system reliability
- Installed new access switches at Public Health, Social Services, and the Government Center. As above this ensures our network's hardware can meet the ever increasing demands of internet use and the sharing of information, throughout the organization and with our citizenry.
- Working to complete SIP (Session Initiation Protocol) trunking project. This will move the county phone connectivity to a true IP (Internet Protocol) based solution which will allow for more flexibility and growth within the phone system
- Installed two new SANs (Storage Area Networks), that not only increased our storage capabilities and performance, but also reduced costs
- Upgraded redundant wireless link between Public Health and the Justice Center. Creating a true redundant link between the two main campuses and data centers

911 Infrastructure

Catawba County 911 is the primary emergency portal for the county. Information collected in our system supports the county as well as the larger municipalities by passing information to them electronically. To increase our municipal partnerships, as well as create greater efficiency throughout the system, the IT Infrastructure team is currently working on the following projects:



- Adding backup 911 site at Hickory Police Department and setting up two data connections for redundancy
- Extending full 911 connectivity to Newton Police Department
- Adding network connectivity to the Maiden Highway Patrol station to ensure a redundant link for the Viper radio system

Security Focus

As cybercrime becomes more prevalent, multiple layers and methods of security are being deployed to further protect the County's data and infrastructure.



Recent projects include:

- Email archiving “in the cloud” creates a redundant backup copy of our email, efficiently keeping it secure while minimizing cost
- Cyber Liability Training was provided to all managers and department heads – ensuring they understood the issues around cyber security within our environment, and providing them with tips to improve the security of our network and environment
- Piloting laptop encryption which will ensure that if a laptop-is lost or stolen that any confidential data will be secure and not accessible

Application Development

The Application Development Team is comprised of eight staff members who work on a variety of projects, spanning all County departments, as well as some outside agencies. This team develops in-house applications, as well as implements 3rd-party software applications, to assist the workforce, citizens, and other agencies with their everyday tasks and data needs.



- The team has written, supports, and / or implemented over 250 software applications, on 12 different operating systems

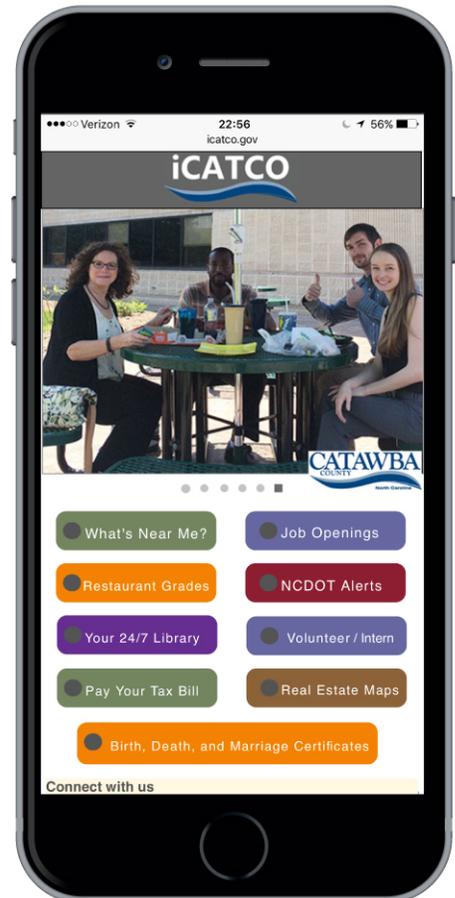
Web Presence

In coordination with the Public Information Officer, the current Catawba County web site is constantly evaluated and upgraded to offer new services and information to the public. The Technology Department works enterprise-wide to review the services that it offers, and how to best present those services and information to the public. Due to the dynamic nature of the website, updates and enhancements are continuous. Recent additions include new datasets for the public to download, and public information announcements in numerous mediums including text, video, photos, and more. iCATCO.gov is our newest addition to keep citizens and visitors informed about Catawba County with strategic, interactive information that is presented in a mobile-friendly platform. In addition, we leverage the following social media tools: Facebook, YouTube, Twitter, and Instagram to enhance communication to internal and external customers.

Web/Social



Each  = 1,000



- Reaches wider audience
- Online Services promote self-service as an option for on demand access of information
- Enhanced transparency

Tax Initiatives

The Tax Department is using technology to further streamline processes. Mortgage companies are able to greatly reduce the number of refunds processed by using a new third-party process to pay property taxes from escrow accounts. The County has partnered with AutoAgent to provide this service at no cost to the County.

Another time savings initiative is a process that automatically transmits property deed records from the Register of Deeds office to the tax systems. This is estimated to save ~800 hours of time per year.



95%
reduction in duplicate payments

Damage Assessment / Management Tool

During the county-wide flooding in July of 2013, the Technology Department assisted with the damage assessment process in several ways that helped save time and provided resources both externally and internally. For the first time, citizens could report property damage online. This allowed damage assessment teams to be readily available to address citizens' needs.

Since then, Emergency Services, Building Services, and the Technology Department have partnered to build an online application for the public to report damage. This data then feeds into EnerGov, the software that Building Services uses to manage building inspections, among other items dealing with planning and zoning. Having this information in EnerGov will allow damage assessment teams to use an app to perform damage assessments in the field. This will save Emergency Services, and Building Services staff time not having to perform double entry of data, or map addresses to show damage assessment teams routes to affected areas. Using this new technology will also allow for teams to have real-time data of affected properties, from data entered by the public, as well as from damage assessment teams.



- Created an online form so that citizens could submit damage claims online
- Use of an existing software systems to manage damage assessments
- Technology Staff provided support in the Emergency Operations Center, assisting with pushing information to the public via social media

PeopleSoft Enterprise Initiative

The County has made significant investments in PeopleSoft technology. Financial and Human Resource systems include the management, tracking, and reporting of county finances and resources.

Recent projects include:

- Credit Card Electronic Agreement – allows for users to read and sign online; allows for immediate approvals from supervisors; allows the Finance department to electronically track compliance that also results in savings of printer usage and paper cost.
- Online access of W2 Information – improves process between payroll & employees. Employees can print whenever and wherever without contacting the payroll department resulting in a time savings for all employees.
- EMS Training Evaluations – Online EMS evaluation process – this provided process improvement between trainers, trainees, and the training officer. Saves paper, time, allowed for paperless approval workflow, and easy access for EMS employees to access evaluations on demand.
- Electronic tracking of Position Descriptions - will save over 10,000 printed pages per year and improved efficiency in the process
- Electronic Employee Evaluation System
 - Will save ~20,000 printed pages per year
 - Enables in-depth analysis of trends and statistics
 - Improves management analysis tools
- Worker's Comp Injury System - allows online reporting of accidents and injuries

ORACLE®

PEOPLESOFT

30,000 +

Sheets of paper
saved each year

EnerGov Projects

EnerGov is a software system used for permits, zoning, and planning. Catawba County is leading the way in collaborating with municipalities, and the WPCOG to implement the use of EnerGov. Businesses and contractors have a more streamlined process for submitting and viewing cases, allowing them to provide better service to their customers.

The next phase to EnerGov will be implementing electronic plan review (eReview). eReview will allow contractors to submit their building plans, electronically to Catawba County Building Services. Once building plans for a case are entered into EnerGov, building inspections, fire inspections, and other inspections can be reviewed electronically, rather than on very large, multiple sheets of paper. eReview is scheduled to begin implementation in early 2016.



- Enhance collaboration with municipalities and building community by electronically sharing information
- Improves customer service through collaborative software
- eReview will improve the way contractors submit building plans, and how inspectors review those building plans, saving time, storage space, and money

Promoting Transparency

Open government is a top priority for Catawba County Government. Our desire is to make public data easier to access, and in the process make the data more useful for everyone. This open data initiative allows Catawba County Government to partner with the public and create solutions for our citizens.

Number of times the Registered Voters in Catawba County dataset has been downloaded since October 2011
<http://bit.ly/ozQTMX>



- Making public data easily available online is not only convenient for the public, but it has saved County employees numerous hours of work that they would have to spend filling requests.
- In a new initiative for Catawba County to be more fiscally transparent, the Technology Department is partnering with the Finance and Budget Departments to build a new fiscal transparency website. This website will be available to the public where anyone will be able to access fiscal information about Catawba County.

Geospatial Information Services (GIS)

Open Source Initiative

In an effort to reduce current maintenance cost and avoid future costs, GIS chose to develop the current Real Estate website (the County's most popular website) using Open Source documentation. In addition to the savings, this choice allowed more flexibility and functionality in the application.

After successful deployment of the Real Estate site, customized applications were also developed to support services for Permitting, Emergency Services, Tax Appraisal, Environmental Health, and Utilities & Engineering. These applications can be used anywhere. Previously staff had to be at their licensed desktop to take advantage of the functionality of GIS.



- Cost savings 13% (\$6,000) in FY 14/15, with an additional 32%(\$15,000) in FY 15/16
- Reduction of future maintenance costs
- Applications available from any location on multiple devices with internet connectivity
- Leverage a collaborative, growing community of developers

Oblique Photography

Oblique photography for the County was updated in early 2014. Almost 75% of the County is available at a higher resolution which provides more detail for Catawba County and municipal agencies. This project was funded by the Geospatial Information Services (GIS) Consortium –Catawba County, City of Hickory, City of Newton, City of Conover, Town of Long View, Town of Maiden, and the City of Claremont.



Public Safety

- View buildings from several angles
- Search, raid, and seizure planning
- Identifying staging areas
- Performing accident reconstruction
- Executing crowd control
- Coordinating search / rescue efforts

e911 Calls

- Provide remote guidance to first response crews
- Instantly view multiple images of a caller location
- View from multiple angles for entry and escape points

Economic Development

- Provide photos of a site to prospective clients from several views
- Provide a more efficient process for business development/recruitment

Tax

- Reduces potential grievances through visual data to support evaluations and notices
- Detect properties not previously accounted for on the tax records
- Reduces field visits by viewing at the office for additions, new construction, and permits

Planning

- Evaluate sites for new developments and proximity to neighborhood, schools, and other structures
- Ability to measure angles, area, distance, height, and width of structures and properties