

Information Technology

General Information

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Mission

To enhance the delivery of County governmental services through the effective use of technology.

Summary

Information Technology supports voice and data technology within Randolph County government. Services provided include help desk support, in-house programming, Web development, Geographic Information Systems (GIS), vendor negotiations, technology purchases, network management, telephone service/support, and project management. The department also serves as the Electronic Public Records Office as required by the State of North Carolina. There are 17 allocated positions for this department.

Overview

Randolph County's Information Technology Department was created in 1977, with the hiring of Tom O'Neil, its sole employee. The County began the process of in-house automation by using the services of Acme-McCrary Corporation, a local manufacturing company, for computer and technology support. We used their computers and keypunch equipment to track Tax Collections and Voter Registration. In 1978, Annette Crotts was hired as a programmer through the CETA program. Annette became Director in 1981 when Tom O'Neil left the County's employ. Michael Rowland was selected as the current Director after Annette's retirement on 1 July 2009. He had previously worked in Randolph County Information Technology for 18 years, with his last position being the County Network Administrator.

In 1980 the County purchased its first computer for \$80,000. It was a McDonnell Douglas machine that ran the PICK operating system. The County had nowhere to put this computer; in the end, it was placed in the basement of the old Courthouse in an old vault room. The County purchased software applications for Tax Collections, Elections, Accounts Payable, General Ledger, and Payroll/ Personnel from Infocel, a software distributor from Raleigh, NC. We worked directly with this vendor to write a Tax Billing application. This venture created a spark of excitement among County employees. We realized we did not have to settle for "canned" packages but could have the software look and function exactly as we wanted and needed. We began creating customized processes to complement the purchased applications. We added a Garnishment Process, Ambulance Billing/Collections, and other enhancements. We

later implemented a Centralized Permitting Application that was highly integrated with our Tax records.

In 1981 a third position was added to do daily data backups at night. A year later a fourth position and a part-time backup employee were added. In the mid-eighties Information Technology moved to the second floor of the Courthouse into offices next to Courtroom B. This more than doubled their space.

In the late 1980's Information Technology helped the Tax Department set up a GIS mapping database. The Tax employee handling GIS later moved to Information Technology, making their fifth employee.

In 1989 Information Technology moved to the Randolph County Office Building, where, for the first time, they had an environmentally controlled computer room. In 1990 the County purchased an IBM RISC 6000 computer, replacing the McDonnell Douglas, to run the PICK system, another IBM RISC 6000 to handle GIS applications, and an AS 400 for Tax Appraisal and Revaluation.

Also in 1989 Information Technology began working with Planning and Zoning on a new concept—centralized permitting. The County Commissioners wanted to make the development permit process more convenient and accessible to the public. The Information Technology staff wrote an integrated Central Permitting database system in-house and fully implemented it in 1991. That program won a N.C. Association of County Commissioners Outstanding County Program Award in 1992.

In 1991 the County began its countywide street addressing project in conjunction with the countywide road-naming project that was underway. Both these projects were prerequisites for Enhanced 911, which went live in 1993. Information Technology supervised several temporary employees hired to gather and verify addressing data for the E911 project. One permanent employee was hired to maintain the addressing database and the 911 database associated with it. This position was originally allocated to Planning and Zoning but was later moved to the Information Technology Department. In 1994, Information Technology staff (Linda Smith, Carroll Wolfe, and Lisa Beal) produced a public safety street addressing map book that won a Ralph W. Ketner Productivity Award, sponsored by the N.C. Association of County Commissioners. When Central Permitting moved to Academy Street, in 2007, the Addressing Coordinator was reassigned to Planning and Zoning to work directly with permitting. An additional GIS position was created to handle database management and GIS data entry for public safety issues.

In 1993 Information Technology brought the Spillman system on-line for the area of public safety, better known as the LIFE (Linked Information for Emergencies) system. This software enabled us to automate jail, sheriff, dispatch, ambulance, and fire records. It also gave police, fire, and rescue agencies around the County access to emergency information and the ability to automate their own records. One position was added to Information Technology to support this system. The LIFE system was an innovative initiative that won a N.C. Association of County Commissioners Outstanding County Program Award in 1996.

This department took on a substantial additional duty in 1995 when they became responsible for the County's telephone system. At that time the County was on a Centrex system. Computer staff researched alternatives and took bids on a PBX system in 2002, saving the County approximately \$15,000 a month on our telephone bill. As an added bonus, we were able to install fiber cable between several County buildings, thereby increasing our network connectivity for data and voice. In 2006, Information Technology began an upgrade to the Mitel's SX-2000 controllers to the 3300 ICP's with Voice over Internet Protocol (VoIP). The DOS-based voice mail server was replaced in December 2007. Since both controllers are still in use, we can convert departments to VoIP as they move or need phone overhauls. This gradual approach reduces the financial impact to the conversions.

Information Technology implemented the County's first web page for the public in 1997. The focus of information provided was our GIS system, allowing parcel owner lookups and maps on-line. One position was added to support the web site. Information on the web site continues to expand into new areas and features weekly. An intranet site, *RANDNET*, was added in 2001 for County employees to access personnel or other administrative information. To-date the County has received three "Digital Counties Survey" awards, 2003, 2006, and 2007.

In 1998, in preparation for year 2000 (Y2K), the County Commissioners created the Information Services Policy Committee to guide technology and to begin unifying processes in the different departments to prepare for Y2K. Information Technology coordinated this two-year project to ensure compliance with Y2K. We found only minor issues that were easily resolved prior to the year 2000 rollover.

In 2003 Information Technology employee, Tom Wassack, won a Ralph W. Ketner Productivity Award for creating a computer-based law enforcement records inquiry and mug shot retrieval application. This system was initiated because of the need to provide law enforcement officers the ability to search for and display name and mug shot information while out in the field. The Mobile Mug Shot System allows the officers to perform queries through downloaded information on laptops in their vehicles. This system is not used just by the Sheriff's officers but is shared with all municipal law enforcement agencies in the County at no cost to them. The database is updated monthly, burned onto CDs, and distributed to all law enforcement agencies by the Information Technology staff.

The County began a technology needs assessment and strategic planning process in 2002 with assistance from the Center for Public Technology, an operating unit of the School of Government at UNC-Chapel Hill. The Information Technology Director initiated this project and has managed the project from its inception. The Technology Policy Team (all department heads) replaced the Information Services Policy Team, and they developed and implemented the first Information Technology Work Plan for 2004. This annual process continues today. It is the Technology Policy Team's goal to present a calendar year work plan each January to the County Commissioners and to obtain funding prior to working on projects. The funding concept is to recognize savings or investments from the previous budget year and to allocate a portion of this fund balance to technology. In 2005, this "Thinking Outside the Box for Strategic Technology Funding" concept won a Outstanding County Program Award.

Document imaging and on-line forms with routing capabilities became a reality in Randolph County during 2004. By using money allocated in the Strategic Technology Work Plan(s), this project continued until 2009. In January 2008, the Commissioners approved an additional position in Information Technology to assist with the management of software, hardware, and end-user support for document management. The Food Stamps unit within Social Services received a NCACDSS “Best Practices” award for improving efficiency by utilizing the County’s document management solution in October 2006.

In 2007, Information Technology took on the task of replacing the aging software used by the Tax department for billing and collections. In July 2009, Information Technology working with the Tax department and the vendor, Intelligent Information Systems, brought the North Carolina Property Tax System (NCPTS) on-line. Then in February 2011, the Tax Land Records/CAMA portion of the system was implemented.

In 2007, Information Technology renovated and expanded its office space. The department now has adequate work space for its staff and future expansion. It is conveniently located next to the environmentally controlled computer room on the first floor of the Randolph County Office Building, 725 McDowell Rd, Asheboro, NC 27205.

In 2012, Information Technology worked with Planning and Zoning, Building Inspections and the Health Department to convert the legacy Central Permitting application to the new Logos Community Development software from New World Systems. This was the last of the legacy software applications identified for replacement in the Strategic Technology Work Plan.

Service Area: Application Development and Support

Mission

To provide software application support for end-users through analysis, research, evaluation, development, and integration of applications.

Summary

This service area provides software support for end-user applications. Programmer/Analysts provide in-house programming services as well as negotiate with vendors for off-the-shelf packages to ensure the end-user's needs are addressed. At present most applications are commercial software purchased from vendors.

Database integrity, 911 database management, software upgrades, software integration and end-user training are a large part of this service area. Employees also act as liaisons between vendors and end-users on problem solving. This unit touches all software products used by the County staff. There are 7.6 allocated positions for this service area.

Operations

The employees in this service area provide support for the following: Internet, Intranet, SQL (Sequel Query Language) databases, Geographic Information Systems, Public Safety applications, Tax applications, Finance, Payroll/Personnel, Document Imaging, on-line eforms, Land Records, and mobile data terminal applications. Monitoring of server performance, storage capacity, access usage, and general hardware requirements for applications are also provided. This service area also acts as the primary contact for meeting the Electronic Public Records Index as specified in General Statutes and for providing customized data request information.

Services

- Procure or create and maintain applications; create and maintain interfaces to related applications (participate in the purchasing process for software).
- Respond to problems reported by department representative to determine the specific technical cause of the problem.
- Serve as vendor liaison. (The end users don't call the vendors directly; they go through Information Technology.)
- Create and maintain corrections and other changes to applications as approved and funded on a case-by-case basis of existing or in-house developed code.
- Maintain Information Technology-controlled tables as dictated by legislative, vendor, or local policy changes, and assist applications users with maintenance of similar user-controlled tables.
 - Set up and maintain database and related objects per the user's requirements.
 - Assist with importing or converting data to ensure capability in existing or new databases.
 - Set up and administer application level security authorizations; ensure data is accessible to those who need access and prohibit unauthorized access.
 - Ensure the database is accessible during the predefined hours of operation. (Staff will try to take equipment down after hours so that the end user is not affected by the downtime.)
 - Design and maintain operational procedures per the customer's requirements; monitor database backups, error logs, disk allocation and data integrity, taking corrective actions as

needed; perform database reorganizations and recoveries as needed; respond to database production problems according to their severity.

- Provide assistance as requested to County Infrastructure Services staff.
- Develop, revise, and continually review hardware and software standards, methodologies, etc., providing technical leadership and direction; manage hardware to support applications development and deployment.
- Execute disaster recovery plans for enterprise data according to the Emergency Operations Plan.
- Assist customers in finding technology solutions and integrating them into business processes.
- Provide training and educational services to allow for the development of internal technicians.
- Provide web usage reporting and statistics.
- Assist in strategic planning and technology standards development for County services.
- Design, maintain and manage the County's Internet and Intranet infrastructure.
- Proactively monitor applications for performance and utilization trends, escalating problems that need other support groups or outside resources.
- Process information requests from citizens or outside agencies as requested.

Service Scheduling and Notification

Notification of major changes should be provided to Application Development and Support at least three days in advance. Emergency system changes or changes not affecting all subsystems will be implemented on an as-needed basis by coordinating with affected users of the subsystem. Downtime will be scheduled outside the 8 am – 5 pm, Monday – Friday workweek whenever possible.

Application Development and Support staff are responsible for notifying designated individuals or the departmental technical liaison in each department that will be affected by changes, downtime, security notifications, etc. The departmental technical liaisons will be responsible for transmitting notifications within their department or area. Emergency maintenance will be limited, but, if necessary, will be coordinated with these individuals.

Service Area: Infrastructure Services

Mission

To provide an efficient, secure, and reliable infrastructure that supports data and voice requirements for County service delivery initiatives. To offer timely and efficient technical support to end-users through our technical support call center.

Summary

The County's data and voice networks continue to grow with its services and applications. There is an ever increasing need to provide and maintain IT infrastructure to support the growth of these applications.

Infrastructure Services provides desktop, data, and voice infrastructure to all County buildings. This includes servers, SAN, and remote VPN connections used by public safety agencies across the County.

Technical support is provided to end-users for the County's data and voices systems. The Infrastructure Services staff also provides PC training, equipment purchases, technology research, and implementation. This service area is very beneficial in giving County employees a single point of contact for any purchases, training, and technical questions.

Network-dependent applications, data sharing between departments, the Internet, telephony, and email continue to make our network stability and security a high priority. The integrity, accountability, and availability of the County's network, data and servers are maintained using a three-layer anti-virus system, along with constant monitoring and upgrading to stay ahead of the hackers and business threats.

Operations

Services Provided

The employees in this service area provide the following services:

- Maintain documentation of purchased software and do random audits for correct licensure for all software used by County employees
- Install computers and offer training classes to employees
- Assist departments with Technology Purchases, including:
 - Desktop PC Hardware/Software
 - Printers/Copiers
 - Building Security Devices (electronic locks, cameras)
 - Cameras
 - Cell Phones
 - Etc.
- Maintain desktop security (virus protection, ensure that each employee's privileges are adequate and that PC's are protected from unauthorized personnel)
- Maintain phone PBX systems throughout the County
- Plan and terminate new structured cabling for data/voice networks

- Troubleshoot PC and phone problems
- Provide strategic planning and standards development/enforcement for network infrastructure and enterprise services. Provide consulting including review of network designs, hardware configurations and vendor specifications, and capacity planning and technology refresh recommendations.
- Design, maintain and manage the enterprise network, including preventative maintenance and technology updates as necessary, and the installation, configuration and maintenance of enterprise service applications.
- Data backups and recovery services. Regular backups include daily backups with a retention cycle of 4 weeks, plus fiscal and calendar year-end backups kept for 3 years.
- Proactively monitor the network for performance, utilization trends, and anomalies. Document and escalate problem priority internally or with outside resources as needed.
- Configure, maintain, and manage the enterprise E-Mail infrastructure
- Install and configure relational database management system (RDMS) on servers as needed. Keep database management system current and apply service patches, as needed, including database version migrations as necessary.
- Administer all organization-wide security and monitoring software products.
- Administer system-level user IDs and passwords.
- Research, evaluate and test proposed products, product versions, and system solutions.
- Coordinate and perform appropriate Operating System installation, upgrades, and maintenance.
- Perform preventative hardware maintenance for test and production environments.
- Manage and control changes for the enterprise servers and networking equipment.
- Plan and test disaster recovery for the servers as indicated in the Emergency Operations Plan.
- Provide strategic planning and standards development/enforcement for the enterprise network, servers, and security systems.
- Provide, maintain, and manage Internet services to include E-Mail, WEB access, or NC State connectivity.
- Promote security policy and awareness by developing, maintaining and interpreting enterprise security policies and standards, and providing security review of new projects and applications.
- Provide network security via configuration and management of firewall and other security devices.
- Configure, maintain, and manage remote access (VPN)
- Protect electronic resources through anti-virus email scanning, desktop scanning, and web content filtering.
- Provide assistance in data recovery strategies as part of the countywide business continuity plan for data not stored on the enterprise network.
- Provide security incident response and analysis in the event of security breaches, including forensic analysis of computer resources in cases of suspected policy infractions.
- Provide Network file storage for critical County data.

Service Scheduling and Notification

Notification of major changes will be provided by the Network Administrator at least 3 days in advance. Emergency system changes or changes not affecting all subsystems will be implemented on an as-needed basis by coordinating with the affected users of the subsystem. Downtime will be scheduled outside of the normal workday (8 a.m. – 5 p.m., Monday through Friday) whenever possible.

Infrastructure Services Team members will be responsible for notifying designated individuals, or Departmental Technical Liaisons, in each department that will be affected by changes, downtime, security notifications, etc. These Departmental Technical Liaisons will be responsible for notifying and transmitting information within their department or area. Emergency maintenance will be limited but, if necessary, will be coordinated with these individuals.

Service Area: Technology Planning and Management

Mission

To provide effective management of the County's technical resources through resource tracking, project management, clerical assistance, and managerial support.

Summary

Personnel supervision, project management, technology procurement, telephone service management, departmental finance and resource support are provided within this area. Other duties include technology planning and vendor negotiations. There are 3 full-time allocated positions in this service area, with additional employees spending only a small percentage of a workday performing these duties.

Operations

Technology Purchasing

The Information Technology staff is capable of handling technology purchasing for all departments. County departments submit an electronic Technology Purchase Request which we use to determine exactly what is needed. Information Technology then researches vendors and products, gets quotes, and makes recommendations. We also work with vendors on pricing and send purchase requisitions to the Purchasing Office. When the product arrives, a Help Desk employee delivers and installs it, unless prior agreements are in place with the installing vendor or the product is too large to move in an employee's vehicle. Information Technology tracks all orders and payments and makes sure that departments get exactly what they ordered and that they are not billed for something they did not receive. Information Technology documents and tracks all licensing information associated with purchases. It is estimated that Information Technology assists with 378 purchases per quarter. These include PC's, software/hardware, printers, scanners, digital cameras, wiring, networking, and other technology related items.

Some departments have their own information technology employee; however, those employees work closely with Information Technology personnel to make sure that what is being done out in the departments is not affecting another department's data or accessibility to critical systems.

Telephone System Billing

This service area includes the handling of all aspects of the County's telephone system, including desk phones, cell phones, data circuits, and alarm lines, as well as billing and directory listings for all departments. At present, directory listings are only available via the County's Intranet site.

Each department has a telephone budget allocation. All telephone-related usage beyond basic service, such as adds, moves, changes, and long-distance, are billed back to each department. A monthly spreadsheet of department phone expenses is sent to Finance for journal entries to charge these expenses back to the individual departments.

Employees in this service area deal with procurement, repair and replacement of cell phones and track cell phone agreements. Cell phones are tracked as employees leave County employment and the phones are either reassigned to other employees or turned back in to be

placed in the County's spare phone pool. Requests are made through our cell phone providers in order that these changes are reflected on the County's monthly departmental billing and so that voice mail pass codes can be reset for the new user. County departments are provided with a monthly detail of their cell phone and long distance usage; whereby they can audit individual usage. This also provides a way for employees to reimburse the County for any personal calls that may have been made. Reimbursement for personal calls is based on the County's Cell Phone Policy reimbursement minute rate. Information Technology maintains control sheets that track requests for programming changes. All vendor contact is done within Information Technology.

Building Access Control

Building access cards are produced and maintained in this service area. Door locks are programmed for who has access and for what time periods. Presently, Information Technology supports Randolph County Office Building, Emergency Services, Central Permitting, Juvenile Services Building, Department of Social Services and the Archdale Community Services Building and assists in the maintenance of Health Department, Jail and Courthouse access systems.

Project Management

For major technology projects, such as the Tax Mass Appraisal Project, Information Technology writes or assists in writing requests for proposals, coordinates meetings, works with vendors, and coordinates time schedules and budgets. If purchases are in the formal bid range, the Purchasing Office handles the bid process.

Technology Records

This service area handles maintenance contracts on hardware and relicensing of software and manages service contracts (cell phones, phone system, etc.). Information Technology tracks Internet agreements for all users. User action forms are used to show each employee's and outside public safety agencies' level of access and any changes made to access levels. An additional record that is maintained by Information Technology is the Electronic Public Records Index as required by general statutes.

Staff Administration & Management

Services within this category include general managerial duties and support services for the Information Technology staff. Employee appraisals, payroll, budgeting, policies/procedures establishment, and general operations within the Information Technology department are a selected list of support services provided under this area.