



2016
Information Technology
Annual Report

Prepared by the Information Technology Department



Town of Mooresville
Information Technology Department
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February 13, 2017

I am happy to report the Information Technology Department continued to excel in 2016. The measure of our work goes beyond the 3,229 service requests handled, or the over 30 projects delivered. It is also measured by the unyielding commitment to provide outstanding service to Town Staff and Citizens by continuing to implement new technologies that improve the quality of life of our Citizens. The Department averaged an 87% satisfaction rating based on our internal surveys, and we will continue to strive to increase that number moving forward.

We take pride in delivering innovative technologies and partnering with all Departments to deliver the quality infrastructure and services they need and deserve. The Town experienced considerable change during the past year including a significant network upgrade at all Town facilities, and we are happy to share that we offer one of the fastest public wireless internet speeds in the country. Furthermore, by upgrading all 500+ devices to the Office 365 suite, this will remove silos allowing collaboration across Departments and outside resources.

By finalizing our Department Strategic Plan, highlighted in this report, you will find potential projects we have identified through FY 2021. Thank you for your support and feedback to help us better serve you.

Sincerely,

Jeff Brotherton

Information Technology Director

Mission and Vision

Mission

The Information Technology Department provides timely support to internal customers and citizens through highly available secure infrastructure, equipment, and services by fostering relationships to promote innovation and enhance the quality of life for both the Town of Mooresville staff and the citizens they serve

Vision

To be a proud workforce that empowers each employee by encouraging creativity, inspiring integrity, and promoting excellence.

Core Values

Pride

Integrity

Commitment

Information Technology Strategic Goals

Innovation

Security

Customer Support

Data Management

Information Technology Strategic Plan (2018-2021)

Innovation

Strategy: Departmental Pairing

IT Department Staff will partner with Town Departments to assist in identifying gaps in technical needs and make recommendations to resolve identified gaps that meet the needs of the Department. This will be an ongoing effort with Departments.

Tactics	Responsible Person	Resources Needed	Due Date
1. Meet with all Department Heads	All IT Staff	Personnel	December 1, 2017
2. Review Gaps	All IT Staff	Personnel	March 1, 2018
3. Develop Plan for Implementation	IT Director, Network Administrator, System Administrator	Personnel	August 1, 2018

Strategy: Virtual Desktop Expansion

The use of Virtual Desktop Infrastructure (VDI) technology allows IT staff to implement, update, and expand access to computers available to the public through centralized servers that provide desktop services to end user terminals supplanting the need for individual desktop computers.

Tactics	Responsible Person	Resources Needed	Due Date
1. Upgrade Existing Server Software and Desktops to Latest Version	Network Administrator	Vendor, VDI Services	August 1, 2018
2. Create Access Control List to Separate Public and Private VDI	Network Administrator	Personnel, Vendor	November 1, 2018
3. Identify Pilot Group at Library and Build Desktop Image to Pilot	Network Administrator, System Administrator, IT Staff, Library Director	Personnel	January 1, 2019
4. Rollout Pilot Group and Monitor for Issues	All IT Staff	Personnel	February 1, 2019
5. Evaluate Results of Pilot and Make Decision to Expand VDI throughout Library	All IT Staff	Helpdesk Tickets	April 1, 2019

Information Technology Strategic Plan (2018-2021)

Innovation

Strategy: IT Assessment

The IT Department Staff will identify a qualified vendor to evaluate the end user devices, network, and server infrastructure to ensure that the Town is meeting industry best practices as it relates to equipment age, security, and policies.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Vendor to Complete Assessment	Network Administrator, IT Director	Personnel, NCLGISA List Serv	Complete
2. Determine Scope of Assessment and Negotiate Pricing	Network Administrator, IT Director	Personnel, Vendor	March 1, 2017
3. Initiate Contract and Purchase Order	Network Administrator	Personnel, Vendor, Purchasing	March 1, 2017
4. Perform Assessment	Vendor, Network Administrator	Personnel	March 15, 2017
5. Review Results of Assessment	Vendor, Network Administrator, IT Director, Deputy Town Manager	Personnel	April 15, 2017
6. Implement Assessment Recommendations	All IT Staff	Personnel, Funding	TBD

Strategy: Expand Drone Usage

The use of Unmanned Aerial Systems in support of Government and Public Safety operations has created unique opportunities to aid Town Departments in their existing operations as well as possibly expand into new areas previously unavailable due to technical or cost limitations.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Possible Use Cases	IT Director	Personnel	On-Going
2. Develop Standard Operating Procedures	IT Director, Risk & Safety Manager	Personnel	May 1, 2017
3. Identify Appropriate Equipment	IT Director, Department Heads of Identified Departments	Personnel, Funding	August 1, 2017
4. Obtain Appropriate Certifications and Training	IT Director, Identified Pilots	Personnel, Funding	August 1, 2017

Information Technology Strategic Plan (2018-2021)

Innovation

Strategy: Public Wireless

The Town currently offers free wireless internet at all Town facilities and parks. This project would expand free public wireless to the Main Street business district as well as the Town Hall Green.

Tactics	Responsible Person	Resources Needed	Due Date
1. Complete Wireless Survey of Main Street	Network Administrator, Vendor, Downtown Commission	Vendor, IT Department Staff	August 1, 2017
2. Coordinate with Business Owners on AP Locations	IT Director, Network Administrator, Downtown Commission	Downtown Commission, IT Department Staff	September 1, 2017
3. Installation of Wireless Access Points	Network Administrator, Vendor	IT Department Staff, Vendor	October 15, 2017
4. Testing and Project Completion	Network Administrator, Vendor	IT Department Staff, Vendor	November 1, 2017

Strategy: Highly Available One Platform

The Office 365 Platform of Applications and Services offers Town Staff a single data storage and management solution that allows staff to securely access data from any location without needing additional software or special hardware. Office 365 supports traditional desktops and laptops as well as mobile devices.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Team Members	All IT Staff	Representatives from Departments/Management	October 1, 2016
2. Identify Needs	All IT Staff	Representatives from Departments/Management	February 1, 2017
3. Move All Data from On Premises Servers to Office 365.	IT Director, Network Administrator, System Administrator	Personnel	April 30, 2017
4. Verify Disaster Recovery Process	System Administrator	Personnel	February 15, 2017
5. Conduct Training for Departments	System Administrator	Personnel	May 1, 2017
6. Remove Access to Departmental On Premise Storage	System Administrator	Personnel	May 30, 2017

Information Technology Strategic Plan (2018-2021)

Innovation

Strategy: Intersection Cameras

The Police Department has requested the assistance of the IT Department in implementing cameras at key intersections throughout Town.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Key Intersections for Cameras	Police Department	Personnel	March 1, 2017
2. Explore Third Party Vendors with Experience in Intersection Cameras	IT Staff, Police Department	Personnel, Vendor	March 1, 2017
3. Select Vendor and Negotiate Cost	IT Staff, Police Department	Personnel	July 1, 2017
4. Complete Contract and Purchase Order	IT Director, Network Administrator	Personnel, Funding	August 1, 2017
5. Installation and Testing Begins	IT Technician, Network Administrator, System Administrator, Vendor	Personnel	October 1, 2017
6. Project Closure	IT Staff, Police Department	Personnel	March 1, 2018

Information Technology Strategic Plan (2018-2021)

Security Focus

Strategy: CJIS and PCI Compliance

The FBI and Payment Card Industry require the Town to comply with certain requirements in order to access Criminal Justice Information or accept Credit Card Payments. This project will review Town systems and policies to ensure the Town is in compliance.

Tactics	Responsible Person	Resources Needed	Due Date
1. Review Policy Documents	Network Administrator, System Administrator, IT Staff	Documents from FBI and PCI websites	June 1, 2017
2. Determine Compliance Requirements	Network Administrator, System Administrator, IT Staff	Personnel, Vendor	June 1, 2017
3. Set Priority Levels for Implementation	Network Administrator, System Administrator, IT Staff	Personnel	September 1, 2017
4. Implement Compliance Requirements	All IT Staff	Personnel	November 1, 2017

Strategy: External Audit

The IT Department will contract a third party security auditor to examine the various IT systems and networks to validate that best practices are being adhered to and identify any areas for improvement related to security.

Tactics	Responsible Person	Resources Needed	Due Date
1. Review/Resolve Out of Date Items in Active Directory	System Administrator	Personnel	February 1, 2018
2. Review/Resolve Out of Date Items on the Firewall	Network Administrator	Personnel	February 1, 2018
3. Develop Baselines for Network Infrastructure	Network Administrator, System Administrator	Industry Best Practice Documentation	November 1, 2017
4. Identify an External Auditor	Network Administrator	List of Qualified Auditors	November 1, 2017
5. Perform Audit	Vendor, Network Administrator, System Administrator	Personnel	August 1, 2018
6. Review Results of Audit	Vendor, Network Administrator, System Administrator, IT Director, Deputy Town Manager	Personnel	September 1, 2018
7. Implement Audit Recommendations	Network Administrator, System Administrator	Personnel	TBD

Information Technology Strategic Plan (2018-2021)

Security Focus

Strategy: WAN Redundancy

The Town of Mooresville's fiber optic Wide Area Network (WAN) provides connectivity to all Town Buildings and Parks. The WAN Redundancy Project will identify key locations that would be critical during a disaster or would require a backup communications link in the event of a cut in the fiber optic cable. The project will also provide a secondary connection to the location via an alternative method and service provider.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Key Locations for Redundant Connectivity	Network Administrator, IT Director, Fire Chief, Police Chief	Personnel, Emergency Operations Plan	October 1, 2018
2. Research Best Connectivity Options for Redundancy	Network Administrator, Vendor	Personnel, Vendor	October 1, 2018
3. Order Equipment	Network Administrator	Personnel	July 1, 2019
4. Configure Equipment and Test Redundancy	Network Administrator	Personnel	November 1, 2019

Strategy: Best Practice Review with Other Municipalities

The constant change in the IT industry specifically the government sector necessitates the need to partner with similar organizations to identify best practices without "reinventing the wheel". IT staff will seek to partner with organizations of similar size and service offering to develop best practices and implement necessary findings in the Town.

Tactics	Responsible Person	Resources Needed	Due Date
1. Compare Mooresville to: Hickory, Asheville, and Raleigh. Review Their Websites and Locate Contact People	Helpdesk Specialist	Personnel	May 1, 2017
2. Review Municipal Websites. Prepare an Interview Guide and Metrics Guide	Helpdesk Specialist, IT Director	Personnel	May 1, 2017
3. Make Calls and Prepare emails as Needed. Ask Questions and Possibly Plan Time for an Onsite Visit.	Helpdesk Specialist	Personnel	August 1, 2017
4. Review Compiled Data. Prepare List of Best Practices to Recommend	Helpdesk Specialist, IT Director	Personnel	October 1, 2017
5. Contact Departments to Implement Best Practices	Helpdesk Specialist, IT Director	Personnel	January 1, 2018

Information Technology Strategic Plan (2018-2021)

Customer Support

Strategy: Training - External & Cross

The IT Department provides various training classes to Town Staff including basic PC skills, Basic & Advanced Microsoft Office, and Mobile Devices. Additionally, the various IT Staff members each have specialized skills that cross training among staff members would have a positive impact on the professional development of the staff.

Tactics	Responsible Person	Resources Needed	Due Date
1. Perform a Training Needs Assessment. Determine Which Classes to Offer to Town Employees. Develop a Cross Training Plan for IT Staff	All IT Staff	Personnel	March 1, 2017
2. Develop Learning Objectives. Objectives Should be Specific, Measurable, Achievable, Relevant, and Time Bound	All IT Staff	Personnel	April 1, 2017
3. Design and Develop Training Materials. Create Lesson Plans for the Classes	Helpdesk Specialist, GIS Administrator, IT Technician	Personnel	April 1, 2017
4. Schedule and Invite Town Employees to Training Opportunities. Schedule Time with Coworkers for Cross Training	All IT Staff	Personnel	April 1, 2017
5. Evaluate the Training. Prepare a survey to Gather Feedback	Helpdesk Specialist, GIS Administrator, IT Technician	Personnel	June 1, 2017
6. Repeat Training as Necessary.	Helpdesk Specialist, GIS Administrator, IT Technician	Personnel	Annually

Strategy: Create SLA with Department Sign Off

Service Level Agreements with Town Departments set standards of response time relating to requests for service and outages. The creation of Service Level Agreements will also allow IT Staff to develop response plans when multiple departments are impacted.

Tactics	Responsible Person	Resources Needed	Due Date
1. Define what Goals and Objectives to Include in the SLA and the Customers covered	IT Director, Helpdesk Specialist	Personnel	June 1, 2017
2. Determine Customer Responsibilities and/or Requirements in Support of the Agreement	IT Director, Helpdesk Specialist	Personnel	June 1, 2017
3. Determine IT Responsibilities and/or Requirements in Support of the Agreement	IT Director, Helpdesk Specialist	Personnel	August 1, 2017
4. Determine Service Availability, Severity Level of Issue, Service Exceptions	IT Director, Helpdesk Specialist	Personnel	October 1, 2017
5. Determine a Review and Revision Period of the Agreement	IT Director, Helpdesk Specialist	Personnel	October 1, 2017
6. Review Agreement with Departments and Obtain Signoff	IT Director, Department Heads	Personnel	November 1, 2017

Information Technology Strategic Plan (2018-2021)

Customer Support

Strategy: Response Time Prioritization

The continual review of helpdesk tickets that show a pattern of recurrence or experience a longer than normal response time should be reviewed and appropriate plans developed to prevent future helpdesk requests or bring response times into normal timelines.

Tactics	Responsible Person	Resources Needed	Due Date
1. Examine Track-It and Kace	IT Technician	Helpdesk System	March 1, 2017
2. Locate Tickets with Response Time Greater than 7 days. Find Patterns/Correlations	IT Technician	Helpdesk System	March 1, 2017
3. Develop Plan to Remediate Identified Patterns	All IT Staff	Personnel	April 1, 2017

Strategy: IT Orientation

The IT Orientation program will be provided to all new Town Staff members in conjunction with the Human Resources Orientation. The class will cover Town IT policies and basic training on IT Systems.

Tactics	Responsible Person	Resources Needed	Due Date
1. Create IT Orientation Content	IT Technician	Previous Versions of IT Orientation Training Material	Ongoing
2. Coordinate with HR on Class Scheduling	IT Technician, HR Generalist	Personnel	Ongoing
3. Practice Run Before First Orientation	IT Technician	Personnel	March 1, 2017

Information Technology Strategic Plan (2018-2021)

Customer Support

Strategy: Selma Burke Center Expansion

The Parks and Recreation Department is exploring plans to expand the Selma Burke Community Center. The Parks and Recreation Department has requested the assistance of the IT Department in planning for IT Related Equipment and Infrastructure.

Tactics	Responsible Person	Resources Needed	Due Date
1. Finalize Plans and Scope of Project	Parks and Recreation Staff	Personnel	February 10, 2017
2. Identify Camera, Network, Security, and A/V needs Based on Project Plans	Parks and Recreation Staff, IT Staff	Personnel, Vendor	February 15, 2017
3. Order Equipment and Schedule Vendors	IT Staff	Funding	July 1, 2017
4. Installation and Testing Begins	IT Technician, Network Administrator, System Administrator, Vendor	Personnel	July 15, 2017
5. Project Closure	IT Staff, Police Department	Personnel	September 1, 2017

Strategy: PC Replacement

The IT Department utilizes a phased approach to PC replacements based on warranty availability provided by the vendor. The PCs in the Police and Fire Departments have reached an end of warranty status with the vendor.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify PCs needing Replacement	IT Staff	Personnel	February 10, 2017
2. Define Hardware Requirements for Replacement Equipment	IT Staff	Personnel	February 10, 2017
3. Order Equipment	IT Staff	Funding	January 1, 2018
4. Complete Installation of New Equipment	IT Staff	Personnel	February 15, 2018

Information Technology Strategic Plan (2018-2021)

Customer Support

Strategy: Police Annex Station Upfit

The Police Department is planning to upfit the existing annex stations located at the ABC Stores on the west side of Town into functional stations for officers. This upfit will require the installation of network connectivity, security, and communications equipment.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Camera, Network, Security Needs Based on Project Plans	Police Department Staff, IT Staff	Personnel, Vendor	February 15, 2017
2. Order Equipment and Schedule Vendors	IT Staff	Funding	July 1, 2017
3. Installation and Testing Begins	Network Administrator, Vendors	Personnel	July 15, 2017
4. Project Closure	IT Staff, Police Department	Personnel	September 1, 2017

Strategy: Edgemoor Park Renovation

The Parks and Recreation Department is converting Edgemoor Park into a tennis complex. The Parks and Recreation Department has requested the assistance of the IT Department in planning for IT related equipment and infrastructure.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Camera, Network, and Security Needs Based on Project Plans	Parks and Recreation Staff, IT Staff	Personnel, Vendor	February 15, 2017
2. Order Equipment and Schedule Vendors	IT Staff	Funding	July 1, 2017
3. Installation and Testing Begins	IT Technician, Network Administrator, System Administrator, Vendor	Personnel	July 15, 2017
4. Project Closure	Parks and Recreation Staff, IT Staff	Personnel	September 1, 2017

Information Technology Strategic Plan (2018-2021)

Data Management

Strategy: Disaster Recovery

Town IT Administrators are responsible for ensuring that appropriate measures are taken to backup Town data appropriately and develop plans to recover that data in an efficient manner to restore Town operations as quickly as possible. The goal of this project is to review existing backup strategies, create needed documentation and policies, and train all IT staff in disaster recovery operations.

Tactics	Responsible Person	Resources Needed	Due Date
1. Research Best Practices	Network Administrator, System Administrator	Vendor Documentation	October 1, 2017
2. Verify Existing Backup and Recovery Procedures against Best Practices	Network Administrator, System Administrator	Personnel	October 1, 2017
3. Develop Written Plan Based on Best Practices and Existing Procedures	Network Administrator, System Administrator	Personnel	August 1, 2018
4. Train IT Staff on Procedures	All IT Staff	Personnel	On-Going
5. Develop Test Schedule, Complete with Guidelines	Network Administrator, System Administrator	Personnel	August 1, 2018
6. Review and Revise Annually	Network Administrator, System Administrator	Personnel	November 1, 2019

Strategy: Office 365 Data Retention

The Town stores large amounts of data across various Office 365 products including EMAIL, SharePoint, and One Drive. The IT Department will partner with departments to create retention schedules for Town data in compliance with the Municipal Records Retention Schedule.

Tactics	Responsible Person	Resources Needed	Due Date
1. Develop Retention Schedules for Shared Data Storage Locations	IT Director, Network Administrator, System Administrator	Personnel	April 1, 2017
2. Develop Migration Plan for Document Moves	IT Director, Network Administrator, System Administrator	Personnel	May 1, 2017
3. Move All Data to Office 365 Environment	All IT Staff	Personnel	October 1, 2017
4. Verify Redirection of Local Folders to Office 365 Environment	All IT Staff	Personnel	June 1, 2017
5. Test Retention Policies	IT Director, Network Administrator, System Administrator	Personnel	May 1, 2017

Information Technology Strategic Plan (2018-2021)

Data Management

Strategy: Integrate Existing Applications

This project will integrate currently isolated silos of Town data by integrating the data stored in applications such as MUNIS, GIS, Laserfiche, and SharePoint.

Tactics	Responsible Person	Resources Needed	Due Date
1. Identify Integration Opportunities with Town Software	All IT Staff, Information Governance Committee	Information Governance Committee	August 1, 2017
2. Prioritize Integration Opportunities	All IT Staff, Information Governance Committee	Information Governance Committee	March 1, 2018
3. Develop Integration Plan	All IT Staff, Information Governance Committee, Vendors	Personnel	September 1, 2018
4. Implement Software Integration	All IT Staff, Vendors	Personnel	September 1, 2018
5. Create a User Acceptance Group	Network Administrator, System Administrator	Personnel	November 1, 2018

Strategy: Police Department SAN

This project will provide a Storage Area Network (SAN) at the Police Department for storage of Police body worn camera footage. Additionally, the SAN will be used to host virtual servers for Police operations.

Tactics	Responsible Person	Resources Needed	Due Date
1. Obtain Pricing for Hardware and Installation	IT Director	Vendor	January 1, 2017
2. Initiate Contract and Purchase Order	Network Administrator, Purchasing	Funding	July 1, 2017
3. Installation and System Configuration	Network Administrator, System Administrator, Vendor	Personnel, Vendor	September 1, 2017
4. Project Closure	IT Director, Network Administrator, Vendor	Personnel	October 1, 2017

Information Technology Strategic Plan (2018-2021)

Data Management

Strategy: Virtual Server Host Replacement

This project will replace the current virtual server hosts located at Town Hall with a modern, highly available configuration that will allow for redundancy and load balancing of Town virtual server infrastructure.

Tactics	Responsible Person	Resources Needed	Due Date
1. Obtain Pricing for Hardware and Installation	IT Director	Vendor	February 10, 2017
2. Initiate Contract and Purchase Order	Network Administrator, Purchasing	Funding	October 1, 2017
3. Installation and System Configuration	Network Administrator, System Administrator, Vendor	Personnel, Vendor	December 1, 2017
4. Project Closure	IT Director, Network Administrator, Vendor	Personnel	January 1, 2018

2016 Achievements

GIS

GIS Collector Web Map for Garbage Can Tracking

What: Garbage can data is captured directly into a web map to track Town owned garbage cans

Why: Previously the data was submitted to be geocoded and mapped. The new map enabled the Sanitation Department to map all cans to keep track of garbage cans issued by the Town.

How: IT created a “collector” web map where Sanitation can enter can data directly and a database is created.

Web Map for the Mooresville Fire Department

What: All inspection data and buildings plans are available and linked to LaserFiche for quick access.

Why: Having inspection and building infrastructure easily accessible to all Fire Department personnel including via iOS devices is extremely beneficial in the field. This information will be available for the Police Department as well.

How: An application has been created and is served from the “Cloud” where all inspection data can be added for commercial building sites. Building plans are scanned into LaserFiche, attached to locations and are available to personnel.

General Obligation Bond Projects Web Map

What: All G.O. Bond projects are available on a single map for easy citizen access.

Why: Finance wanted to create an easy to use map that provided citizens with current bond project locations and status.

How: IT created a “story” web application that links to each project and details plans, budget, and status information.

Mooresville Current Development Web Map

What: Shows approved development within Town limits.

Why: Originally created for the Planning Department Monthly Report for the Mooresville Police Department as a visual aid to show Mooresville’s upcoming development.

How: A web map application has been created for the general public to view currently approved land development.

[Mooresville Water and Sewer Infrastructure Web Map and Application](#)

What: Depicts locations of Water and Sewer utility infrastructure allowing staff to input and view critical information from iOS devices in the field.

Why: This map is used in many different forms in the office and field to serve the public and give our employees the information needed to do their jobs efficiently. This map is constantly updated and improved.

How: This map has many forms. A desktop map, mostly used by Town Engineers to update infrastructure information, a web map, used by many employees and a web map application, used by employees in the field and the office.

[Drone to Map Application](#)

What: Allows an Unmanned Aerial Vehicle to use high definition imaging to impose updated images on existing maps to show new buildings, development, etc.

Why: To provide up to date aerial photography of Town locations that can be integrated into maps for presentations and information.

How: The IT Department has certified drone operators that can provide imagery to be integrated into all types of maps using GIS Drone to Map software.

[Fire](#)

[Voice Gateway Replacement](#)

What: Replaced obsolete Voice Gateways with ATA devices.

Why: The functionality of ATA devices is identical to Voice Gateways and will provide a long term IP device for fax and analog line devices.

How: The Voice Gateways were replaced as part of the approved Network Upgrade project and migration occurred following a test of different devices to ensure no loss of functionality occurred.

[Infant Drop Off / After Hours Communication Project](#)

What: The Fire Department has identified a location at each Fire Station where an infant can be surrendered without question. The IT department partnered with the Fire and Police Departments to install a telephone at each station that calls all internal Fire Department phones and Police Dispatch so that someone choosing to surrender a child can be certain that assistance is available at the station. Additionally, a camera was installed at each location for liability and protection purposes.

Why: To ensure that Fire Department personnel are notified after normal business hours that a child has been surrendered or in the event of an after-hours medical emergency.

How: An IP security camera and IP Phone were configured at each station to provide communication capabilities to the public with emergency personnel.

Library

Mobile Circulation

What: iPad and Sirsi Dynix Application and Equipment

Why: Library Staff are able to complete checkout processes with the mobile equipment to provide faster item checkout without the need to wait in line at the Circulation Desk. Additionally, Outreach staff are able to check out items away from the Library.

How: An iPad Mini with an RFID reader and receipt printer allow for operation of the Mobile Circulation program.

Police

Evidence RFID Inventory Project

What: Track Evidence Inventory using RFID tags

Why: Using RFID tags to track and inventory evidence allows for more effective chain of custody.

How: RFID tags are printed and placed in each item stored in the Evidence Rooms at the Police Department. Secured RFID readers are located at the doors and create an audit log entry anytime a tagged item is removed.

Two Factor Authentication

What: Two Factor Authentication uses something known such as a password in combination with something you have such as a token to authenticate access to applications and networks.

Why: The FBI's Criminal Justice Information Standards (CJIS) requires that two factor authentication be implemented when accessing networks or systems where Criminal Justice Information is stored.

How: All Police Department personnel were issued a SecurID token to use when accessing the Police Department VPN. The VPN devices at the PD were configured to only allow authentication using the two factor authentication model.

CID Interview Room Cameras

What: Criminal Investigations uses three Interview Rooms and a Polygraph room during investigations.

Why: The existing camera system that was used in the interview rooms was proprietary and outdated. The Police Department requested that the camera system be upgraded with a high definition option that worked with the camera system used throughout the Town of Mooresville. The new cameras allow for remote viewing and granular security restrictions when granting access to the recordings.

How: The cameras and microphones were removed and new IP based cameras were installed with high definition capabilities.

After Hours Security Improvements

What: Implemented equipment and technologies to provide for greater access control and security after hours.

Why: The Police Department requested a way to control access to the Lobby and exterior entrances of the building outside of normal business hours. The IT department in conjunction with our security vendor installed magnetic locks and a callbox at the front entrance of the Police Department to allow communication between the public and Police Dispatchers after hours. Additionally, the access control system at the PD was configured to allow Dispatchers to unlock exterior facility doors and gates from the new radio consoles.

How: Additional Security Equipment was installed at the Police Department and programming was added to the access control system to allow the radio consoles to unlock doors and gates. Additionally, an IP phone was installed at the front door to allow communication between citizens and Police Dispatch.

Training Room and Emergency Operations Center Upgrade

What: Installed audio/video equipment in the Training Room and Emergency Operations Center for more professional and easy to operate meeting space.

Why: The previous audio/visual equipment in the Training Room was difficult to use and provided poor audio and presentation capabilities for use during large training sessions.

How: The IT department partnered with the Police Department and an Audio/Video vendor to install technologies that allow for the system to function both as a Training Room and EOC as needed. The technologies allow for staff of varying technical abilities to hold training sessions by using a touchscreen panel.

Cell Phone Booster

What: Installed a cellular signal booster system at the Police Department

Why: Almost all employees that worked inside the Police Department were struggling to receive a cellular signal. Many of them have town-issued devices that need to be able to connect. Furthermore, employees of other agencies were having trouble staying in touch with their respective departments when inside our Police Department.

How: Researched cellular signal booster systems and vendors and paid for a turn-key system that allows for full coverage service throughout the building with all major cell phone providers.

CAD and RMS User Permissions

What: Overhauled user rights and groups in the Police Department's CAD (Computer Aided Dispatch) and RMS (Records Management System) Systems.

Why: The CAD and RMS systems were cluttered with disorganized groups that gave many unneeded rights to many users.

How: Collaborated with appropriate personnel at the Police Department to determine a new set of groups and to decide exactly which rights each group needed.

Patrol Laptop Upgrades

What: Upgraded in car Patrol Officer laptops for use on the road.

Why: Replaced half of the laptops used by Patrol Officers which were older and no longer under warranty. All Patrol Officers are now using the same model laptop which allows for easier administration by IT staff.

How: Purchased and configured laptops to replace older model laptops.

Meadowlark Glen Camera System

What: Installed software for Police Officers to view the cameras at Meadowlark Glen Apartment Complex.

Why: The Police Department and staff at Meadowlark Glen wanted to give officers the ability to connect to the complex's camera system to aid in investigations.

How: Installed and configured the software on the laptops of all officers stationed on the east side of town.

Public Services

Remote Access to Cemetery Records

What: Provided Buildings and Grounds Staff with iPads to access Cemetery software remotely.

Why: Buildings and Grounds staff were printing maps and other records in order to complete Cemetery work orders. The implementation of iPads has allowed crew members to look up information in the Cemetery software program at the job site and reduced the need for printing paper records.

How: Three iPads with cellular service connect to the Cemetery program using existing VPN technology.

Fleet Building Cameras

What: Added additional cameras to the Fleet Services building.

Why: The Fleet Services building did not have exterior cameras installed on the rear of the building which created a blind spot and a potential location for theft or crime to occur. Three cameras were installed on the rear of the building to provide additional coverage of the Public Services complex.

How: Three IP cameras were installed and configured on the Fleet Services building.

Recreation

SmartCities Light Pole Pilot

What: Installed Internet connected light poles at the Golf Course and Mazeppa Park.

Why: Smart Cities are under construction across the country and internet connected light poles are recognized as the best infrastructure to leverage when beginning Smart City Initiatives. The light poles at the Golf Course and Mazeppa Park provide cameras, wireless internet, as well as the ability to add additional technologies depending on the use case.

How: Two light poles were installed as a pilot at the Golf Course and Mazeppa Park.

Citizen Center A/V and Wireless Improvements

What: Installed Wireless Controlled Amplifier and Access Points at Citizen Center

Why: The Citizen Center has speakers in the hallways and common areas to play music; however, the speakers have not worked for several years, IT installed a new wireless enabled amplifier to allow staff to control the music anywhere in the Charles Mack Citizen Center. The Citizen Center frequently hosts large meetings and events and were having problems with bandwidth and the ability to provide quality internet service to the customers of the facility; IT added additional wireless access points in the meeting rooms in order to better serve the facilities customers.

How: Additional equipment was purchased and installed to meet the goals of the facility supervisor and staff.

Golf Course Network

What: Network and Access Control installed at Golf Course Restroom and Temporary Clubhouse.

Why: The new restrooms and temporary Clubhouse needed infrastructure to connect to the Town's network for internet, communications, and security services.

How: IT staff purchased and configured network, access control, and communications equipment to provide the necessary services to the temporary Clubhouse and course restrooms.

Public Access Cameras at Golf Course

What: Three high definition IP cameras were installed and configured to allow public viewing of the Golf Course.

Why: The ability for the public to view the course, driving range, and clubhouse construction promotes marketing opportunities for the course and increases transparency as it relates to the construction progress of the new clubhouse.

How: Three IP cameras were purchased and installed in key locations around the course to allow citizens to view the cameras from the Town's website.

Wireless Expansion at Parks

What: Additional Wireless Access Points were installed at Mazeppa, North Main, and Cornelius Parks

Why: Mazeppa, North Main, and Cornelius Parks frequently host large tournament events where several hundred spectators attend these events. The wireless infrastructure that was originally implemented did not provide sufficient coverage in the bleacher and spectator areas and was limited to areas immediately surrounding the concession stands.

How: Additional wireless access points were installed throughout these parks to provide a better experience for visitors.

Information Technology / Town Wide Projects

Network Upgrade (Phase 2)

What: Refreshed our Network Switches, Wireless Access Points, and Voice Gateway infrastructure throughout Town facilities

Why: The Town's network infrastructure at all Town facilities was over ten years old and no longer supported by the vendor for replacement or troubleshooting. Additionally, the new equipment provided new features that provide a more efficient and secure network for Town citizens and staff.

How: New equipment was purchased, configured and installed throughout Town facilities without impact or downtime to citizens and staff.

Office365 Implementation

What: IT migrated the Town's office services (Email, Instant Messaging, File Storage, and Document Management) from local services that required users to be on the network (either physically connected or through a VPN) to hosted cloud services.

Why: The reason for the transition was so that the Town could more easily leverage new services and be more efficient in the way employees conduct business. Town Employees no longer have to be on the Town of Mooresville Network to access office services. Employees also have more access to the files and collaborative pages that help coordinate between Town of Mooresville staff and the public.

How: IT planned the migration by migrating departments individual and providing training on how to access those resources. The OneDrive and SharePoint services are new services offered with the Office 365 suite. SharePoint will eventually replace the public storage folders that are on the Town of Mooresville network and OneDrive will replace the personal 'My Documents' that are also currently only accessible through the Town of Mooresville network.

Security Camera Replacement

What: Replaced Security Cameras at Fire Department and Citizen Center

Why: The Fire Department and Citizen Center were using camera equipment and software that was over fifteen years old and obsolete, the equipment provided poor image quality and storage capabilities. Additionally, the equipment and software were no longer supported by the vendor and replacement parts and software upgrades were not available.

How: New camera equipment was ordered that enhanced quality and meetings were held with department staff to install the new cameras in optimal locations based on user feedback.

EMAIL Security Migration to Cloud Services

What: SPAM Filtering and Message Archiving services were moved to the Cloud

Why: The Town's migration from on premise SPAM Filtering and Message Archiving was completed in conjunction with our move to Office365 and provided a fault tolerant solution should the Town lose internet connectivity SPAM and Archiving will continue to function without user impact.

How: Services were purchased from our current on premise provider and configuration and archived data was migrated to the new cloud services.

Helpdesk Software Migration

What: Replaced Helpdesk Software and combined other disparate software with a single solution.

Why: The IT departments Helpdesk software was unable to provide the level of services that mobile users needed. Also, the Town was leveraging different systems to provide patches and updates to Town PCs and servers.

How: The IT department implemented a new system that allows users to submit helpdesk tickets via the web or IOS application. Also, the IT department was able to retire another system previously used to patch PCs and servers with an integrated solution.

Town Hall SAN Upgrade

What: Expanded the Town's Storage Network capacity.

Why: The storage array used by the Town to house virtual servers, and provide file storage was expanded with new equipment and increased capacity. This upgrade increased our storage capacity from 24 terabytes to 97 terabytes of solid state storage.

How: The IT Department partnered with Dell to purchase the additional storage and migrate the data to the new drives without causing downtime to Town staff.

By the Numbers

Number of IT Employees	7
Number of Cell Phones	71
Number of Air Cards and Tablets	141
Number of Servers Managed	58
Number of Network Infrastructure Devices Managed	497
Number of VOIP Devices	360
Number of PCs and Laptops Managed	470
Average Helpdesk Tickets Completed	3,229
Average Number of SPAM Emails Blocked Weekly	115,700
Number of Full-Time Town Employees	435
Number of Part-Time Town Employees	37
IT Budget as a Percentage of the Town's General Fund Budget	4.8%

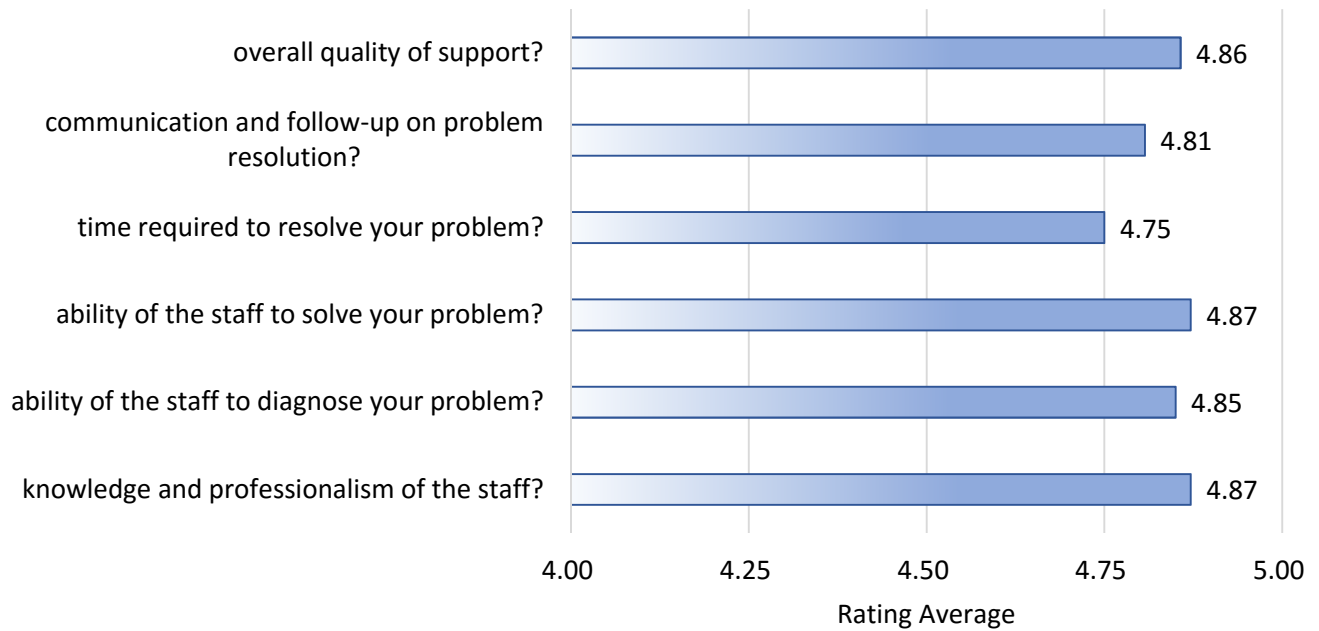
Resource Allocation Comparisons

	Goldsboro	Hickory	Salisbury	Statesville	Iredell Cty
Population	35,489	40,216	33,955	25,096	165,241
FTEs	449	654	467	403	-
IT Employees	6	8	7	11	11
IT Budget (\$M)	1,055	1,443	2,529	1,763	1,556
General Fund Budget (\$M)	40,521	47,989	43,029	31,110	190,382
IT Expenditure per Town Employee	2,350	2,207	5,415	4,375	-
Percentage IT Budget/General Fund	2.6%	3.0%	5.9%	5.7%	0.8%

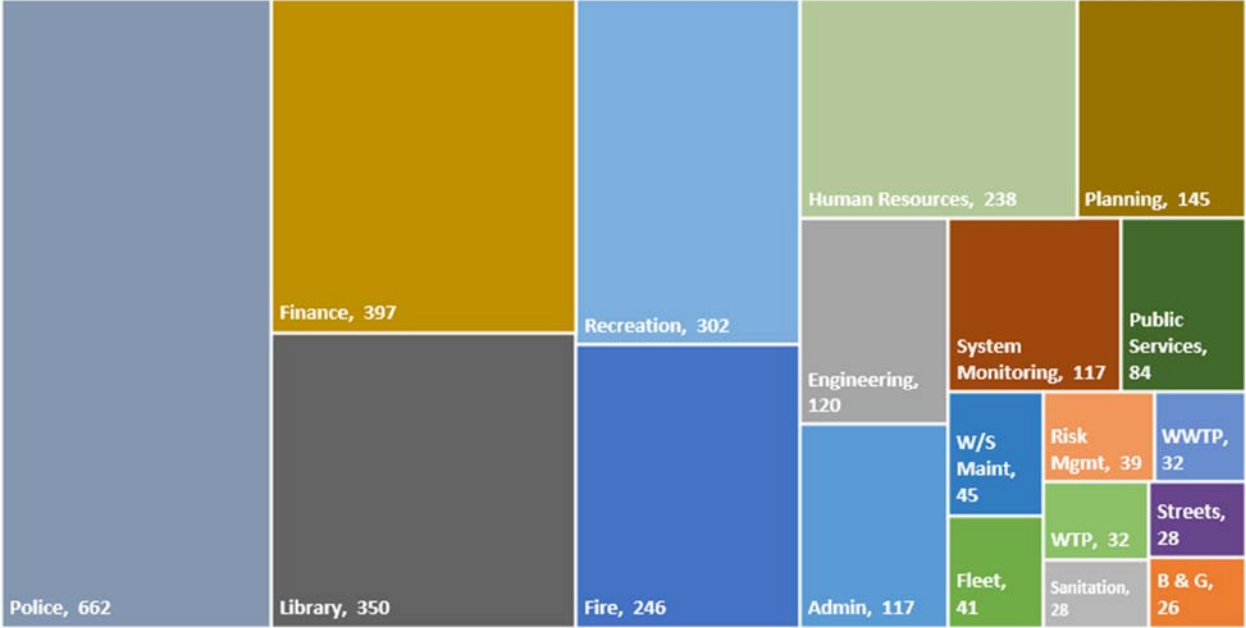
	Asheville	Cary	Gastonia	Monroe	Mooresville
Population	88,003	151,088	72,947	33,708	35,156
FTEs	1,204	1,270	876	454	435
IT Employees	23	31	37	5	7
IT Budget (\$M)	3,142	9,500	6,689	1,074	3,155
General Fund Budget (\$M)	110,834	151,705	62,319	29,098	66,346
IT Expenditure per Town Employee	2,610	7,480	7,636	2,365	7,252
Percentage IT Budget/General Fund	2.8%	6.3%	10.7%	3.7%	4.8%

Information Technology 2016 Satisfaction Survey Results

How satisfied are you with the:



Information Technology 2016 Helpdesk Tickets by Department



Information Technology 2016 Expenditures

