



TECHNOLOGY SOLUTIONS BUSINESS PLAN

July 1, 2018 – June 30, 2019



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OUR MISSION

The mission of the Technology Solutions department is to provide technology leadership through innovation, oversight, education, and support to ensure that the Town make the best possible use of available technology.

FY18 PRIORITIES & ACCOMPLISHMENTS

| FY18 Priorities | What was the outcome? What data or performance measure(s) indicate the progress towards this priority? |
|--|---|
| Provide effective security to protect the Town's cyber assets. | Cyber-security is a never-ending challenge. Using a multilayered approach, the Town cyber assets had very few incidents. Generally, the layers are a trained and situationally aware user community; firewalls, external intelligence, encryption and intrusion detection; and mitigation for events. |
| Improve Internet access for the residents and business in the community. | Private internet service providers (wired and wireless) were supported and regulated as they expanded services to citizens. A MOU with the CHCCS allowed 3 schools to use Town fiber to reach UNC and MCNC to improve their speed and reliability without construction. |
| Support other departments with technology related projects. | The selection and configuration of several applications such as eBuilder, GovPilot and SeeClickFix was supported. The development of a LUMO amendment regarding small cell towers. Replacement equipment deployments. Assistance with facilities including Fire Station 2, Library and others. |
| Develop innovation team support and assist the various innovation teams | Work progressed with the creation of an innovation team. The team met with LCI graduates with several internal and external innovation teams to facilitate projects. Initial efforts were made to increase the collaboration among the Analytics Team, Open Data Team and TS Enterprise Solutions Team. Formalizing the processes among the groups is an objective for next year. |

Other Major FY18 Accomplishments

- Telephone system - upgrade completed.
- Security cameras several upgrades complete, others in progress.
- Replacement desktop and laptop computers – roll out is in progress.
- WiFi access points for the Town network – roll out is in progress.
- Helpdesk support to all Town staff.
- Spotlight City/Smart City project - Completed administrative and contract work and kicked off the operational planning for parking and public safety.
- GIS and Analytics functions and staff – integrated into Technology Solutions.
- Open Data Portal - managed technical programming and data acquisition.
- Staffing changes - the hired Sr. Business Analyst and Records Manager.

FY19 PRIORITIES

| FY19 Priorities | What is the desired outcome? What data or performance measure(s) will indicate the success of this priority? | Point-Person (if applicable) |
|--|--|--|
| Provide effective security to protect the Town's cyber assets. | The desire is zero intrusions and outages. The expanded use of encryption of data, fully implementing the password standards and training to the security policies are planned. Improved backups, business continuity and disaster recovery. | Robert Reynolds |
| Improve Internet access for the residents and business in the community. | Low negative incident construction while expanding the wired and wireless opportunities for residents and businesses. Collaboration with Planning and Public Works on developments and projects where telecom infrastructure can be improved. Collaboration with UNC, CHCCS and other entities. | Tim Czapka |
| Support other department with technology related projects. | <ul style="list-style-type: none"> • Provide support services for existing systems as well as collaboration on application, facility and infrastructure projects. • Convert operating platform to single product • Implement Windows 10 upgrade town wide • Implement Office 365 upgrade town wide | Janelle Bailey Tim Czapka Robert Reynolds |
| Lead/collaborate on organizational changes involving the use of data, analytics, user experiences and project management | Improved coordination and cooperation among departmental business analysts, open data liaisons, internal services departments and innovation teams. | Scott Clark |
| Operationalize of Spotlight City projects | Deployed sensors and analytic capabilities to gather and process information for decision making.. TS will continue to coordinate with Police, Parking, Public Works, Traffic and Planning as well as citizen hacktivist. | Scott Clark Janelle Bailey Robert Reynolds |

**TECHNOLOGY SOLUTIONS
CORE BUSINESS**



CORE BUSINESS PROGRAMS & SERVICES

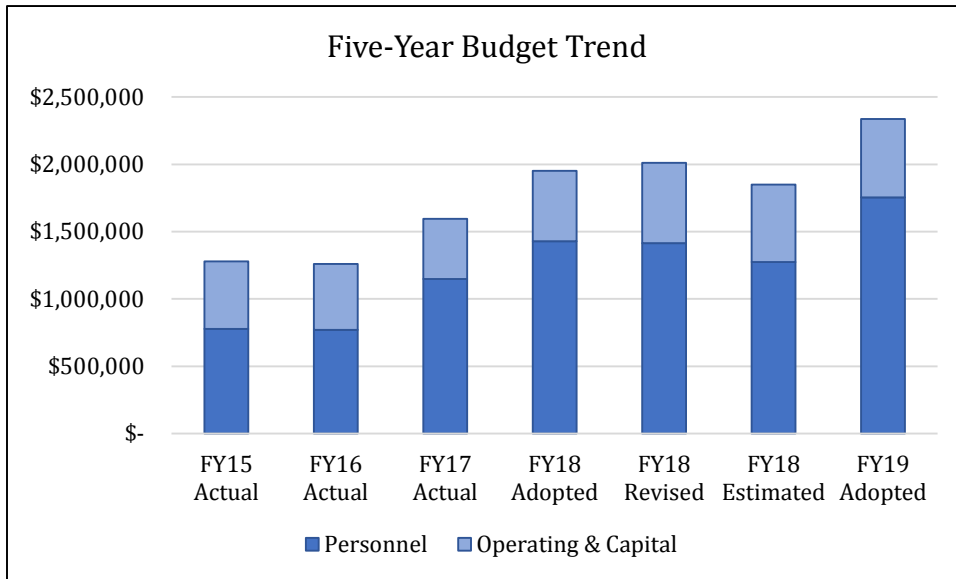
Core Business Programs

The programs listed below are the essential services of the Town that are managed by Technology Solutions. Each program has objectives and performance measures designed to help us track the performance of our core services. While a departmental program may support multiple Strategic Goals, the following is emphasized:

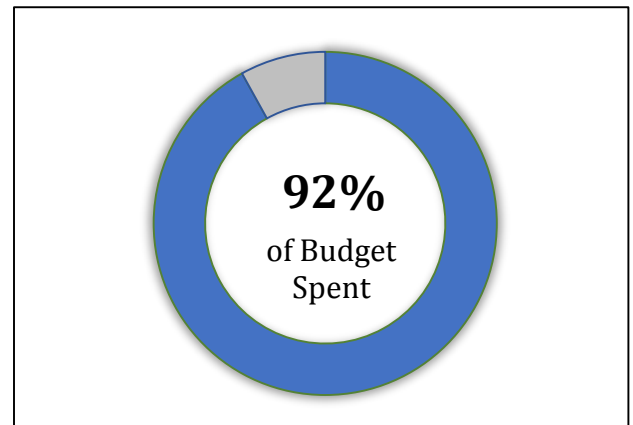
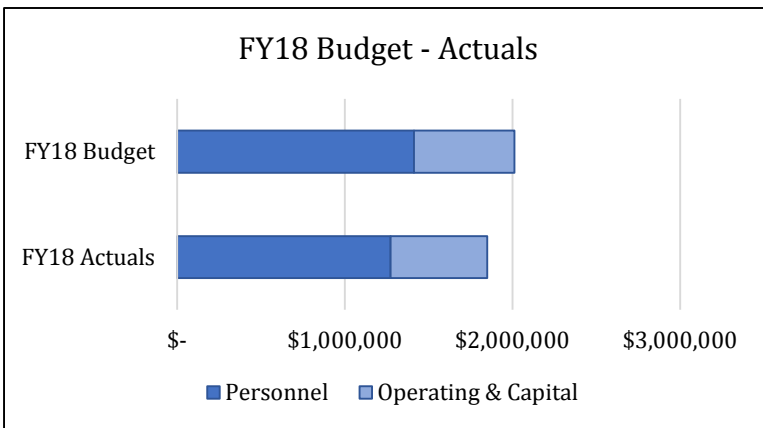
| Program | Program Description | FTEs | Cost | Strategic Goal Alignment |
|--|---|------|-------------|---|
| User Support | Provide user Help Desk support for computer hardware, software, network, servers, and telephones. Provide user support for other technical issues, including: engineering reviews of new building construction for IT requirements; user training in the use of application software; and technical training of IT staff. | 5 | \$998,671 | Collaborative & Innovative Organization |
| Network Infrastructure | Administer and manage all network infrastructure, including: security, connectivity, server support, network hardware support, email support, collaboration software support, and financial/payroll/human resources application software support. Fiber optic cable maintenance and support. | 2.25 | \$644,788 | Collaborative & Innovative Organization |
| Telecommunications | Administer and manage all Voice over IP telephone systems, including setup and configuration of desktop telephone handsets, VoIP related network servers and software support. Support wide area network through 3rd party broadband network, and support the Town videoconferencing systems. | 1 | \$271,506 | Collaborative & Innovative Organization |
| Database Management and Enterprise Application Support | Administer and manage the Geographic Information System (GIS). Support all major application software and databases located on Town servers. | 4 | \$639,087 | Collaborative & Innovative Organization |
| IT Planning and Coordination | Consult with Town departments on IT planning, collaboration, and design services for infrastructure and software configurations. Consult with various agencies and units of government on shared projects and areas of interest. | 2.75 | \$257,973 | Collaborative & Innovative Organization |
| Total | | 16 | \$2,333,858 | N/A |

BUDGET SUMMARY

Five-Year Budget Trend



FY18 Budget-Actual Report



FY19 Budget Expansions

| Budget Expansion | Cost | What is the desired outcome? What data or performance measure(s) will indicate the success of the expansion? |
|------------------|------|--|
| None | N/A | N/A |

PERSONNEL SUMMARY

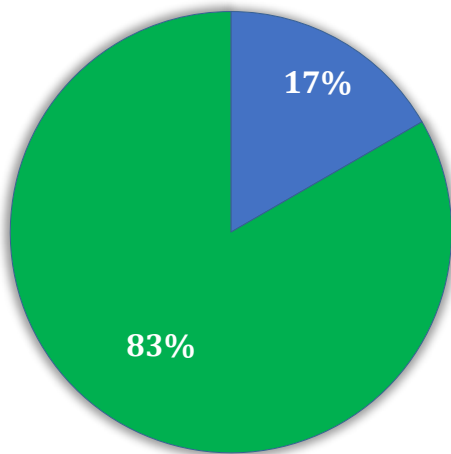
Personnel Data (end of fiscal year data)

| | FY17 | FY18 | FY19* |
|--------------------------------|------|------|-------|
| Number of Current FT Employees | 11 | 12 | 13 |
| Number of FT Vacancies | 2 | 1 | - |
| Number of FT Hires | 2 | 1 | - |
| Number of FT Departures | 1 | 0 | - |
| Number of FT Retirements | 1 | 0 | - |
| Number of FT Promotions | 0 | 0 | - |
| Turnover Rate (FT Only) | 9% | 0% | - |

**The number of FT employees in the FY19 column represents the number of employees in the department as of their FY19 Business Plan Submission*

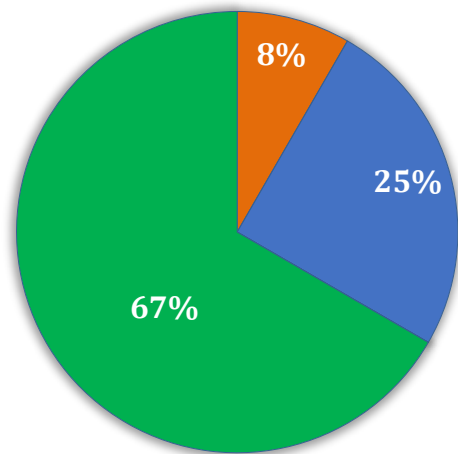
Personnel Demographics (as of FY19 Business Plan Submission)

Gender Breakdown



- Female
- Male

Ethnicity Breakdown



- American Indian or Native Alaskan
- Asian
- Black or African American
- Hispanic
- Native Hawaiian or Other Pacific Islander
- Two or More Races
- White

MISSION-LEVEL MEASURES

| Mission-Level Measure 1 | FY16 Actual | FY17 Actual | FY18 Estimated | FY19 Target |
|--|----------------|----------------|-------------------|----------------|
| Percentage of responses to service requests within one working day | | 95* | 96 | 96 |

| Analysis – What are your takeaways from the data? | Initiatives – What actions will you take in response to your takeaways (if any)? |
|--|--|
| <ul style="list-style-type: none"> • Most helpdesk calls are for minor issues and are handled within a working day • * Some service requests are expected to be multi-day. | <ul style="list-style-type: none"> • Review calls to determine opportunities for problem avoidance or self-service. • Improve the technology inventory, documentation and training to avoid need for calls. • Improve reporting to differentiate types of service requests. |

| Mission-Level Measure 2 | FY16 Actual | FY17 Actual | FY18 Estimated | FY19 Target |
|---|----------------|----------------|-------------------|----------------|
| Percentage of servers in security compliance | | 90% | 90% | 90% |
| Percentage of desktop and laptops in compliance | | 90% | 90% | 90% |

| Analysis – What are your takeaways from the data? | Initiatives – What actions will you take in response to your takeaways (if any)? |
|---|--|
| <ul style="list-style-type: none"> • Goal is rapid compliance for high risks and within 60 days for other risks. • Waiting is part of the process since some patches create additional problems | <ul style="list-style-type: none"> • Monitoring tools will be configured to improve the reporting of information for this measure. • Servers are being upgraded to operate on a similar operating platform to improve management |

| Mission-Level Measure 3 | FY16 Actual | FY17 Actual | FY18 Estimated | FY19 Target |
|---|----------------|----------------|-------------------|----------------|
| Number of training sessions offered on cyber security and appropriate use | | 6 | 6 | 75%* |

| Analysis – What are your takeaways from the data? | Initiatives – What actions will you take in response to your takeaways (if any)? |
|---|---|
| <ul style="list-style-type: none"> • Training session were held with low number of participants. • The program changed mid-year with insurance company changes. • *The number of sessions will be changed to the percentage of staff participating in the training | <ul style="list-style-type: none"> • The program is being redesigned and will be offered to all staff through HRD. For most technology users it will be mandatory. • The program will also include testing methods. |

MISSION-LEVEL MEASURES (CONTINUED)

| Mission-Level Measure 4 | FY16 Actual | FY17 Actual | FY18 Estimated | FY19 Target |
|---|----------------|----------------|-------------------|----------------|
| Percentage of utilization factors of systems and infrastructure | | | | |
| Storage capacity in use | | < 70%* | < 70% | < 50% |
| Bandwidth usage | | < 25%* | < 25% | < 25% |
| Compute-power usage | | < 50%* | < 50% | < 50% |

| Analysis - What are your takeaways from the data? | Initiatives - What actions will you take in response to your takeaways (if any)? |
|--|---|
| <ul style="list-style-type: none"> Average utilization factors require a significant reserve to handle times of peak demand and redundancy for failures *Estimates remain rough. | <ul style="list-style-type: none"> Reporting tools will be configured to report better information to support estimates. Other measures need to be added for a better view of the existing needs and improved planning. |

**TECHNOLOGY SOLUTIONS
STRATEGIC BUSINESS**



STRATEGIC PROJECTS

Strategic Project 1.

| Council Strategic Goal | | |
|-------------------------------|--|--|
| Vibrant & Inclusive Community | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| Expand and improve access to the Internet within the Town | Ongoing | |

| Project Description | Partners |
|--|--|
| <p>Evaluation of the mix of wired and wireless access points provided at Town facilities. Considering opportunities for public and private partners to provide service a lower costs.</p> <p>Public WiFi access in recreation centers, other public buildings and downtown have been reviewed and upgrades are in progress.</p> <p>Fiber connections to 3 CHCCS schools have been completed with other opportunities under review.</p> <p>Work with AT&T, Google, Verizon and other internet service providers as they build fiber to the home, fiber to the business and small cell/5G wireless networks.</p> | <p>Office of Housing, Internet service providers, UNC and UNC Health, Orange County, CHCCS</p> |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|---|----------------|----------------|
| 1. Increase the number of functioning public housing locations with Internet service. | 7 | 8 |
| 2. Increase the number of functioning public WiFi locations around town | 9 | 12 |
| | | |

Other notes/comments on this Strategic Project

Strategic Project 2.

| Council Strategic Goal | | |
|-------------------------------------|--|--|
| Economic & Financial Sustainability | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| Consider Internet connectivity in private and public construction projects. | Ongoing | Tim Czupka |

| Project Description | Partners |
|--|--|
| Technology Solutions participates in the review of projects assigned to Public Works, Transit, Housing, Parks and Recreation and other departments. Input in the early phases identifies opportunities to add infrastructure or modify requirements to support the technology needed by the Town, UNC, CHCCS, businesses, residents, workers and others. | All Departments, Internet Service providers. |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|--|----------------|----------------|
| 1. Number of projects reviewed | 9 | 9 |
| 2. Number of technology related additions or influences made to projects | 5 | 8 |
| | | |

Other notes/comments on this Strategic Project

| |
|--|
| <ul style="list-style-type: none"> - TS collaborates with Public Works, Planning and Economic Development to review plans early in projects. The expected impact is coordinating infrastructure upgrades needed for private and public telecommunication. In addition, there is better coordination among the Internet services providers, wireless service providers and other government entities. - Reporting will be changed to a percentage to better reflect the impact. |
|--|

Strategic Project 3.

| Council Strategic Goal | | |
|-------------------------------|--|--|
| Vibrant & Inclusive Community | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| Expand digital inclusion within Town facilities and with nonprofits and business partners | Ongoing | |

| Project Description | Partners |
|---|---|
| <p>Older computers are repurposed and deployed to the Library and recreation centers for public use. Additional older computers are provided to the Kramden Institute where they are repurposed and used to train residents and then given to them.</p> <p>Digital inclusion opportunities are being increased at community centers and in public housing with price and service level negotiations as well as donated equipment.</p> <p>The Town is a member of the North Carolina Next Generation Network (NCNGN) and its Community Enablement pilot programs in several communities.</p> | <p>AT&T, NC Next Generation Network, Housing, CHCCS</p> |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|---|----------------|----------------|
| 1. Utilization public computer systems available | 70 | |
| 2. Number of training sessions offered or completed | 4 | |
| | | |
| | | |

Other notes/comments on this Strategic Project

Strategic Project 4.

| Council Strategic Goal | | |
|------------------------|--|--|
| Connected Community | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| Consider the Internet of Things (IOT) and Smart-City technology and challenges in mobility planning | Ongoing | |

| Project Description | Partners |
|--|---|
| Technology Solutions participates in the mobility planning linking it with smart city opportunities. Working with Spotlight City partners, mobility related pilot projects including traffic analytics, pedestrian safety and parking have been planned. The project is moving to operational testing. | Mobility Committee, Planning, Smart City Partners |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|---|----------------|----------------|
| 1. Meeting participation, ideas generated | 9 | |
| 2. Pilot projects that include the Smart-City or other technology | 5 | |
| | | |

Other notes/comments on this Strategic Project

| |
|--|
| <p>This project also impacts directly the Safe Community Council goal with the use of sensors to improve road crossings and analytics to help form long term priorities.</p> |
|--|

Strategic Project 5.

| Council Strategic Goal | | |
|-------------------------------------|--|--|
| Economic & Financial Sustainability | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| The maintenance and enhancement of a secure and current technology environment and tools for staff and the public to use. | Ongoing | |

| Project Description | Partners |
|---|--|
| <p>This multifaceted project includes maintaining and enhancing:</p> <ul style="list-style-type: none"> - cyber security, data backups, business continuity and disaster recovery, - technology related physical security with cameras, access control, telephones and code blue phones, - productivity applications such as the Office suite, remote access, file sharing, financial systems, webpages and intranet functions, - public record systems, open data and social media | All Departments, Government Security Partners, The public. |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|--|----------------|----------------|
| 1. Successful Security Audits | 3 | 3 |
| 2. Implementation plan developed with stakeholders | 0 | 3 |
| | | |

Other notes/comments on this Strategic Project

Strategic Project 6.

| Council Strategic Goal | | |
|-------------------------------------|--|--|
| Economic & Financial Sustainability | | |

| Strategic Project | Target Date for Completion | Project Manager |
|---|----------------------------|-----------------|
| Collaborate with UNC, UNC Health, CHCCS, Carrboro, Orange County and the Triangle region to expand shared fiber networks. | Ongoing | Tim Czupka |

| Project Description | Partners |
|---|--|
| <p>Technology Solutions participates in several groups where the members have fiber assets within the Town. The groups identify needs and the proximity of other members' assets.</p> <p>The goals are to 1) allow the use of spare fiber assets to reduce the construction cost each member would otherwise endure. 2) Create a regional resilient network allowing interoperability, redundancy, data sharing and larger scale analytics.</p> | Triangle Regional Governments, NCNGN members |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|--|----------------|----------------|
| 1. Number of fiber sharing projects completed | 10 | 12 |
| 2. Number of resilience related project identified | 2 | 5 |
| | | |

Other notes/comments on this Strategic Project

Strategic Project 7.

| Council Strategic Goal | | |
|---|--|--|
| Collaborative & Innovative Organization | | |

| Strategic Project | Target Date for Completion | Project Manager |
|--|----------------------------|-----------------|
| Develop an innovation support system/group | Ongoing | Scott Clark |

| Project Description | Partners |
|--|---|
| <p>The innovation support system/group would have the following functions:</p> <ol style="list-style-type: none"> 1) Improving government and citizen services 2) Enhance sustaining processes and technologies 3) Introduce disruptive processes and technologies 4) Prioritize efforts and projects 5) Improvements in digital literacy and community broadband services 6) Engaging with the civic technology community | All Departments, Citizen groups and Business Partners |

| Project Resources | Budget (in dollars) | Account Number |
|---|---------------------|----------------|
| Financial Resources: | | |
| Technology Needs: [if applicable, describe technology needs here] | | |

| Outcomes & Performance Measures | FY19 Q1 Status | FY19 Q4 Target |
|---------------------------------|----------------|----------------|
| 1. Projects supported | | |
| | | |
| | | |

Other notes/comments on this Strategic Project