CITY OF CHARLOTTE

TECHNOLOGY STRATEGIC PLAN

FOR CALENDAR YEARS 2021 - 2025

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EXECUTIVE SUMMARY

The primary goal of the Technology Strategic Plan is to help enable the Mayor, City Council, and City departments to achieve the desired strategic business outcomes and improve overall citizen engagement and experience with the City's services. This plan outlines the key strategic priorities and supporting initiatives across a five-year roadmap. Our consolidated technology organization operates using a centralized and distributed support model, with a common mission. Using a set of key technology themes that best help us achieve City of Charlotte business objectives, the Innovation and Technology department will work with the other city departments to identify and execute upon the desired investments. Those responsible for planning or funding technology investments for the city should review this document and account for the goals spelled out here as part of any technology investment planning.

CITY OF CHARLOTTE TECHNOLOGY VISION: TO PROVIDE AN OUTSTANDING CUSTOMER AND EMPLOYEE EXPERIENCE AS THE CITY'S UNIFIED AND TRUSTED TECHNOLOGY PARTNER

How will this plan be used?

This plan will provide technology guidance for the city and set the technology strategic priorities as identified to help identify which investment needs will be prioritized for funding requests. There are also a number of metrics identified which will be tracked on an annual basis to provide a gauge of how well things are progressing.

What are the city's Technology Strategic Priorities and how did we get there?

As the rest of this document will expand on, the strategic priorities shown are where we need to focus for the next 5 years to best ensure technology efforts are contributing to the business needs of the city. These were identified by the Innovation & Technology leadership team over the course of a multi-month exercise of reviewing city and departmental business objectives and technology industry trends. This team will continue to monitor progress on these goals and adjust the plan as the needs of the city evolve.

Enabling Business

Collaboration

Digital Engagement

Data & Analytics

Technology Resiliency

Our People

BUSINESS PRIORITIES

The city's business priorities drive our technology strategy. The summarization of those priorities was gathered from 3 primary channels. 1) Council Strategic Priorities were developed this year and well-defined within the FY2020 Budget Book. 2) Although still in development, the 2040 Comprehensive Plan is well into development and seeks to guide city planning activities for the next several years. 3) Business objectives directly from the departments were gathered both by interviewing departments directly and by looking at their summaries in the FY2020 Budget Book.

COUNCIL STRATEGIC PRIORITIES

At the January 2020 City Council Annual Strategy Meeting, strategic priorities were confirmed, with a focus for FY 2021 on Accessibility, Mobility, and Connectivity. While COVID-19 is necessitating a shift in operations to deal with the most immediate needs, the strategic priorities serve to set a focus on the higher-level policy framework needed to guide the city's recovery and progress forward. The strategic priorities defined by Council will guide decision making and align resource allocation:

ECONOMIC DEVELOPMENT (ECONOMY, JOBS AND UPWARD MOBILITY)

Building and maintaining a successful business climate and workforce talent; including the number of jobs with sustainable wages/benefits, economic opportunity for all residents and encouraging business development, innovation and entrepreneurship.

NEIGHBORHOOD DEVELOPMENT (SAFE, HEALTHY, AND INCLUSIVE COMMUNITIES)

Building and maintaining great neighborhoods with a focus on community relations, safety, and housing.

TRANSPORTATION AND PLANNING (ACCESSIBILITY, MOBILITY & CONNECTIVITY)

Anticipate and plan for the growth of the community and safeguard the environment. Address growth with strategic investments, building and maintaining a comprehensive transportation network and placemaking strategies that encourage connection between neighborhoods and employment centers.

WELL-MANAGED GOVERNMENT (EFFICIENT, EFFECTIVE, ACCOUNTABLE, RESPONSIVE, INCLUSIVE AND CUSTOMER FOCUSED)

Ensuring the city demonstrates leadership in financial stewardship, reviews best practices, and ensures consistency in approach with an emphasis on effective and efficient services that are accountable, customer focused, and inclusive.

A Comprehensive Plan guides our growth to achieve the physical structure we want for Charlotte in 20 years. A shared vision of our growth, development and capital investments. This effort seeks to pair citizens and staff alike to answer the question "How do you want Charlotte to grow over the next 20 years?". Data collection contributing to this plan has been going on for the past few months and at a high-level has revealed a need for us to grow around 5 core themes:

INCLUSIVE & DIVERSE

Welcomes and accommodates all people. Addresses risk of displacement from gentrification; housing, goods and services at diverse price points; and fair environmental policy.

LIVABLE & CONNECTED

Provides all parts of the city public services and infrastructure, multi-modal transportation and complete neighborhoods with convenient access to goods and services.

HEALTHY & SUSTAINABLE

Incorporates sustainability and all aspects of resiliency. Addresses access to healthy food, health care facilities and recreation and plans for climate change.

PROSPEROUS & INNOVATIVE

Leverages growth to benefit all residents equitably. Supports employment opportunities, upward mobility, education, job-training, and innovative entrepreneurs.

REGIONAL

Embraces Charlotte's role as the center and improves political, social, and economic linkages and other critical regional connections.

DEPARTMENTAL BUSINESS PRIORITIES

The departments also maintain priorities to align with City business objectives, but specific to their core functions. These were also reviewed and discussed in the process of identifying technology direction. Here is a summary:

AVIATION
Mission: *We will be the preferred airport and airline hub by providing the highest quality product for the lowest possible costs.*
Highlighted Objectives:
- Infrastructure growth that provides access to the Charlotte Douglas International Airport
- Maintain and support Charlotte's transportation assets

CHARLOTTE AREA TRANSIT SYSTEM
Mission: *To improve the quality of life for everyone in the greater Charlotte region by providing outstanding community-wide public transportation services while proactively contributing to focused growth and sustainable regional development.*
Highlighted Objectives:
- Service effectiveness
- Provide transportation choices

CHARLOTTE WATER
Mission: *Charlotte Water provides reliable, high quality services to our community through valued employees, financial stability, and environmental stewardship.*
Highlighted Objectives:
- Enhance customer satisfaction through responsive service
- Promote customer safety through the delivery of clean water

CITY ATTORNEY
Mission: *Ensure that appropriate legal services are provided in accordance with the highest professional and ethical standards.*
Highlighted Objectives:
- Timely public records responses
- Enhance Attorney staff efficiency in technology

CITY CLERK
Mission: *Provide professional support and the best in customer service to the Mayor and City Council, staff, and the public that encourages transparency and participation in city government, accessible and accurate public information and official records.*
Highlighted Objectives:
- Maintain permanent history of government actions
- Enhance public access to government records

COMMUNICATIONS
Mission: *To develop innovative and strategic communication and marketing solutions that advance the city's overall vision and tell the stories that shape Charlotte.*
Highlighted Objectives:
- Increase effective citywide communications efforts
- Create consistent branding for the city

COMMUNITY RELATIONS
Mission: *To empower, collaborate, engage, and promote opportunities to create positive outcomes.*
Highlighted Objectives:
- Improve service delivery to Community Relations members, volunteers, customers, and partners
- Investigate housing discrimination

ECONOMIC DEVELOPMENT
Mission: *Economic Development's mission is to help Charlotte's businesses and residents thrive. Collectively, the team advances the community through building great places, creating a climate where all businesses innovate and prosper, and developing a diversified talent pipeline.*
Highlighted Objectives:
- Increase business relocations and expansions
- Support minority small businesses

FINANCE
Mission: *Finance emphasizes a service-oriented, team approach to providing financial information, systems and policies that meet fiduciary and regulatory responsibilities, address the operational needs of the city's departments and serve the needs of our residents.*
Highlighted Objectives:
- Follow Generally Accepted Accounting Principles to create an accurate Comprehensive Annual Financial Report
- Provide timely payment to vendors

FIRE
Mission: *The Charlotte Fire Department is called to serve all people by minimizing the risk to life and property through professional response, mitigation, prevention, education, planning, and community partnerships.*
Highlighted Objectives:
- Timely response to calls to 911: Receipt of call to phone pick-up
- Efficient dispatch of companies: phone pick-up to dispatch

GENERAL SERVICES
Mission: *Guide agencies through innovative and efficient deployment of resources to meet their missions and fulfill the needs of the city in a rapidly evolving environment.*
Highlighted Objectives:
- Partnering with customers to approve development plans in an efficient and collaborative manner that helps to build a safe and thriving community
- Maintain energy use practices so city facilities compare favorably with available benchmark information in the South Atlantic region

HOUSING & NEIGHBORHOOD SERVICES
Mission: *Housing & Neighborhood Services focuses on creating vibrant, diverse neighborhoods through the delivery of five major service areas: CharMeck 311; code Enforcement; Community Engagement; Equity, Mobility & Immigrant Integration; and Housing Services*
Highlighted Objectives:
- Preserve and create attractive and environmentally sustainable neighborhoods
- Provide services that meet the needs of 311 call center customers

HUMAN RESOURCES
Mission: *Help employees thrive by providing the city's workforce valuable access to comprehensive benefits plans, learning and development opportunities, and competitive compensation, to meet the unique and changing needs of the workforce throughout the states of their career life cycle.*
Highlighted Objectives:
- Create an enhanced applicant experience through increased recruitment and selection transparency
- Review administrative policies with the goal of breaking down barriers to employment through a focus on diversity, equity, and inclusion

INNOVATION & TECHNOLOGY
Mission: *To innovate, deliver, and secure technologies that empower Charlotte.*
Highlighted Objectives:
- Educate customers, promote transparency, and enhance accountability to customers
- Improve effectiveness and efficiency through Organizational IT alignment

INTERNAL AUDIT
Mission: *To provide reasonable assurance the city has an operating and effective system of internal controls.*
Highlighted Objectives:
- Deliver competitive audit services to facilitate a well-managed government

PLANNING, DESIGN & DEVELOPMENT
Mission: *To provide integrated planning services, create great places for our community, guide growth with innovative and creative solutions, sustain our natural environment and community character, and design vibrant and inclusive places.*
Highlighted Objectives:
- Partner with our customers to approve development plans in an efficient and collaborative manner that helps build a safe thriving community

POLICE
Mission: *The Charlotte-Mecklenburg Police Department builds problem-solving partnerships with residents to prevent the next crime and enhance the quality of life throughout the community, while treating people with fairness and respect.*
Highlighted Objectives:
- Reduce victimization
- Build trust and confidence with the community

SOLID WASTE
Mission: *To protect the public health of the City of Charlotte by providing services, in partnership with the community, that deliver environmentally friendly collection programs that are safe, competitive, and efficient.*
Highlighted Objectives:
- Maintain a clean city for all residents
- Reduce harmful greenhouse gas emissions

STRATEGY AND BUDGET
Mission: *To prepare a balanced annual budget that prioritizes community and organizational needs while supporting the goals of the city, and to increase efficiencies of city services through research, analysis, and long-range planning strategies.*
Highlighted Objectives:
- Prepare high quality budget documents that follow best practices
- Promote strong financial management

TRANSPORTATION
Mission: *To connect Charlotte and enhance the driving, bicycling, and walking experience by providing a safe and efficient multi-modal transportation system that supports economic mobility and sustains the community's quality of life.*
Highlighted Objectives:
- Advance transportation projects supporting growth, walkability, bicycle-friendliness, and Vision Zero action plan
- Maintain existing infrastructure

TECHNOLOGY STRATEGIC PRIORITIES

The strategic planning process includes gathering, reviewing, and collectively analyzing the business objectives presented to this point. The planning process identified areas within our technology practice that could best contribute to the goals of the city. This section outlines a brief overview of those strategic themes and capabilities. Technology professionals and others that plan for technology investments within the city will focus on these as part of any technology planning activities.

OUR PEOPLE

People are the most valuable asset for every department, not just I&T. It's our first duty to make sure our people are knowledgeable, well-trained, and engaged in their roles. By doing this, we ensure that they will be at their best when trying to solve business problems with technology. Some of the ways we're seeking to do this are:

- Giving high performers opportunities for growth, both through technical and management paths
- Implement improvements identified within the job classification study
- Progress culture development of our New I&T department using the OneTeam framework
- Establish a customer service mindset by inspiring and rewarding people for operational excellence

TECHNOLOGY RESILIENCY

It's not only important that we provide innovative solutions to problems, but also that these solutions are designed to be highly reliable and to stand the test of time. This priority focuses on 2 key paths to achieving this; (1) applying disaster recovery principles in our designs and (2) investing in cloud technologies, both moving infrastructure to the cloud (Infrastructure as a Service [IaaS]) and moving entire applications to the cloud (Software as a Service [SaaS]). The programs below are a few of the ways that we'll do this:

- Enhance critical application redundancy
- Establish plans for recovery of non-critical applications
- Increase citywide cloud computing footprint
- Build IT infrastructure framework and roadmap to support mobility and collaboration

DATA & ANALYTICS

The term Business Intelligence (BI) refers to technologies, applications, and practices for the collection, integration, analysis, and presentation of business information. The purpose of this ever-growing practice is to support better business decision making. The city's belief in the value of BI is evident, as investments in it have evolved in nearly every department over the years. As we continue to work to bring these ideas together, we'll be focusing on 3 key areas in coming years:

- Modernize data technology to support insights and decision making
- Leverage internet of things (IoT) and machine learning to support operational adjustments
- Drive toward better coordination of service delivery through data integration

DIGITAL ENGAGEMENT

Our citizens have an increasing expectation of being able to access our services from the palm of their hands. While we've made some strides toward this end, we still have many opportunities for expanding our digital presence. Factoring in investment complexity and cost, we seek to work together on improving digital engagement in the coming years

- Modernize CharlotteNC.gov web platform
- Coordinate mobile offerings
- Expand community camera coverage through the Smart Charlotte / Community Connect program
- Advance digital equity goals with the city's Access Charlotte program

COLLABORATION

We've grown leaps and bounds over the years and so have our investments in technology. Some of these were more collaborative, with an enterprise perspective, while others were more departmentally focused, to solve an individual business problem as quickly and efficiently as possible. Over time, we've rationalized our investment opportunities to ensure efficient use of city resources, while supporting differentiation in department services. The need to collaborate spans all aspects of technology, here are a few of the key initiatives we're seeking to improve on:

- Expand use of the consolidated video management system platform
- Establish unified electronic document management platform
- Deploy automatic vehicle location (AVL) to all city vehicles

ENABLING BUSINESS

One of our biggest roles as a support department is simply to enable the requests of departments to carry out their business. Sometimes those will match up with a technology strategic priority, but often they're simply technologies that help them meet the demands of their own customers. There are also some projects pursued at an enterprise level that are notably for the purpose of allowing departments to better accomplish their own missions. Here are some initiatives that are key to enabling business:

- Implement enterprise digital collaboration tools
- Advance efforts to support a more digital government (Think Paperless!)
- Continue preparing the organization for a long-term mobile workforce
- Support the execution of departmental projects across the enterprise

BUSINESS ALIGNMENT

How do the technology strategic priorities contribute to the business strategy components explained earlier in this document? The final list of priorities was chosen from a much larger field of possibilities. Ultimately, the selected priorities were those that best aligned with city business objectives. The 2 matrices below demonstrate the linkages with the Council Strategic Priorities and the 2040 Comprehensive Plan.

WITH COUNCIL STRATEGIC PRIORITIES

		Council Strategic Priorities			
		Economic Development	Neighborhood Development	Transportation and Planning	Well-managed Government
Technology Strategic Priorities	Our People	✓			✓
	Technology Resiliency				✓
	Data & Analytics	✓	✓	✓	✓
	Digital Engagement	✓	✓	✓	✓
	Collaboration		✓	✓	✓
	Enabling Business	✓ *	✓ *	✓ *	✓ *

* Enabling Business alignment varies based on which part of the organization is investing

WITH THE 2040 COMPREHENSIVE PLAN

		2040 Plan Themes				
		Inclusive & Diverse	Livable & Connected	Healthy & Sustainable	Prosperous & Innovative	Regional
Technology Strategic Priorities	Our People	✓			✓	
	Technology Resiliency				✓	✓
	Data & Analytics	✓	✓	✓	✓	✓
	Digital Engagement		✓		✓	✓
	Collaboration	✓			✓	✓
	Enabling Business	✓ *	✓ *	✓ *	✓ *	✓ *

* Enabling Business alignment varies based on which part of the organization is investing

TIMELINES AND PROGRESS

Priority / Initiative	2021	2022	2023	2024	2025
Our People (*completed last cycle: Classification study & alignment*)					
Provide growth opportunities	──→				
Implement classification improvements	──→				
OneTeam Culture Development	──→				
Technology Resiliency					
Application redundancy	──→				
Recovery plans	──────────────────────────→				
Increase cloud footprint	──────────────→				
Data & Analytics					
Data driven decision making	──→				
Modernize data technology	──────→				
Service delivery through data integration	──→				
Digital Engagement					
Modernize CharlotteNC.gov platform	──→				
Coordinate mobile offerings	──→				
Expand community camera coverage	──────→				
Improving digital equity with public WiFi	──→				
Collaboration (*completed last cycle: IT Alignment, Digital Collaboration Direction*)					
Video management system	──────→				
Electronic document mgt platform	──────→				
Deploy AVL to all city vehicles	──────→				
Enabling Business					
Collaboration tool implementation	──→				
Long-term mobile workforce preparation	──→				
Support departmental projects	──→				

2020 CHALLENGES AND SUCCESSES

2020 has been a year of unique challenges and opportunities. Innovation & Technology has come together as "One Team" to address external and internal needs in a unified and collaborative fashion. Here are some examples of the efforts that continue to bring us together as a team:

PROJECT UNITE

One factor influencing technology work this year was a technology staff consolidation, dubbed Project UNITE. Prior to this, technology staff had been distributed across more than 20 departments, reducing our overall efficiency and capability. The goal of Project UNITE was to ensure sustained management of information security, technology skills development, and technology cost. It was further intended to ensure the protection of City information and systems, while maintaining business productivity and improving service levels. Project UNITE was completed in March 2020 and took approximately 6 months to execute.

2020 REPUBLICAN NATIONAL CONVENTION

The Republican National Convention offered an opportunity for the city to showcase itself to visitors from all over North America. Planning for this event started well before opening day, and the fact that, due to Covid-19, the event was shortened to two days, did not diminish the technology team's efforts. I&T had to ensure smooth system integration, expanded data and video sharing and find solutions to help support the officer buildup all while ensuring the city operated as normally as possible outside of the event. The RNC Technology Program, encompassing 65 projects, focused on governance and execution of those projects critical to the success of the RNC event.

OUR FUTURE THROUGH DIGITAL EQUITY AND TRANSFORMATION

COVID-19 has helped put a spotlight on the need to accelerate digital transformation efforts across the City of Charlotte. The digital divide in the City of Charlotte has intensified, due to the ongoing pandemic. As a result, the increasing need for remote work and virtual learning has grown significantly. The city recognizes this urgency and has accelerated its commitment for public Wi-Fi on buses, and in neighborhoods and public spaces throughout Charlotte. In addition to meeting an immediate need for students and families, public Wi-Fi will boost economic mobility for Charlotte residents. The Access Charlotte initiative also will support economic development efforts in the Corridors of Opportunity.

In parallel to our Access Charlotte initiative we're also looking at ways to become more digital as a government. The days of in-person interactions being the fallback or even default way of doing business are a thing of the past, and the City is working to transform by utilizing less paper-based systems and services.

Although the paperless workplace has been on our radar, this mass movement to a remote workforce is giving the first real significant driver toward digitizing our processes. Hand carrying documents for signature, storing them in boxes, and reliance on paper is becoming a thing of the past as we further invest in digital signature technologies, electronic document management, and digitization of our manual processes.

Another way we're accomplishing this is through Access Charlotte. The pandemic has redirected many more commercial, social, and educational activities online and highlighted a critical need to provide Wi-Fi for people in Charlotte with cost barriers to internet connectivity. With CARES funding and in-kind support from public and private community partners, the City is pursuing public Wi-Fi enhancements including adding coverage to CATS vehicles, public spaces, and some residential areas. Providing access to the internet to Charlotte residents via the Access Charlotte project will help provide the necessary resources to underserved populations who otherwise might not have access to the internet. This access will not only improve the lives of those benefitting directly, but also the City as a whole in intangible ways by supporting economic and social inclusion. Broadening Wi-Fi capabilities within the city will enable a larger percentage of residents' access to the internet and help reduce the digital divide.