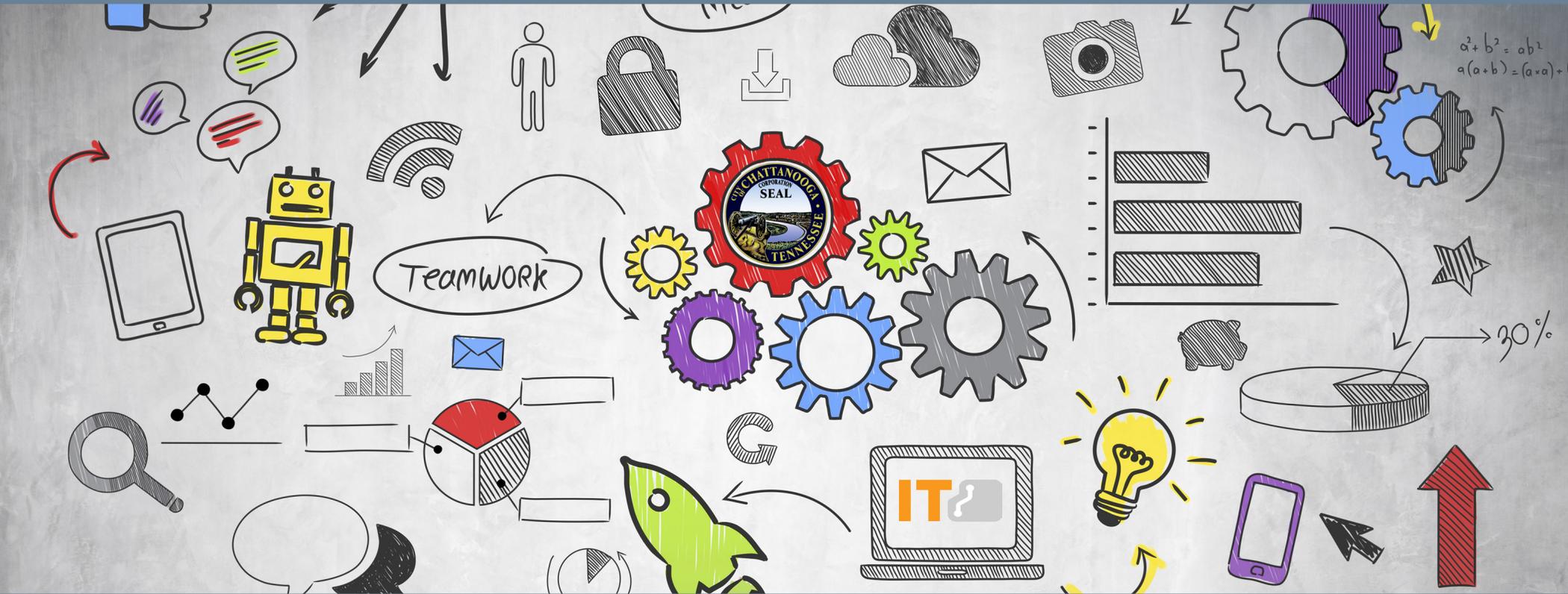


CITY OF CHATTANOOGA

# TECHNOLOGY STRATEGIC PLAN

FY 2015/16 to FY 2017/18



# CITY OF CHATTANOOGA

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# TECHNOLOGY

# STRATEGIC PLAN

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Part 1 Executive Summary

Part 2 Assessment

Part 3 Strategy

Part 4 Implementation

FY 2015/16 to FY 2017/18

## From the Chief Information Officer

This first year that I have been honored to serve as the Chief Information Officer for Chattanooga has been one of the most rewarding and challenging of my entire career. I'm glad to be a part of the large and positive culture shift in the City of Chattanooga as we take account of the past and plan for the future.

Technology is such a vital component in all of our lives that our capability to conduct business within the City using advanced technological means must grow. In time the City of Chattanooga will move to a point where it is conducting business digitally, faster, and more efficiently at all levels. We are a City that embraces mobile and cloud based technologies to enhance our service capability in turn enhancing the lives of our citizens. My vision for technology within the City of Chattanooga is one that is lofty but achievable. After all, we are the innovative and forward thinking Gig City.

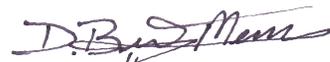
The plan outlined in this document serves as a synopsis and repository of IT strategies for the City of Chattanooga focused over the next three years, but looking out long-term as well. This document is only a snapshot in time, the plan itself goes beyond the pages of this document. It is a living plan that we use frequently as a way for IT to reflect on the decisions we have made, the outcomes those decisions bring about, and the decisions we have yet to make as a result. My vision for IT as a department coincides with my vision of technology throughout the City of Chattanooga. To be as useful and efficient as possible, while constantly looking to improve and innovate.

This plan represents a continuous effort by every staff member of the Department of Information Technology to make the implementation and use of technology throughout the City of Chatta-

nooga the most efficient and effective possible. If our strategy could be summed up in a single word, that word would be **value**. That is what we strive for every day is to add value back to each department, agency, and partners we work with to best serve the citizens and businesses of this great city. This is no easy task either. We in IT know we have a long way to go to achieve our desired outcomes, but we are determined to get there and flexible enough to adapt along the way.

To achieve our goals, we cannot embrace the status quo. We must instead embrace and harness the power of change and seek new ideas to be successful in our mission. We must coordinate efforts, test theories and processes, communicate readily and openly, and most of all not be afraid to make mistakes along the way. If we work smart, do our due diligence, plan as thoroughly as possible, and still come up short, then we have at least learned and can apply the knowledge from that result to the continuation of efforts we make in the next sprint for the goal.

Constantly improving our efforts to become lean and efficient, continue to build a great culture and environment where staff can flourish, continue to attract solid performing IT talent, and continue our journey to move out of our reactive state and become proactive innovators. Constant improvement is our constant companion in IT, because if we are not continually improving, we are continually falling behind.



**D. Brent Messer**  
Chief Information Officer  
CIO@chattanooga.gov



## INTRODUCTION

Technology is a vital component of any modern organization regardless of the organization's origins or status. At the City of Chattanooga, technology plays a critical strategic role in the service delivery for the citizens and businesses of Chattanooga. 2014 was the first year a technology strategy for the City was written, but there has always been a desire to use technology to enhance the delivery of the City's business units. A formal IT planning process was introduced early in the second quarter of 2014 (FY14-15) that includes regular technology strategic planning sessions with all areas of the City, a formal governance process consisting of a Technology Planning Committee (TPC), and regular performance goal tracking sessions within the IT department. All culminating in a formal three-year technology strategic plan tied with the City's budget process and updated on an annual basis.

## IT PLAN SUMMARY

While every attempt is made to be as comprehensive as possible, this document, which is just a snap-shot in time for IT strategy, is published once annually. The plan is a three year plan, but internally is a living document. This means that IT leadership is working on the plan year round with tweaks and modifications to realign the plan as needed and at the end of each year the written plan is evaluated holistically and updated before re-publishing the next three year strategy.

## BACKGROUND

In early 2014 the Department of IT and technology throughout the City of Chattanooga was in a less than desirable state. While some significant progress has been made over the last year, there is still a great deal of work remaining to get the IT department from its reactive state to its desired state of being pro-active and innovative.

## KEY CONCERNS

The largest immediate area of concern is the aging infrastructure throughout the City. This is a top priority for IT to replace and re-engineer our network infrastructure, which includes our telecommunications systems, and Wi-Fi

infrastructure. Also of concern are the aging core applications throughout the City. A recent approximate estimation of the average age of all technology throughout the City is around fifteen years old. That is well beyond a lifetime for technology. One critical concern is with the lack of resources to handle the enormous workloads the Department of Information Technology is faced with. As of the date of this document, the IT Department can only handle 13% of the workload demand on the department. This is inclusive of all City-wide technology projects, requests for service, and regular operations. Efforts are in place to mitigate some of the reasons for the less critical demands on staff time. However, even faced with these daunting challenges, staff performance and morale has still increased over the previous year.

## KEY SOLUTIONS

Aside from the complete re-engineering of the entire network physical and wireless infrastructure, one of our key strategies is moving commodity systems into the cloud and taking advantage of managed services as much as possible. This began with the decision to move to Google Services for part of our communications, office, productivity, and storage applications. This overall strategy will eliminate a significant portion of the department's operational workload thereby freeing up several staff to perform more innovative and proactive tasks such as developing new solutions to make the City more efficient. Our cloud strategy is also a contributing factor to our longer-term web and mobile strategy that will make the City's core functions and services more accessible and interactive for citizens and business to utilize, which in

turn is a direct contribution to economic growth and prosperity in the community. Since economic growth is one contributing factor in crime reduction, the strategy also aligns with those efforts by Economic and Community Development, Youth & Family Services, and Public Safety (Police and Fire) as well.



## DEPARTMENT OF INFORMATION TECHNOLOGY ORGANIZATION



Department of Information Technology  
**CITY OF CHATTANOOGA**

### IT MISSION

To serve as the catalyst for technological change and innovation, through shared and integrated information systems.

### IT VISION

To be known as a value-driven proactive partner and noble steward of information systems and innovation.

### IT VALUES

#### Honesty

We are truthful, fair, and open with our partners, ourselves, and the citizens we all serve.

#### Integrity

We adhere to standards of ethical conduct.

#### Accountability

We are accountable for our actions and the quality of work performed individually and in teams.

#### Respect

We are compassionate and courteous in all our interactions.

#### Diversity

We embrace the value and power of diversity in our information systems planning, human resources, and our community.

#### Communication

We encourage open communication and the sharing of ideas to enhance our partner's decision-making processes and our community.

#### Innovation

We are committed to the pro-active consideration and implementation of new ideas and services that add value and prosperity to our partners and the community.

## IT GUIDING PRINCIPLES

- 1** Technology based solutions will be deployed that meet business needs, have a satisfactory return on investment, and provide the best value to the City of Chattanooga.
- 2** Always work S.M.A.R.T.E.R. regarding all technology related goals, objectives, and initiatives; they will be Specific, Measurable, Attainable, Relevant, Time constrained, Evaluated, and when appropriate Reevaluated to provide the best value possible.
- 3** Projects and resource allocation will be managed according to standard project management methodologies and tools (PM-BOK).
- 4** Technology resources will be leveraged efficiently and effectively through the adoption of common standards and shared information.
- 5** Maintain a “pro-active” approach to technology and innovation within the City.
- 6** A partnership, an attitude of collaboration and cooperation will be fostered with all City departments, EPB, Hamilton County, and all other appropriate service organizations in our area of influence when providing services to community stakeholders in order to maximize the use of taxpayer dollars and, as much as possible, provide seamless interaction in delivering governmental technology related services.
- 7** Exploit functional commonality and sharing of data across organizational boundaries when implementing new technologies and business applications, and when possible, strive to capture data once and centralize common services in order to avoid higher costs, duplications of effort, and potential for any error.
- 8** Business processes should be evaluated for re-engineering opportunities where applicable and before they are automated.

## FY 15/16 IT STAFFING

<b>IT Administration Division</b>	(5 FTE)
Chief Information Officer (CIO)	- 1 FTE
Deputy CIO (DCIO) / Dir. IT PMO	- 1 FTE
Executive Assistant	- 1 FTE
Fiscal Analyst	- 1 FTE
Admin. Support Specialist	- 1 FTE

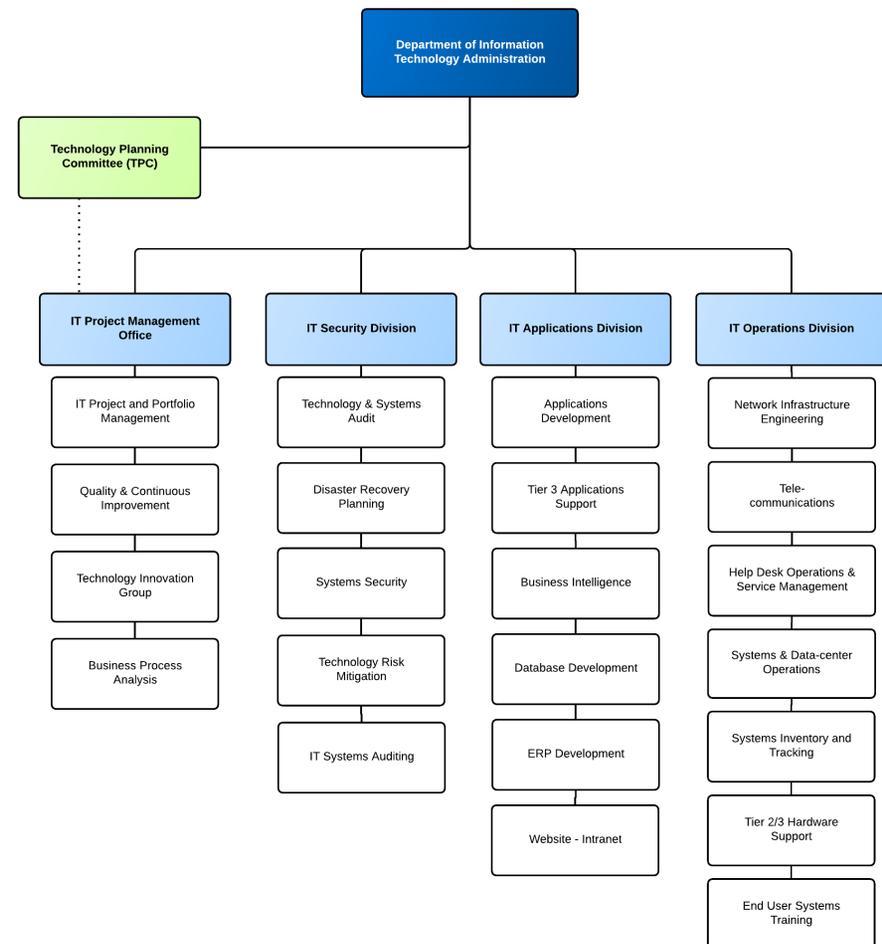
<b>IT Applications Division</b>	(10 FTE)
Dir. of IT Applications	- 1 FTE
Programmer II	- 4 FTE
Programmer I	- 4 FTE
Webmaster	- 1 FTE

<b>IT Operations Division</b>	(22 FTE)
Dir. IT Operations & Inf.	- 1 FTE
Manager, IT Systems & Inf.	- 1 FTE
Manager, IT Operations	- 1 FTE
Supervisor, Telecommunications	- 1 FTE
Coordinator, Help Desk	- 1 FTE
Coordinator, Public Safety Tech.	- 1 FTE
System & DB Specialist II	- 2 FTE
System & DB Specialist I	- 2 FTE
IT Network Analyst	- 2 FTE
IT Network Engineer	- 1 FTE
IT Telecommunications Analyst	- 1 FTE
IT Service Technician II	- 4 FTE
IT Service Technician I	- 4 FTE

<b>IT Project Management Office</b>	(5 FTE)
<i>(Run by the DCIO)</i>	
IT Project Manager	- 2 FTE
IT Business Analyst	- 3 FTE

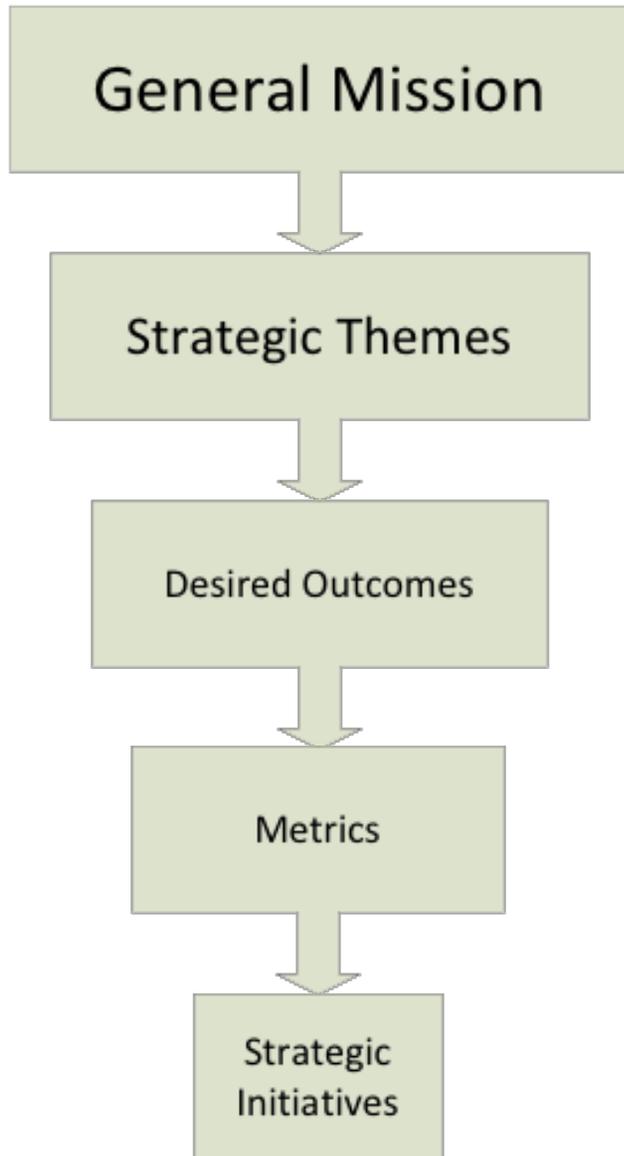
<b>IT Security Division</b>	(2 FTE)
Asst. Dir. IT Security	- 1 FTE
IT Security Analyst	- 1 FTE

**Total Positions Budgeted FY 15/16: 44 FTE**



## Strategy Development

The method we use to develop a strategic plan for technology



### What we do.

**IT MISSION:** To serve as the catalyst for technological change and innovation, through shared and integrated information systems.

### What is important to us.

Operational Excellence | Standardization & Reuse  
Technological Maturity | Sustainability

### What results do we want?

Here is where we fill in the gaps in performance and strategize what initiatives will bring us the results.

### How will we know when we have achieved our desired results?

Data that is measurable to determine that an initiative is having a positive affect and will bring about the correct result.

### What actions will lead to our desired state and results.

The projects we undertake over the course of the strategic plan that will lead to positive outcomes and fill in the performance gaps.

## Strategic Themes

What is important to us. A.k.a. our pillars of excellence.

### Operational Excellence

DIT will strive to be the most efficient and effective we can possibly be. We must constantly look to improve in every way possible, and become as lean as possible. IT must have strong leadership and must build a great culture and an environment that is attractive to the best IT talent, then hire, develop, and retain solid performing IT staff.

### Standardization & Reuse

DIT will implement tailored industry standards and best practices throughout the department. IT will remain centralized, including central acquisition of standardized technology purchasing and governance.

### Technological Maturity

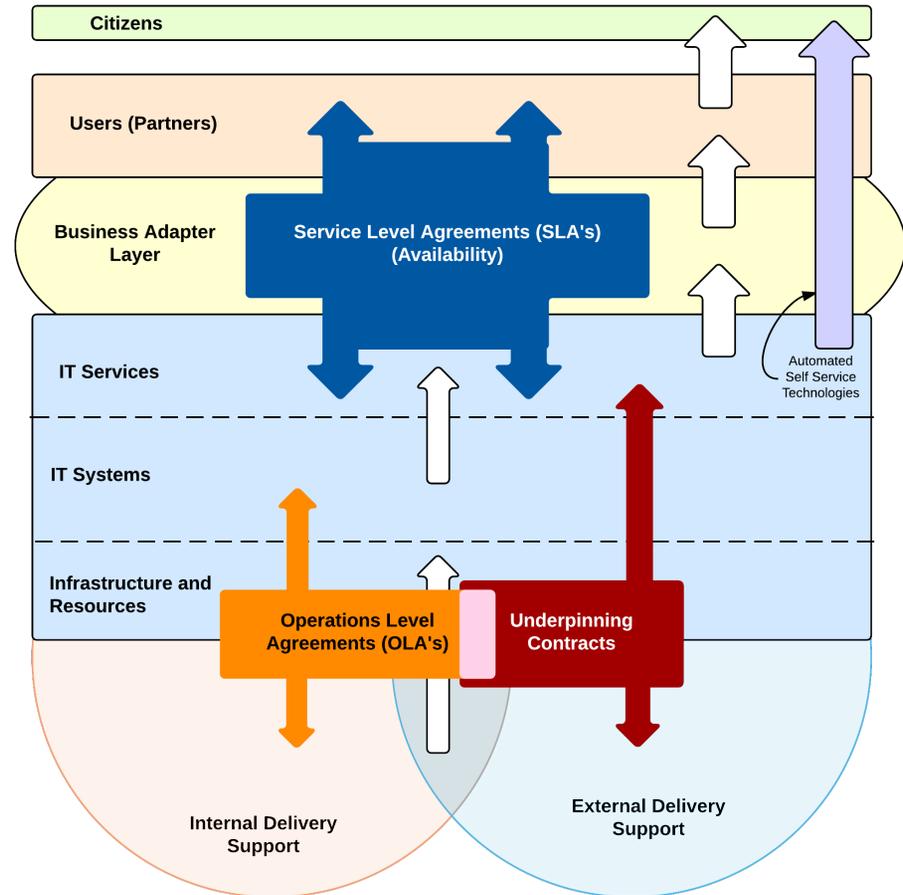
DIT will plan and maintain our enterprise architecture appropriately using the correct methodology, tools, and the City's information capital. A core goal shall always be to keep the technology architecture up to date, and core systems interoperable, wherever feasible and possible

### Sustainability

DIT will look to implement sustainable technologies whenever feasible. IT will strive to utilize lean management practices and constantly improve our processes for peak efficiency. IT will also strive to provide a consistent and constantly improving user experience with focus on formal IT governance, providing excellent functionality of core systems and processes, and being the provider of choice to our partners.

## Service Level Management Supply Chain

The critical elements to supplying our partners and customers excellent service and how they stack up.



### ASSESSMENT OVERVIEW

This section presents the organizational assessment findings and impacts gathered by the incoming CIO in 2014. Note that the material gathered during the assessment period is a “snapshot” of the state of the Department of Information Technology (IT) during the previous year.

### IT ORGANIZATION REVIEW

At the time of the new CIO coming on board on February 3rd, 2014, the Department of Information Technology (then called Information Services) was a small department consisting of 38 FTE made up of several disparate groups of staff and a 311 Division consisting of 10 FTE. The IT Department had a fluid internal organization that promoted communication silos and a lack of accountability. The absence of any written standard procedures, policies, or organized formal functional divisions and

specific responsibilities exacerbated the status-quo mentality of the then department leadership.

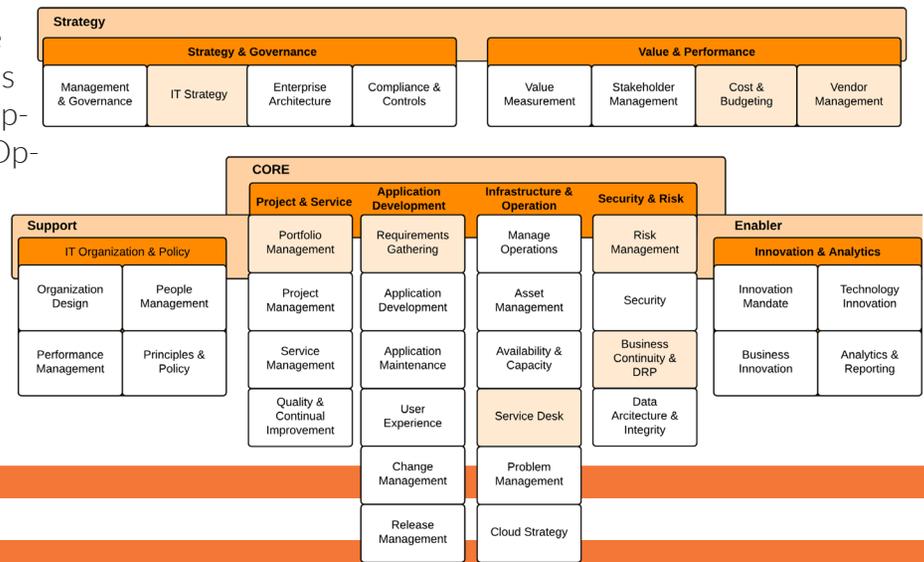
Beginning in July 2014, the department begun to reorganize by breaking down the communication silos and combining several of the disparate mini-groups and teams to create an *Administration Division* and four larger core functional divisions consisting of the following:

- Applications Development Division*
- Operations Division*
- Security Division*
- IT Project Management Office*

This organizational construct groups many of the similar mini-groups, such as networking, systems, helpdesk, et al., into a logical Operations Division that simplifies the organizational structure. The four primary divisions follow the best practices of the IT core competencies. However, beginning in late 2015

through early 2016, the department will be moving to a hybrid Agile framework of Scrum, Lean, and Dev-ops to promote faster production and better accountability. Self organizing teams will eliminates the need for a middle management layer of the hierarchy. The use of laptops and mobile devices will enable the workforce to work from where is convenient while still providing dedicated team work / planning space and quiet space for staff.

CHAgile  
DIT is going Agile!



## PARTNER ANALYSIS

Partners of the Department of Information Technology consist of the internal departments and other agencies of the executive branch.

### PARTNER SATISFACTION AND PLANNING SURVEY

The initial baseline survey of the DIT partners was conducted during the week of March 3rd, 2014. The follow-up Survey (to be conducted each year at the same time) was conducted during the week of January 5th 2015. The survey was undertaken for the following purposes:

- To document where our partners satisfaction and dissatisfaction are related to IT services and to identify any potential gaps in service that cause any disappointment in the partner experience.

- To find out what improvements are important to our partners.
- To discover where IT is lacking in communication and marketing of service offerings to our partners.
- To prioritize the continuous improvement initiatives that will make it easier for IT partners to do their work.

The survey was sent to all City employees with email access with exception of IT personnel for total population of 2,442 City employees. The suggested sample size for this population is 1,665 or more; derived using a 5% margin of error and 95% confidence interval.

Our target response rate was 13% of the population (n=333). The actual total response rate was 14.46% of the population (n=353).

TABLE 1: SAMPLE AND RESPONSES BY CLASSIFICATION STATUS

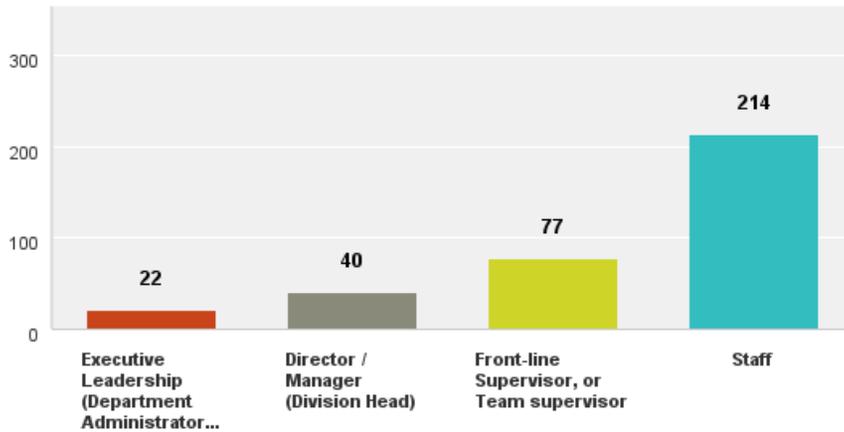
Classification Status	Target No. Responses (Tn)	Actual No. Responses (An)	Actual Response Rate (AR = An/S)	% of total responses (An/n)
Executive Leadership (Department Administrator or higher)	15	22	146.67%	6.23%
Director / Manager (Division Head)	25	40	160.00%	11.33%
Front-line Supervisor, or Team supervisor	50	77	154.00%	21.81%
Staff	154	214	138.96%	60.62%
Sample Size (S) = 2442	n=353			

### 2014 SATISFACTION SURVEY RESULTS

Looking at the results, the total overall satisfaction rate has improved to 83.09% from a rate of 78.61% last year. Given the nature of the improvements made over the last year, this seemingly incremental amount is actually a significant improvement. One we hope to improve even further over the next few years as we continue to improve our services.

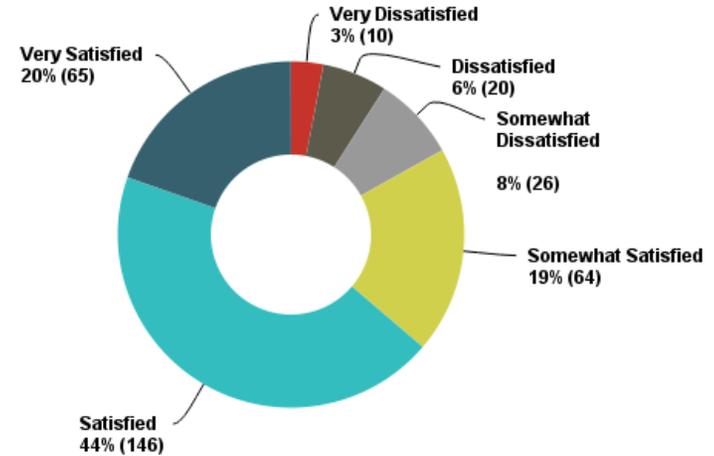
#### Q2 What is your classification status?

Answered: 353 Skipped: 0



#### Q4 How satisfied are you as a whole with the services provided by the Department of Information Technology?

Answered: 331 Skipped: 22



### STATE OF THE DEPARTMENT

There are three distinct states of an IT Department. A reactive state, also known as a fire-fighter or smoke jumper state where IT just reacts to the organization. A proactive state where IT is a trusted partner in the organization. And a strategic enabler state where IT seeks innovative ways to move the organization forward. While fire-fighting is great for our Fire Department, it isn't what IT is here to do, so rather than sitting around waiting for someone in the City to ask for something (service, equipment, etc.), we strive to seek opportunities to enhance our partners technology experience and add value back to what the City does everyday.

Currently, DIT is transitioning across all three levels. In just one year (less in some areas) DIT has moved from a 100% level 1 reactive state to a nearly full level 2 proactive state. While there are still some lingering areas of level 1, DIT is actively working on the initiatives in our strategic road map that will complete the transition to level 2 and in a few cases also move into level 3 by the end of fiscal year 2015-16. Beyond that, the sky's the limit.

**KEY:**

The areas of colored text (the color of the area respectively) indicate current 100% state. Areas of black text are transitional.

	Level 1	Level 2	Level 3
	<b>"Smoke Jumper" - Reactive State</b>	<b>"Trusted Partner" - Proactivate State</b>	<b>"Innovating" - Strategic Enabler</b>
<b>Projects</b>	<ul style="list-style-type: none"> <li>▶ No formal Project Management Process</li> <li>▶ Projects are not governed and mostly are focused on core IT delivery</li> <li>▶ Unknown project benefits</li> </ul>	<ul style="list-style-type: none"> <li>▶ Organization is involved in project approval</li> <li>▶ IT balances strategic / Operational projects</li> <li>▶ Project demand is known</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT Leads project recommendations</li> <li>▶ IT works with the organization to generate new sources of value</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>▶ Majority of IT systems are legacy or in poor shape</li> <li>▶ Infrastructure is unstable</li> <li>▶ Application portfolio is unknown</li> </ul>	<ul style="list-style-type: none"> <li>▶ Technology roadmap is defined</li> <li>▶ Operational costs are being reduced &amp; duplicate systems are decommissioned</li> <li>▶ Applications and infrastructure are enabling organization services</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT uses/develops industry leading technology</li> <li>▶ Disruptive technology enables the business</li> </ul>
<b>Processes</b>	<ul style="list-style-type: none"> <li>▶ Processes are not performed or documented</li> <li>▶ Strategic &amp; core processes are not known</li> </ul>	<ul style="list-style-type: none"> <li>▶ Core IT processes are performed &amp; predictable</li> <li>▶ Strategic processes are being established</li> <li>▶ IT is automating business processes</li> </ul>	<ul style="list-style-type: none"> <li>▶ Processes are leading practices</li> <li>▶ IT is a master of business process reengineering and automation</li> <li>▶ Processes are optimized for cost reduction</li> </ul>

	Level 1	Level 2	Level 3
	 <b>"Smoke Jumper" - Reactive State</b>	 <b>"Trusted Partner" - Proactive State</b>	 <b>"Innovating" - Strategic Enabler</b>
<b>People</b>	<ul style="list-style-type: none"> <li>▶ IT capabilities are unknown</li> <li>▶ IT organization design has not been planned</li> <li>▶ <b>Unclear career path</b></li> </ul>	<ul style="list-style-type: none"> <li>▶ IT organization is aligned by IT function</li> <li>▶ IT capabilities are known and established</li> <li>▶ Career planning is implemented and repeatable</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT organization is aligned by services</li> <li>▶ Capabilities are leading practice</li> <li>▶ IT is best-of-breed at retaining and attracting talent*</li> </ul>
<b>Budget</b>	<ul style="list-style-type: none"> <li>▶ IT Spending is not tracked or poorly tracked</li> <li>▶ Resource spending is unknown</li> <li>▶ Budget planning is ad hoc</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT is able to track project spending by multiple dimensions --costs, services, business lines, strategic goals, planning, etc.</li> <li>▶ Resource Spending is predictable reconciled</li> <li>▶ Costs of IT services are known</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT offers services at "market rates."</li> <li>▶ Budget is linked to value creation activities (outcomes)</li> <li>▶ Strategic Plan is driving force in Budget preparation.</li> </ul>
<b>IT / Organization Alignment</b>	<ul style="list-style-type: none"> <li>▶ The organization sees limited value in IT</li> <li>▶ No established IT governance</li> <li>▶ <b>IT is federated</b></li> </ul>	<ul style="list-style-type: none"> <li>▶ Organization is involved in setting IT direction</li> <li>▶ IT is centralized*</li> <li>▶ IT is viewed as an enabler of business programs</li> <li>▶ IT governance is established &amp; repeatable</li> </ul>	<ul style="list-style-type: none"> <li>▶ IT supports and enables business innovation, industry awareness, and solution creation success path</li> </ul>

**DIT STATE**  
Continued

**KEY:**

The areas of colored text (the color of the area respectively) indicate current 100% state. Areas of black text are transitional.

## The Strategy

Here is where it all comes together. We have assessed the department's status and the status of technology at the City. We know what our current state is and we know where we want to be. A strategy has been devised to close the gaps, so in this section we lay out that strategy and how we will get to our desired state.

We start with a strategy map, which is a visual reference of how each of the capabilities, micro-strategies, and strategic initiatives come together to achieve our desired result. The core of how we work the plan and the specific areas of our core competencies as they relate to different perspectives within the organization.

Next is the road map. This lays out all of our capabilities, micro-strategies, and strategic initiatives on a time-line of when we

would like to see a particular initiative complete, or a capability reached. Even where a core micro-strategy will be most critical to our efforts along the way. The details of the road map items explain what each element in the strategy is.

There is more to a good strategic plan than just stating the core initiatives the department is working on. Creating and sustaining excellent value in the organization takes several strategies, several capabilities, and a string of core practices and competencies that make the results of every initiative meaningful.

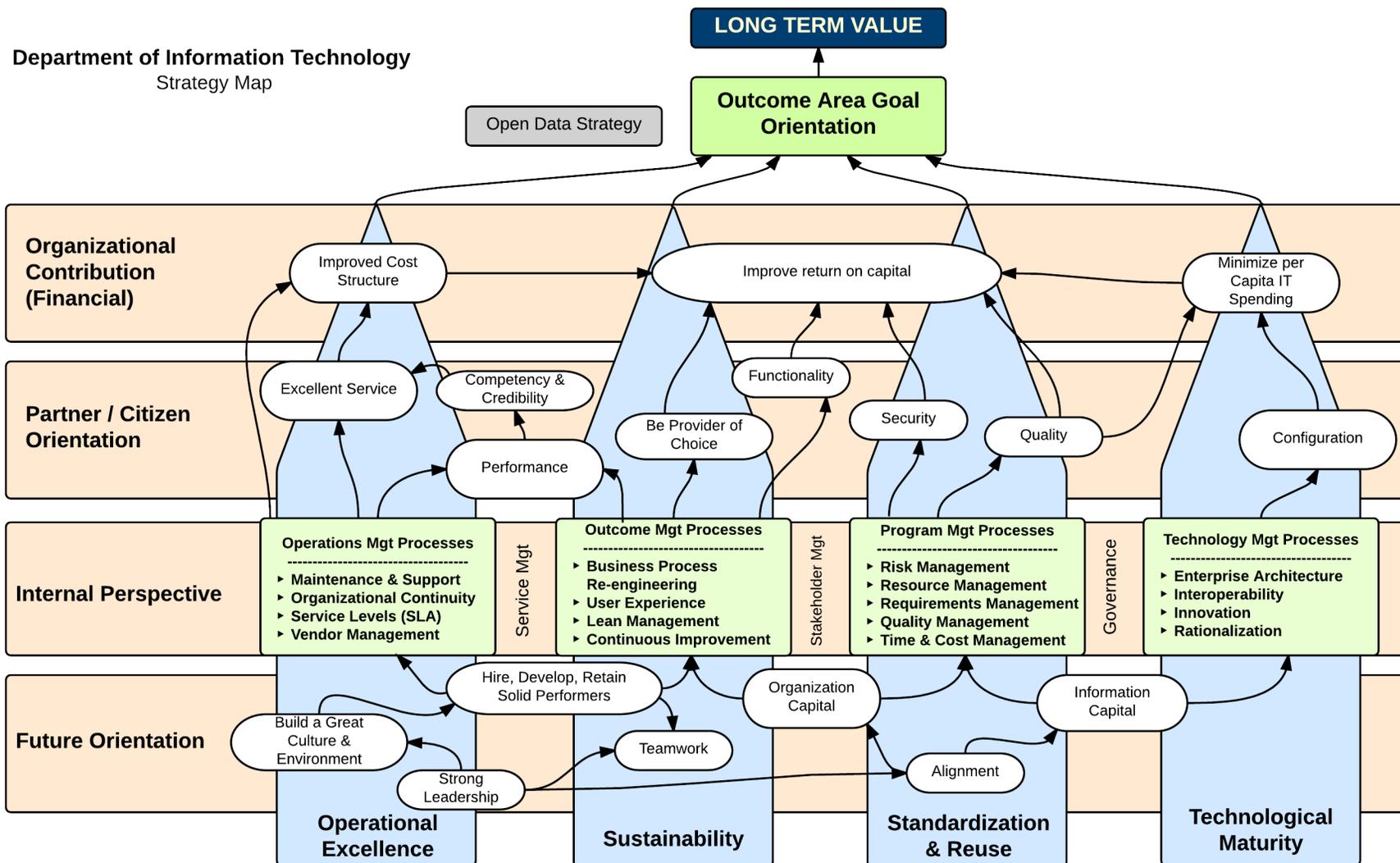
We have no illusions that this plan is just plug-n-play or will be a walk in the park. Many decisions and changes will occur along the way. That is part of being lean and continuously looking to improve.



### STRATEGY MAP

Putting it all together. Taking our pillars of excellence and building out the micro-strategies needed to build long-term value for the

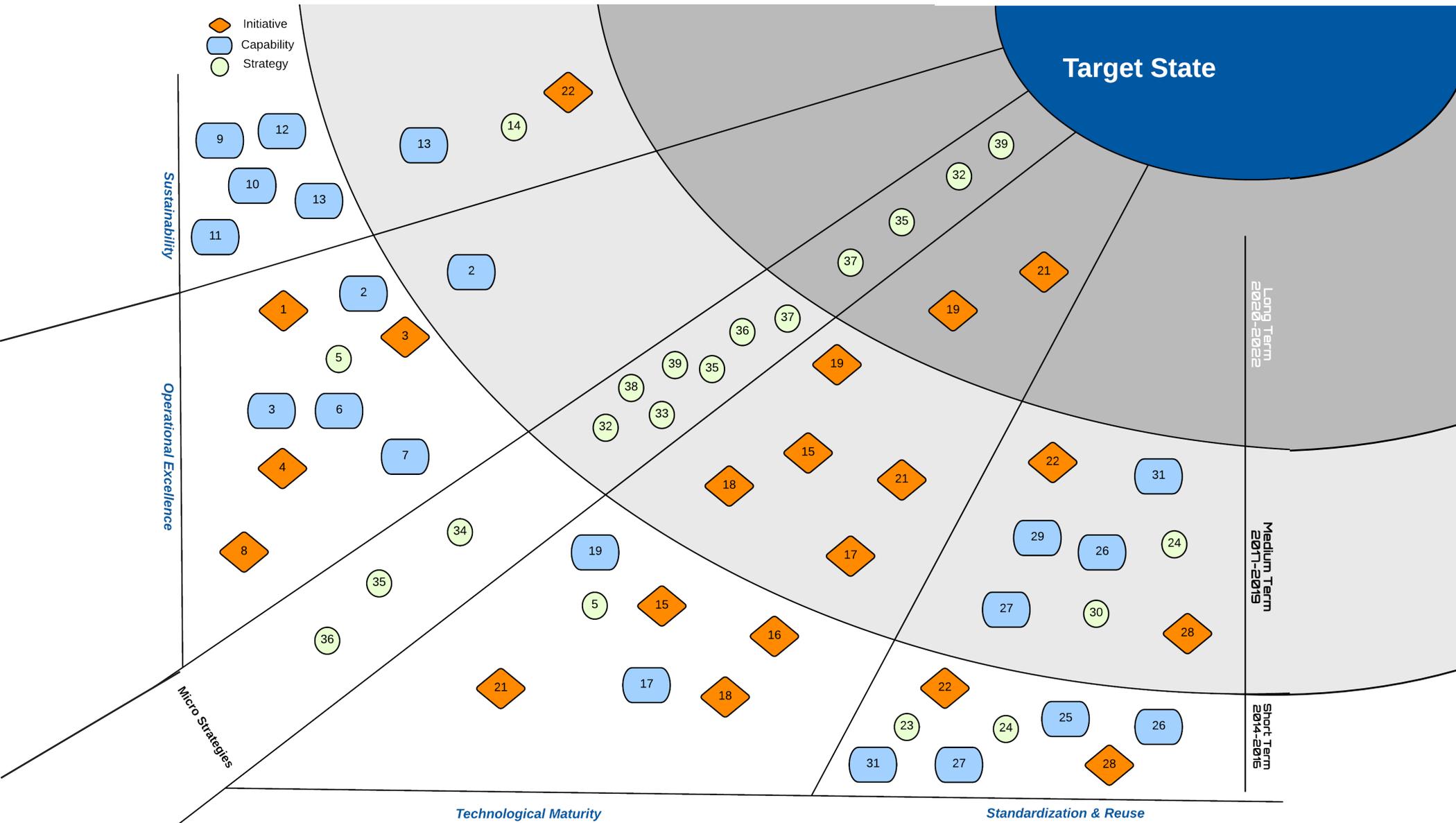
City of Chattanooga. We see these micro-strategies from four basic perspectives: future orientation, internal, partner & citizen orientation, and organizational contribution.



### IT ROAD MAP

A clear road map of initiatives, capacities, and micro-strategies that takes the most recent analysis and creates a map of where we expect to be within a specific time range. What capacity do we need to have, what strategic initiative must be in place, and by when do we expect it to be.

What capacity do we need to have, what strategic initiative must be in place, and by when do we expect it to be.



## IT ROAD MAP

The following pages list the details of the initiatives, capabilities, and micro-strategies the DIT will achieve and the date range it is expected.

Theme / Microstrategy	Capability / Initiative	Description	ST (15-17)	MT (18-20)	LT (21-22)	ID
Operational Excellence	Well Defined Service Catalog	To better establish the full capability of DIT and define what DIT can and can't do for City departments and agencies. Items outside our catalog may be vendor driven.	X			1
	Resource Capacity	Establish and build our resources by establishing partnerships with vendors, sister agencies, and promoting / recruiting top talent.	X	X		2
	Performance Measurements (KPIs)	DIT key performance measures established and used in decision making.	X			3
	Training & Development Plan	Establish a training program for DIT staff to hone key skills, and expand others. The better trained the staff, the better and more efficient thier performance.	X			4
	Coaching & Mentoring	A mentorship program that allows each member of DIT to be a mentor to another member and yet be mentored by others. Shared progression of skills and professional development establishes excellence in our working environment and maximizes performance.	X			5
	Career Path Plan	Establishing a career path and method of promotion to encourage and reward high performers. A clear path to the top and lateral moves to different challenges where possible.	X			6
	SOPs & Policies	Clear, searchable, standard operating procedures and easy access to written policies for DIT staff.	X			7
	Help Desk System & Procedures	Standard procedures to improve customer service across the board and enhance our first-line Help Desk staff performance.	X			8

## IT ROAD MAP: SUSTAINABILITY

Theme / Microstrategy	Capability / Initiative	Description	ST (15-17)	MT (18-20)	LT (21-22)	ID
Sustainability	DR & CoOp Plan	A solid plan and table top exercises to practice disaster recovery procedures and a solid plan to continue operations after a disaster.	X			9
	Tolerance for Innovation	Something that has been in place since 2014 will continue to be solidified in the DIT environment. Innovating means taking some calculated risks and making mistakes acceptable if all due diligence has been done. If you can't make mistakes, innovation will not happen. Failure is an option!	X			10
	Rewards & Recognition	It's important to recognize the successes and efforts of staff. Part of creating an inviting environment where staff are encouraged to take on challenges.	X			11
	Education & Awareness	Education of City staff on specific systems, processes, and methods available to them. Bringing about awareness internally, and externally to promote strategic initiatives and established systems and processes.	X	X		12
	Innovation venues & Forums	Going beyond being proactive is being innovative. Creating opportunities to share ideas and collaborate with peers internally, as well as throughout the state of Tennessee with other government agency IT groups.	X	X		13
	Alternative Funding opportunities	Seeking out grants and other creative forms of funding for strategic IT initiatives within the City.		X		14

## IT ROAD MAP: TECHNOLOGICAL MATURITY

Theme / Microstrategy	Capability / Initiative	Description	ST (15-17)	MT (18-20)	LT (21-22)	ID
Technological Maturity	eGovernment Reconstruction Plan (My Chattanooga)	A holistic and centralized (Single -Sign-On) platform for citizens to use a single account to access a variety of City and City partner services in the Chattanooga / Hamilton County area. Steps toward taking the Gig City farther and making our community smarter. Smart Cities initiative.	X	X		15
	Data center migration	Part of our cloud sub-strategy. Strategically locating and managing our data center to maximize efficiency, access to data, and reduce costs. The strategy calls for using a managed service and off-site partner to host and manage our data center. RFP process is under way.	X			16
	Managed Services	Part of our cloud sub-strategy. To utilize expert specialist vendors to manage and host core systems throughout the City, thereby reducing DIT overhead, personnel costs, and freeing up DIT staff to take on more innovative challenges throughout the City. This strategy reduces costs and increases our workload capabilities.	X	X		17
	Network Reconstruction & Redundancy	The City's network infrastructure is dated legacy equipment that must be replaced as a foundation for other initiatives. Critical to the success of this overall strategy going forward.	X	X		18
	Systems Interoperability	Finding ways to connect disparate systems together to allow the sharing of data among core City systems and processes.	X	X	X	19
	Legacy Systems Reduction Plan	A plan to replace legacy systems with more modern processes and systems, or remove them all together by retiring or reengineering the entire process.	X	X		20
	NoogaNet	City-wide WiFi Initiative. To help bridge the digital divide and bring free WiFi to many public locations in the City.	X	X	X	21

## IT ROAD MAP: STANDARDIZATION &amp; REUSE

Theme / Microstrategy	Capability / Initiative	Description	ST (15-17)	MT (18-20)	LT (21-22)	ID
Standardization & Reuse	Printer Centralization	A sustainability and waste reduction plan to place centralized lease printers within core departments where possible to reduce printing wastes. This includes methods of ensuring that physical contact with the printer is necessary to print. Swiping one's City ID card to actually pull a document sent to a printer from the queue and print it. Reducing paper and toner waste.	X	X		22
	Stakeholder Engagement	We bring in our partners and stakeholders on the decision making process to help ensure the success of an initiative and get the best end result possible.	X			23
	Governance	The standards for enterprise wide IT governance. COBIT 5.	X	X		24
	Inventory	Better inventory tracking and replacement procedures in place to ensure technology is never outdated or the cause of inefficiencies.	X			25
	Capability Planning	With limited resources and funds, strong capability planning is essential to maximize returns and efficiency.	X	X		26
	Software Standardization	Standardization of operating systems, office suites, etc. where possible, decrease maintenance troubles and makes IT Operations more efficient long-term.	X	X		27
	Server Virtualization	Reducing our datacenter footprint reduces overhead and maintenance costs. Virtualization also increases our redundancy and ability to recover in the event of a disaster.	X	X		28
	International Standards Compliance	ISO27001 / ISO27002 / NIST / COBIT		X		29
	Align initiatives with partners	Strategic alignment via governance planning and budget processes to ensure DIT directives and initiative align with partner and City strategy	X			30
	Analytics	Data for decision making.	X	X		31

## IT ROAD MAP: MICRO-STRATEGIES

Theme / Microstrategy	Capability / Initiative	Description	ST (15-17)	MT (18-20)	LT (21-22)	ID
Micro Strategies	Mobility	Focused on mobile device compliance with City services as well as enabling our City workforce to perform their jobs remotely and on the move more easily.		X	X	32
	Unified Communications	Centralizing communications systems where possible, such as CAD systems, etc.		X		33
	Open Data / Open Government	Promoting systems that make dissemination of City records and data easier and more transparent.	X			34
	Cloud	Cloud micro strategy to utilize cloud infrastructure for core City applications where feasible.	X	X	X	35
	Data Management	Plans to effectively manage and utilize effectively central data repositories and the integrity of that data.	X	X		36
	Business Intelligence / Data Mining	Decision support systems (data warehousing)		X	X	37
	Document Management	Centralized electronic document management systems		X		38
	Paperless	In-line with document management methods of reducing or eliminating the need for paper. Ties in with Mobility as well.		X	X	39

## Foundation Strategic Initiatives

Short-term completion projects that lay the foundation for the rest of the strategic plan over the course of the next few years. These initiatives break the barrier from the old status-quo to the new mind-set and capability of IT at the City of Chattanooga. Bringing the Gig-City even farther ahead. The expected outcome of these initiatives have something in common; to push the boundaries of our capabilities and prepare the City to conduct business efficiently and effectively well into the future.

At the very core of these initiatives is a cloud strategy. DIT will push all commodity type services into the cloud and some even position as managed services. This bold move will mean better system integration, faster deployments, faster upgrades, lower over-

head, reduced costs, smaller footprint, and better ease of use for our partners and citizens alike.

Email, document management, data management, communications and more. As we build out our private and public cloud infrastructure combined with new managed services, DIT will enable the City's workforce to be released from the confines of being tethered to a desk or particular method of conducting business. Our users will be mobile. Able to spend more time being productive in the field or wherever they may be at any time they may be working. Combining this strategy with our Open Data initiative also gives us the ability to more easily make common datasets more readily available and keep them up to date.



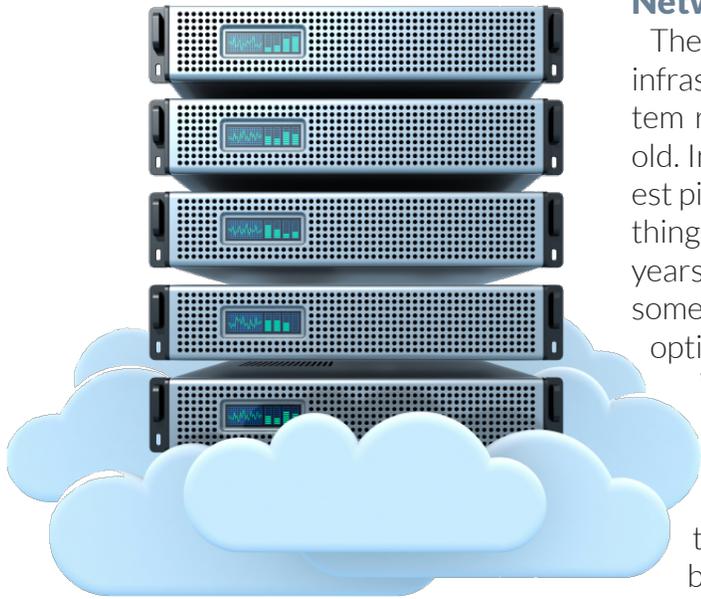
### The Core Strategic Initiative Map

The rest of our strategic initiatives moving forward are dependent on the success of these two micro-strategies and six core strategic initiatives; here's why. We are changing more than technology. We are rebuilding the very essence of DIT and technology at the City of Chattanooga. It's a huge undertaking, but one that is very necessary for

the future. IT does not just provide eMail, so IT's role is not to support Microsoft Exchange or Google gMail, or any other "product." In this example, IT provides "communication" and email just happens to be one of the mediums we use to help our users communicate information. After

all, that is why we are "Information Technology." We provide better ways to use technology to store, disseminate, communicate, read, write, and retrieve "information." These core efforts are going to change the way the City does business and interacts with the citizens and businesses of Chattanooga. The future of technology in Chattanooga starts here.





### Network Infrastructure

The backbone of our network is literally the infrastructure the data-center and each system runs on. This infrastructure is old, very old. In fact if you average the age of the newest piece of equipment, the oldest, and everything in between, it comes to just under 15 years old. That is three lifetimes or more for some technologies. To modernize is not an option, but a necessity that is long over due. We have taken great strides this past year to start cleaning house. Over the next two years or so we plan to finish this critical and time consuming operation to modernize and futurize our backbone.



### Cloud Micro-Strategy

Mobile devices are here to stay and in today's BYOD connected world the City of Chattanooga must position itself to be able to conduct business in a way that takes advantage of these technologies and the leverage they bring.

Mobilizing the City's workforce is a start, but it goes deeper and farther than that. Interoperability is even more crucial today than in the past. Adopting a cloud strategy gives the City the ability to make more data available to more

### Data Center

The other portion of this massive strategic initiative is to move our data-center from its old outdated and very unreliable location to a new modern Tier IV facility. Rather than build our own facility, we will be looking to lease both a primary and co-location to optimize and control overhead and expansion capabilities as we need it. We will be going out to RFP later in FY 15/16 to begin this process, but are strategizing a hosted and managed service solution (IaaS, Infrastructure as a Service) as potentially being the best option for the future. This option has the best ROI, reduces DIT overhead, and frees up DIT staff to tackle more proactive initiatives across the City.

employees across a broader range of systems and roles than has ever been possible before. DIT will capitalize on this and look for private or public cloud options, and other hosted solutions to bring our systems interoperability and data sharing capabilities closer together.

This includes pushing all our core systems' data into the cloud and even looking for managed / hosted solutions for core systems. This frees up DIT staff time for more proactive initiatives, enhances interoperability capabilities, and lowers DIT overhead expenses as

# Google

## Google Apps

We live in a connected world that is becoming more and more mobile every day. To help set a foundation in embracing a mobile workforce and encourage better collaboration among City

staff we have selected Google to partner with. Google apps will bring the level of collaboration and ease of use the City is looking for to not only bring our staff together in collabora-

## NoogaNet

Partnering with EPB, this initiative will bring public Wi-Fi connectivity to public spaces in strategic places throughout areas of Chattanooga, including the waterfront and all City Owned buildings and facilities.



tion better, but also bring the City closer to citizens in collaboration. Gmail will replace our current email system; Drive will become part of our document management solution; Docs will make real-time collaboration on documents possible; Sites could become our integrated staff portal. The possibilities are truly awesome.



## My Chattanooga

My Chattanooga is a lofty but achievable initiative with the goal to re-engineer the City's eGovernment presence from the ground up to be a single sign-on portal for citizens and businesses of Chattanooga. Not only will this make the user experience better, but the goal will be make it so citizens and businesses can more easily conduct business with the City and gain access to a new variety of services. This will be a long-term phased project that will include devising methods to integrate various systems across the City (interoperability) and making data available to other non-native systems where possible. Doing so will increase the efficiency of City staff by making data more readily available while conducting regular City business.