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# SF TIS Budget Hearing FY 2019-20 /20-21

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SAN FRANCISCO  
DEPARTMENT OF  
TECHNOLOGY

Good Morning,

Thank you for the opportunity to share the Department of Technology's accomplishments and upcoming work initiatives.

How annoyed are you when your phone or internet access is slow?

Technology is about speed and delivering information and service to you fast. Easy to use, fast technology is the foundation for increasing productivity and lowering cost.

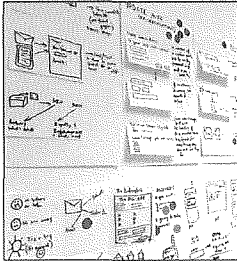
When DT technology saves 50 City staff, a minute a day with faster access to information, the productivity savings is over \$700,000 per year! With modern systems, the speed of government increases which speeds decision making and delivery of services to the community.

San Francisco is the technology capital of the world and the Department of Technology is excited to build, maintain and support City technology that increases the speed of government and lowers cost.

A thank you to the DT Financial Team and Strategic Planning Chief who have helped me prepare for this presentation.

## Department of Technology Mission

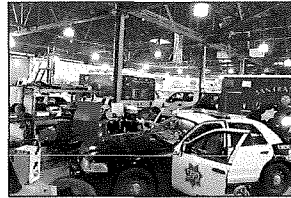
To provide innovative, reliable, and secure business solutions that support and empower CCSF agencies and departments in their delivery of high-quality government services for the public.



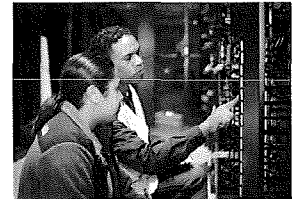
Delivering Innovation



Excellence in Communications



Contributing to Officer Safety



Building Fiber Infrastructure to Secure, Redundant Data Centers



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The Department of Technology is an internal technology services provider to the 55 departments of the City and County of San Francisco.

We provide a wide range of services and this slide shows us at work!

The Department of Technology is comprised of the:

- City Innovation team who manage the STIR and Civic Bridge programs
- EMMY award winning SFGovTV
- Public Safety Division dedicated to radio communications and City fiber installation as well as alerting and camera systems
- City Network and Data Center services which is a core competency

As well as:

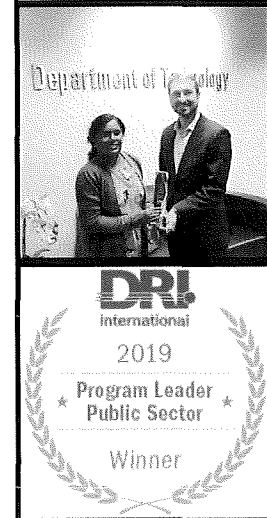
- Technology Project Management Office
- Cyber-security Program
- Customer Service and Help Desk supporting multiple departments
- Office of Justice Technology
- Enterprise Applications and Data for citywide efficiency and productivity

This year, we have serviced 41,000 IT Service requests from City staff. 96% have been resolved within our service agreements time frames.

Technology is exciting, and we strive to make technology simple. We take pride in delivering excellent customer service and increasing staff productivity and delivering outcomes with tech tools!

## Department of Technology Strategic Goals

<b>Future-proof Technologies</b>	<i>Enable City services by building high-performing, sustainable technologies.</i>
<b>Compliant and Secure</b>	<i>Securely manage and protect public assets, services and information with advanced cyber security.</i>
<b>Operational Excellence</b>	<i>Deliver efficient, effective and quality City services enabled by technology, information access, and streamlined processes.</i>
<b>Collaboration &amp; Innovation</b>	<i>Partner with Departments and business community to drive innovation, becoming a smarter, digital City.</i>
<b>Dynamic Workforce</b>	<i>Increase the performance of the organization through our people and our service delivery to achieve City goals.</i>



*Question: What is the Department's strategic goals?*

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The DT conducts a strategic off-site annually and implementation of our plan includes monthly reviews on each area to measure progress against plan. Our Strategic Goals include:

**Future Proof Technologies** – technologies shift quickly. What is useful and relevant today is obsolete tomorrow. DT invests in technologies that support the new world of applications and anywhere/anytime cloud service.






**Compliant and Secure** – every investment in technology requires investments in security. The City's data, systems and services must be secure. DT works to educate the City about the importance of cyber security and how we work to stay out of the news.

**Operational Excellence** – this is the heart of our organization. We offer 18 IT Services to the City and County departments—from networks, cloud services, and VOIP to business applications. We are always focused on improving the delivery and quality of these services.

**Collaboration and Innovation** – innovation is a “culture” as well as projects and the innovation team is building new methods and models to grow and support a culture of innovation in the City.

**Dynamic Workforce** – as exciting as the technology is for all of us, it is really about the people and our ability to create a positive healthy and safe work environment so they can do their best work every day! It is an incredibly competitive landscape in this City to recruit and retain talent and we are committed to building an engaged and dedicated team!

## DT's expenditures and initiatives will deliver productivity and efficiency.

	<b>Future-proof Technologies</b>	Install City's Next Generation Network	\$6.43M
		Replace City phone system to improve mobility & decrease cost	\$3.14M
		Close the Digital Divide with Internet to Affordable Housing	\$1.80M
	<b>Compliant &amp; Secure</b>	Deliver Risk Assessment to City Departments	\$0.20M
		Protect Identity and Systems with Advanced Alerting	\$0.87M
		Unify Cyber Incident Response and Recovery	\$0.15M
	<b>Operational Excellence</b>	Build-up Data-As-A-Service for JUSTIS and other data hubs	\$3.15M
		Reduce Cost, Build Efficiency using Enterprise Systems and Data	\$0.40M
		Support 49 SVN Permit Center Operations	\$1.90M
	<b>Collaboration &amp; Innovation</b>	Create New Opportunities and develop New Models for Innovation Partners – Civic Bridge and Startup in Residency	\$1.2M
		Offer an Innovation Lab for prototyping and testing New Tech!	
	<b>Dynamic Workforce</b>	Offer a Technology Skills Academy!	\$0.20M
		Support staff doing new services, train and align positions	\$0.20M



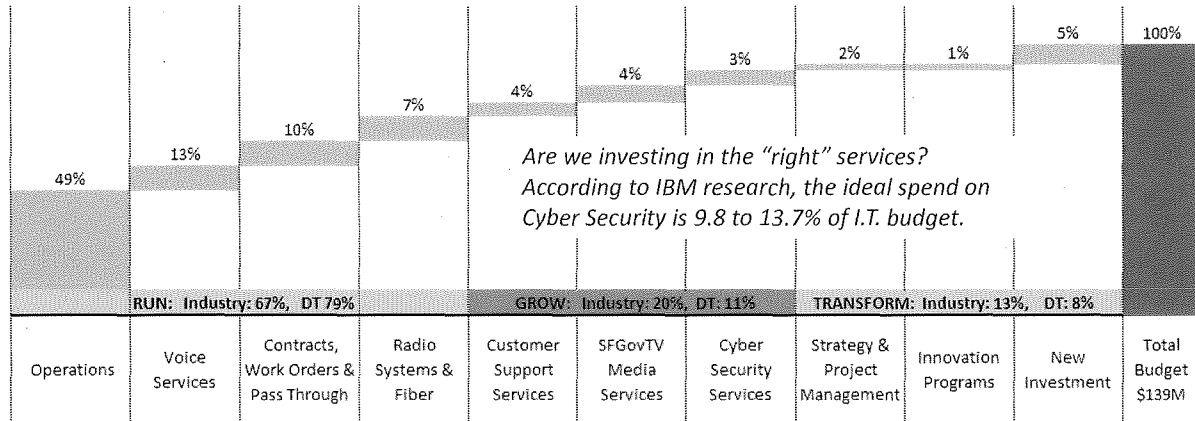
Question: What is the Department's expenditures and major initiatives?  
Question: Where is there growth for new programs/initiatives?

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The following table shows expenditures and change from previous year by cost category:

Category	Net Increase in FY19-20 (in Millions)	% of the Total Increase (\$15.5 Millions)	Justification	Strategic Goals
Salaries & Fringe	\$1.9	12%	* Primarily due to MOU adjustments	Dynamic Workforce
Pass-Thru (double counted as it is also in the requesting department's budget)	\$6.6	42%	* Increasing telecom costs * Permit Center (49SVN) * Procurement requests from other departments (DocuSign, Accela, Microsoft, ServiceNow, NextRequest, Adobe, etc.)	Collaboration & Innovation
COIT & Capital Projects	\$4.2	27%	* Fiber to Public Housing * Telecom Modernization * Network Modernization * SF Cloud Expansion * JUSTIS Mainframe Retirement * JUSTIS Governance Planning	Digital Equity Transformation of Technology Infrastructure
CyberSecurity	\$0.9	6%	* Advance cyber-security with new tools & services (Managed Security Service Provider and Tanium)	Compliance & Cyber-Security
Others	\$2.0	13%	* Replacement for end-of-life equipment * Contractual increases driven by the market (e.g. PBX Maintenance, Smartnet, CA Technologies, etc.)	Operational Excellence
<b>Total</b>	<b>\$15.5</b>	<b>100%</b>		

## DT business services are a collection of services that provide measurable benefit to City business functions.



DT Business Services – Percent of Budget



Question: Where is there growth for new programs/initiatives?

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The graph above answers the question about how DT costs align with services. The percent of budget is compared to IT industry standards in Run, Grow and Transform categories.

Compared to industry standards, the City is spending more for operations (Run) and less for Grow and Transform business areas. Higher operational costs can be attributed to the increasing complexity and size of the technology environment.

Ways to reduce costs:

- Avoid investment delays in large tech projects due to the short lifecycle of technology
- Implement UTN/VOIP and save \$4-5M /year and modernize the environment.
- Move closet data centers to SFCloud and eliminate redundancy and unsecure systems.
- Invest in systems that add cost transparency like Aptio and telephone billing

The contracts DT manages are enterprise procurement vehicles that reduce cost and procurement timeline for technology. Departments purchase from these contracts as needed and DT allocates the expenses. This cost area is increasingly popular and growing. This cost area should not be attributed to the DT increasing expenditure. These are pass through costs.

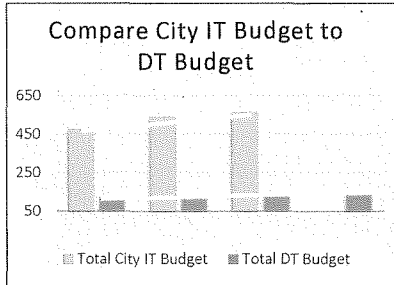
# Technology Use is Increasing in the City

## Over 3 Years

DT is 20% of Total IT Spend

City IT budget increase 19%

DT Budget increase 7%

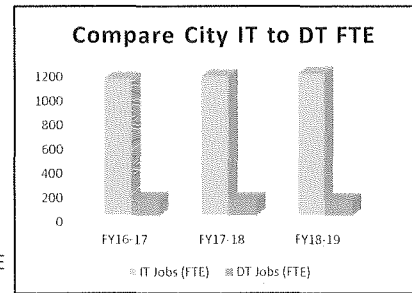


## Over 3 Years

DT is 12% of Total IT FTEs

4% increase in City IT FTE  
(1,129 to 1,171)

7% decrease in DT FTE  
(140 to 130 FTE)



Question: How many new FTEs are included in the budget?

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The DT Budget and Position counts can be compared to overall City IT expenditures and staffing.

- This shows that budgets are increasing at a rate of 19% while DT budget is increase on average over 3 years 7%.
- The rate of staffing increases for the City and DT is significantly lower than the rate of budget growth. DT has seen a decrease in staffing over the last 3 years.

Given the budget growth and the staffing decrease there is risk of service interruptions and “burnout”. DT and GSA HR have worked hard this year to fill vacant positions for operations and strategic initiatives. Hiring can take months and 88 job actions have been completed to date with 24 in active recruitment and 12 in-progress.

DT Total Positions: 225	FTE
Budgeted Positions moved to ADM	(5.00)
Temporary Salary for Network and SFGovTV	4.75
Miscl. Adjustment	0.59
<b>Net Change</b>	<b>0.34</b>

Position Summary - List & Org chart Provided to BLA	
Total vacancies (as of 4/1/19) on report to BLA	34
New recent vacancies	2
Subtotal	36
Two vacancies trans to Admin Services as part of TOF	(2)
Close to hire - exams, interviews	(22)
<b>Net positions in progress</b>	<b>12</b>

# If You Can't Measure It, You Can't Improve It

Core services **measured and monitored** to ensure minimal to no disruption to CCSF business.

Cybersecurity



Network Services



SFCloud



Oracle Exa Hosting



**44 real-time dashboards** show service tickets, costs, measure usage, monitor consumption, predict overages and savings of our major enterprise services.

ServiceNow



Office 365 Email for CCSF



Adobe



DocuSign



**Project dashboards** to communicate status of project schedule, upcoming activities, financials. **User feedback surveys** show 79% Net Promoter Score (industry average is 58%)

Project Management Office



Service Desk asks:  
How well are we doing?  
<http://dtperform/sfgov.org>



Question: What performance measures are used to determine maximum efficacy?



Thank you!



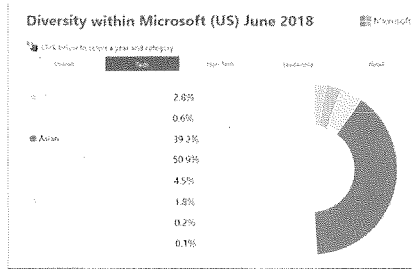


# Talking Points

## DT - Confronting Racial Inequities and Vulnerable Residents

- In coordination with MOHCD, DT has connected 13 affordable housing facilities to broadband fiber - surpassing the goal of seven (1,600 total units).
- The department pays specific attention to the diversity issues within the tech sector and works very hard to recruit diverse candidates for our department. 65% of our department is people of color, while 35% is white. As you may know, this is a systemic hard problem to confront within tech. We are very proud of this number!

DT Tech Workers: 35% white  
 Google and Apple: 55% white  
 Microsoft: 51%  
 Facebook: 41%  
 Yahoo: 50%  
 LinkedIn: 53%  
 Pandora: 71%  
 Pinterest: 50%  
 eBay: 40%  
 HP: 71%



### DT Diversity

Race/Ethnicity	Count of Fiscal Year	Count of Fiscal Year2	Percentage
American Indian/Alaskan Native	3	1	1.1%
Asian/Pacific Islander	83	31	31.7%
Black	22	8	8.4%
Filipino	32	12	12.2%
Hispanic	29	11	11.1%
White	93	35	35.5%



## *Top IT Initiatives that Support Enterprise Strategies*

Future-proof Technologies	Install City's Next Generation Network	\$6.43M
	Replace City phone system to improve mobility & decrease cost	\$3.14M
	Close the Digital Divide with Internet to Affordable Housing	\$1.80M
Compliant & Secure	Deliver Risk Assessment to City Departments	\$0.20M
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Operational Excellence	Build-up Data-As-A-Service for JUSTIS and other data hubs	\$3.15M
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Collaboration & Innovation	Create New Opportunities and develop New Models for Innovation Partners – Civic Bridge and Startup in Residency	\$1.2M
	Offer an Innovation Lab for prototyping and testing New Tech!	
Dynamic Workforce	Offer a Technology Skills Academy!	\$0.20M
	Support staff doing new services, train and align positions	\$0.20M

## *How is DT lowering the cost of technology?*

### **1. Lowering cost of Voice Services (VoIP Project):**

If the City chose to do nothing and kept the old telephone system running, we would have to spend about \$10M/year to maintain the broken system;

The total project cost to replace the old telephone system with VoIP is about \$26M. Of which, we have spent about \$6M;

If funding is provided to complete the project as planned, we will reduce the maintenance cost of the City's phone system from about \$10.9M/year to \$5.1M/year, saving the City about \$5.8M/year starting in FY23-24.

### **2. Lowering cost with efficient data storage:**

Saving on-going infrastructure costs of \$438,120 per year by migrating to an efficient and cost effective data storage environment (Rubric). Total savings over 5 years is expected to be \$2,190,000 and will actually be higher because the system design is so efficient that incremental capacity increases do not have a corresponding equivalent high cost increase (as compared to the old environment).

### **3. Lowering cost by active management of equipment:**

Sending cell phone usage reports to Departments each month to report NON USE. The report is filtered to reflect all devices that had NO usage (No Voice/No Text/No Data) and incurring monthly service fees. The approximate total = \$100,000 per quarter.



## *What are the challenges to meeting objectives? Technology Replacement Funding and Cyber Security*

**Need for a City Technology Replacement Fund:** By replacing older, less capable technology with newer, more powerful systems, the City can perform the same amount of computing with only a fraction of systems, cost and cyber security risk. Justification for a Replacement Fund:

1. **Productivity:** The City has legacy systems that require upgrades or replacements. These business systems can be 45 years old (CMS) and are silos and island of data that dramatically increases cost and decreases productivity.
2. **System Advancements:** The latest systems have new capabilities or improvements with virtualization, cloud, reliability, security, storage handling, provisioning, server management and licensing that reduce total cost of ownership.
3. **Maintenance Avoidance Risks Availability:** The City depends on unsupported hardware that lacks readily available replacement components and these systems must be upgraded to avoid outages.
4. **Service Reliability:** City technology operation is becoming a 24x7x365 service and this greater demand for application availability puts greater demand on the physical server platform and ways to have Zero Maintenance windows, and duplicates of the production system at a Disaster Recovery sites.
5. **Consolidation:** Cost savings can be realized by upgrading technology to more compact servers that require less power and cooling. These benefits offer the opportunity to virtualize more resource-intensive workloads.
6. **Application Licensing:** Very often upgrades to business system can reduce application licensing as apps move to the cloud and the virtualized environment which has better-performing processors can reduce the cost of purchasing licenses and maintenance renewals.

DT requested funding for the Technology Replacement Fund to build a reserve for large project replacements over the next 10 years.



## *What are the challenges to meeting objectives? Technology Replacement Funding and Cyber Security*

### Cyber Security Improvements:

The City's Cyber Security program has been in place for 4 years. The team has grown from 2 FTE to 16 FTE who deliver:

- Identity and Access Management
- Business Continuity Planning and Disaster Recovery Planning
- Centralized Security Information and Event Management
- Vulnerability Management

The Team builds best-in-class technology and practice to protect the City. And yet, the THREAT continues to evolve. As the Threat evolves the City cyber systems must keep pace to stay ahead of the attackers. It is a continual cycle of building and replacing systems, training users, implementing controls and testing/exercising systems.

This work is critical to the City's business operations and continuity of operation. IBM estimates average yearly cyber security investment to be 10% of the organizations technology budget. The City is increasing investment to 3% in FY 19/20. This investment should be increased to fully prepare and protect the City from cyber events.





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## FY18/19- 21/22 STRATEGIC PLAN

### Mission Statement – What is our core purpose?

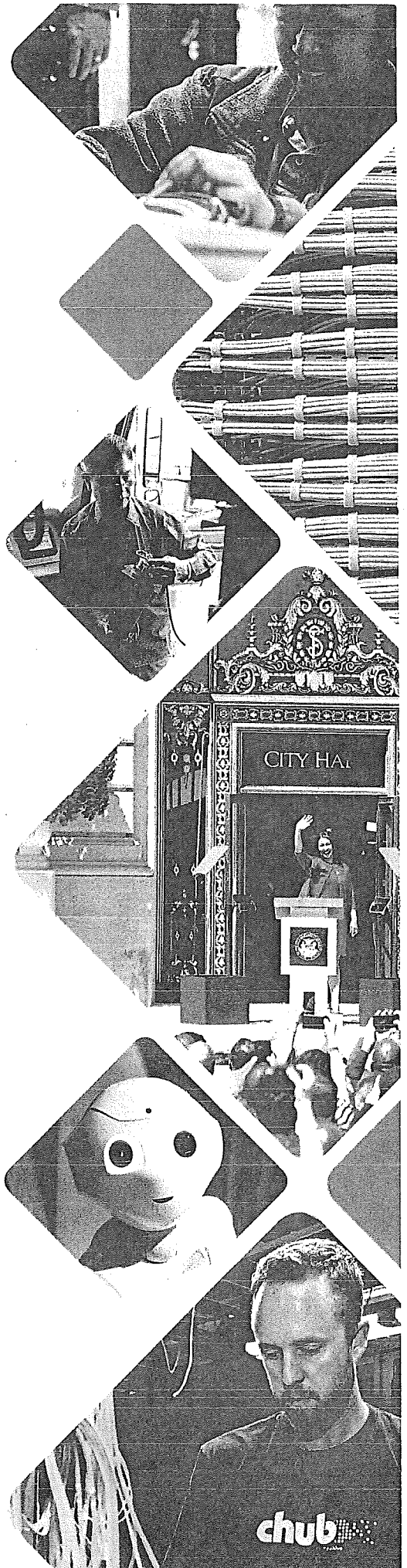
To provide innovative, reliable, and secure business solutions that support and empower CCSF agencies and departments in their delivery of high-quality government services for the public.

### Vision Statement – Where are we headed?











We envision being a trusted leader and global example in providing innovative technology services and solutions to all CCSF agencies, the people of San Francisco and worldwide.

### Guiding Principles – What guides our work?

- 1 **STRIVE FOR SIMPLICITY** – We build disciplined processes, streamline organizational structures, improve managerial practices, and simplify service portfolios to deliver quality services with greater scope and speed.
- 2 **DELIVER EXCELLENT CUSTOMER SERVICE** – We leverage technology to improve communication, increase transparency, deliver efficient and economical technology.
- 3 **BE INNOVATIVE** – We deliver new services and technology that anticipate the demands from a City-wide perspective (continuous next).
- 4 **FOCUS ON OUTCOMES** – We are flexible, responsive, results-oriented facilitators of success, who overcome constraints to achieve our objectives.
- 5 **OWN IT** – We demonstrate accountability through transparency, self-evaluation, openness to feedback and the pride we take in our work.
- 6 **TAKE A CITY-WIDE PERSPECTIVE** – We provide solutions that will thrive within our federated model.





SF City Priorities	Clean, Safe & Livable Communities	Excellent City Services	A City and Region Prepared for the Future	A Diverse, Equitable & Inclusive City	
Business Outcomes	Future-proof Technologies	Compliant & Secure	Operational Excellence	Collaboration & Innovation	Dynamic Workforce
					
<b>DT Focus Areas</b>	<b>#1 - Transform City Technology Infrastructure</b> Enable City services by building high-performing, sustainable technologies.	<b>#2 - Ensure Secure Services</b> Securely manage and protect assets, services and information with advanced cyber security across CCSF.	<b>#3 - Deliver Quality Services</b> Deliver efficient, effective and quality City services enabled by technology, data access, and streamlined processes.	<b>#4 - Promote Digital City</b> Partner with Departments and the business community to drive innovation, becoming a smarter, digital City.	<b>#5 - Dynamic Workforce</b> Increase the performance of the organization through our people and our service delivery to achieve goals for the City.
<b>Strategic Initiatives</b>	<b>FY19/20</b>	<b>6 months</b>	<b>FY20/21</b>	<b>18 months</b>	<b>FY21/22</b>
 <b>Transform Infrastructure</b>	49SVN Permit Center – Install Next Gen Network, new phone system, software, and provide cloud service for permit departments.				
	Install City's new Next Generation Network to support business applications and mobility, increase security, and respond faster to department needs.				
	Replace City's phone system to support a mobile workforce, offer enhanced communications and collaboration, and decrease costs to consumers.				
	Build cloud services to support organizational collaboration, the multitude of applications, workforce mobility - while tightening security, and decreasing costs through consolidation of City data centers.				
	JUSTIS – Build an optimized data platform to inform decision making, improve transparency, and solidify accountability across the criminal justice system.				
 <b>Secure Delivery</b>	Identity Access Management V2 – Upgrade access to protect City employees, suppliers, partners, and citizens by extending protections to multiple business applications – improving security, reducing maintenance, and increasing usability.				
	Prepare City for a cyber emergency – people, process, tools in place and planned stress testing to ensure City business can rebound and recover.				
	Implement Risk Assessment Program across enterprise, aiming to quantify cyber risks – propelling investment in mitigation and management.				
	Develop cybersecurity standards for enterprise to securely buy, build, and operate technology.				
 <b>Quality Services</b>	Build an enterprise business data platform to make timely relevant data easily available - increasing use of evidenced based decision making and giving users advanced insights through analytics.				
	Connect City's affordable housing to Internet to erode the digital divide within the City.				
	Create a regional test and evaluation group across Bay Area for new technologies implemented within cities and counties to ensure seamless integration and thoughtful use.				
 <b>Digital City</b>	Establish innovation network of outside partners to leverage resources and tools of the business community.				
	Conduct inventory of all existing communications assets in public right of way to inform new investments in modern sustainable technology.				
 <b>Dynamic Workforce</b>	Increase cost transparency, tighten-up budget and accounting, while streamlining management of technology services across the City by implementing Technology Business Management software.				
	Establish Enterprise Skills Academy to provide tech certifications for CCSF employees in critical technology skill sets.				