

# FY 2018-22 ICT PLAN: EXECUTIVE SUMMARY - DRAFT

## PURPOSE OF THE PLAN

The Five-Year Information and Communication Technology Plan (ICT Plan) is required under the San Francisco Administrative Code section 22A.6. The ICT Plan is updated every other year to provide strategic direction for the City and County of San Francisco to plan, fund, and implement technology projects.

## OVERVIEW

The fourth iteration of the City's ICT Plan presents a vision of improved City services through the enabled use of technology. Over the next five years, San Francisco will continue to build a community that is safe, diverse, and welcoming to all.

**Vision Statement: San Francisco technology supports easy to use and accessible services for every resident, visitor, business, and employee.**

The City's vision is supported by three strategic goals which help to structure our work.

**Goal 1 - Support, Maintain, and Secure Critical Infrastructure:** The City's technology infrastructure is the basic set of systems which support our operations and services. The City will ensure all our services, systems, and datasets are protected from cyber threat and disaster.

The following key thematic areas are leading efforts to support this goal:

- *Networks & Telecommunications* – San Francisco's fiber network now extends 226 miles throughout the City and is a critical piece of infrastructure enabling the next generation of services. The City plans to connect every government building to fiber by 2025.
- *Data Centers* - The City operates four separate data centers for use by all departments. The City is currently reexamining the value of maintaining data centers on the basis of cost, risk, and disaster recovery needs. Over the next five years, the City will continue to refine its data center strategy.
- *Cybersecurity* - The mission of the City's Cybersecurity Program is to protect our connected critical infrastructure, manage risk, and contain and eradicate breaches. Over the next five years, the City will help build a shared governance model and the tools necessary to protect San Francisco from cyber threat.
- *Disaster Preparedness, Response, Recovery, and Resiliency (DPR3)* - San Francisco is a city that is vulnerable from a multitude of threats, both man-made and natural. Within the next two years, departments will be responsible for developing a continuity of operations plan for their mission critical technology systems.

## **Goal 2 - Improve Efficiency and Effectiveness of City Operations:**

When deployed properly, technology can help the City do more with less. Ultimately, technology should help avoid unnecessary costs, save time, and improve the delivery of City services.

In support of this goal, the following key thematic areas are helping to improve City operations:

- *Strategic Sourcing & Procurement* – The purchase and acquisition of technologies and technical services continues to be an ongoing issue in government. Through the leadership of the Office of Contract Administration and the Department of Technology, the City is investigating ways to streamline procurement.
- *Hiring Technologists* - The City is positioning itself as an employer of choice for top tech talent. The Department of Human Resources has partnered with the Department of Technology and other City departments to develop the TechHire program to help bring in more technology professionals throughout the City.
- *Data Strategy* - The increased use of data can improve City services and ultimately lead to an increased quality of life for San Francisco residents, employers, employees and visitors. The DataSF team is working to streamline data access, boost the City's capacity to use data, and improve data management and governance.
- *Centralizing Customer Service* – San Francisco services should be easy to access through simple help customer service centers. SF311 is the City's most prominent service center to help residents, visitors, and businesses better navigate through the City. Over the next several years, the City will continue to build other service portals to help connect customers to the services they need.

## **Goal 3 - Increase Access and Transparency to Local Government:**

Technology can help improve access to City services and promote government transparency. A transparent government makes better decisions with services that are inclusive and universally accessible.

Over the next five years, the city will pursue the following key areas:

- *Digital Services* – The City is making a dramatic shift in service delivery. Led by the City's first Chief Digital Services Officer, the City will redesign existing services from the ground up in an effort to provide more digital services. The mission of the Digital Services team is simple: to transform the customer's experience to be beautiful, intuitive, and accessible to all.
- *Digital Inclusion* - As more and more City services use technology, the City has a responsibility to make sure all residents have the skills, tools, and access to all services. Over the next five years, the City is committed to building a supportive and inclusive digital society. By bringing stakeholders together and coordinating effort, San Francisco aims to close the digital divide.

## Future Initiatives

The fourth iteration of the ICT Plan also highlights several new strategic initiatives which are to be developed more thoroughly over the next two years.

- **City Experience** is a citywide effort to improve the employee's experience using City technology. The City Experience Strategy will re-evaluate the end-to-end experience and build processes that seamlessly integrate technology into City operations. Future work may include evaluating change management strategies and providing trainings. In the next year, a working group will provide recommendations and new strategies to improve the employee experience using City technology.
- **Strategic Sourcing & Procurement** has become increasingly complex for local government, especially in the purchase of new technologies. Over the next five years, the City seeks to re-examine our strategic sourcing strategies in an effort to streamline the procurement of technological goods and services. A Procurement Working Group composed of staff from the Office of Contract Administration, the Department of Technology, and the Controller's Office will be tasked with analyzing administrative barriers to technology procurement and strategies to streamline the purchasing process. The working group will provide recommendations and help spread successful innovations in an effort to make technology procurement quicker and easier.
- **Data Architecture** is fundamental to leverage data and analytics across programs, services, and applications. Over the next two years, DataSF will team up with the Committee on Information Technology (COIT) to develop a strategy for a shared data architecture. This effort will ensure that our City works together to leverage upcoming technology investments in a coordinated effort build the base blocks to a shared data architecture.
- **Cybersecurity** – Following a recently passed citywide policy, City departments are required to build their cybersecurity operations in an effort to better secure the City's systems and data. Each department will be required to adopt a cybersecurity framework, appoint departmental leadership, and participate in citywide security events.
- **Disaster Preparedness, Recovery, Response, and Resilience (DPR3)** - The emphasis of the City's recently adopted DPR3 policy is to promote the resilience of critical IT infrastructure, minimize the effects of a disaster upon departmental operations, and restore critical IT services. Over the next two years, departments are required to develop a Continuity of Operations Plan by July 2017, and a complete plan by July 2018.

## FISCAL STRATEGIES

A major purpose of the ICT Plan is to provide financial guidance for technology investment for the next five years.

In this update to the ICT Plan covering FY 2017-18 through FY 2021-22, COIT's allocation is greater than ever before with a projected allocation of approximately \$184.7 million of the General Fund. The addition of the Major IT Projects Allocation has especially contributed to COIT's expanded capacity to support City technology projects.

**Figure 1: Projected COIT Allocation from FY 2017-18 through FY 2021-22**

	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	TOTAL
Annual Project	11.7	12.8	14.1	15.5	17.1	<b>71.2</b>
Major IT Projects	18.6	20.5	22.5	24.7	27.2	<b>113.5</b>
<b>TOTAL</b>	<b>30.3</b>	<b>33.3</b>	<b>36.6</b>	<b>40.3</b>	<b>44.3</b>	<b>184.7</b>

*Note: All figures in \$ millions.*

Through these growing sources of funding, the City continues to pursue technology projects at a record rate. Over the next five years, departments are projected to pursue 151 different technology projects, with an estimated total cost of \$306.5 million.

### **Major IT Project Recommendations**

To continue our progress and reach our strategic goals, COIT recommends all \$113.5 million of the Major IT Projects Allocation.

Although the Financial Systems Replacement project is on schedule to be complete in FY 2017-18, General Fund requests from the Public Safety & Public Service Radio Replacement and the Replacement of the Property Assessment & Tax System far outstrip available resources in the next two fiscal years. Only in FY 2019-20 does funding become available to address future Major IT Projects.

To adequately support implementation for each Major IT Project, COIT's funding recommendations will be determined on the basis of each project's impact, the current and future risk of deferring funding, as well as the department's readiness to implement.

Under current budget projections, COIT recommends funding the following projects:

#### **1) *Financial Systems Replacement Project (F\$P)***

The City's new Financial System will be the system of record for accounting, budget control, purchasing, and financial reporting for all City departments. The F\$P is fully funded and is expected to go live in FY 2017-18

#### **2) *Public Safety & Public Service Radio Replacement***

The Public Safety & Public Service Radio Replacement Project will upgrade the citywide radio communications system used primarily by the City's public safety agencies. The new technology will support over 7,000 mobile and handheld radios, with ten City departments and four outside agencies operating daily on the system.

#### **3) *Replacement of the Property Assessment & Tax System***

The Assessor seeks to replace their property tax system in order to better support document capture, reporting, storage maintenance, conversion migration services and management.

#### **4) *Electronic Health Records (EHR)***

A unified EHR system will allow the Department of Public Health to transition to performance based medicine and better track patients and service delivery outcomes.

The existing financial constraints require all available resources from the Major IT Allocation to support ongoing Major IT Projects. However, several future projects are currently being scoped out as potentially the City's next Major IT Project, including:

- **Voice over Internet Protocol (VoIP):** The Department of Technology is investigating the options for replacing the City's telephone systems with VoIP solutions.
- **Citywide Customer Relationship Management:** 311 is investigating the pursuit of a future CRM which could be used across more departments to better coordinate customer information and create a more seamless service experience across departments.
- **Voting System Replacement:** The Department of Elections is currently investigating alternative voting systems, including the possibility of building an open-source system.
- **Universal Broadband:** The City is currently investigating options for providing gigabit speed internet connection to every household and business in San Francisco.

To address current and future needs, COIT recommends:

*Recommendation 1:* The Major IT Project Allocation should continue to grow by 10 percent annually.

*Recommendation 2:* A comprehensive planning and scoping phase should precede investment for future Major IT Projects to better understand total lifecycle costs and returns.

*Recommendation 3:* COIT should sequence funding of Major IT Projects on the basis of risk, project readiness, and cost-effectiveness.

### **Annual Projects Allocation**

COIT also recommends the approval and funding of over \$71.2 million in General Fund dollars. However under current projections, COIT's allocation is insufficient to meet growing demand. Over the next five years, departments requested a total of \$117.2 million in General Fund support.

Due to finite resources, COIT evaluates all ICT Projects to determine the need, anticipated impact, and the department's readiness to implement. Among the highest technology priorities is maintenance of the City's network. A reliable and high capacity network is essential to continued operations. The Department of Technology's *Upgrade the Network* Project is intended to make the City's network more robust in support of City operations.

To address current and future needs, COIT recommends:

*Recommendation 1:* The Annual Project Allocation should continue to grow by 10 percent annually.

*Recommendation 2:* The Annual Project Allocation should support technology projects that replace or enhance existing services and promote eventual cost savings.

*Recommendation 3:* The City should set aside a separate funding source for the continual refreshment of IT hardware.