



Regular Meeting

February 3, 2017

**1 Dr. Carlton B. Goodlett Place, City Hall, Room 305
San Francisco, CA 94102**

AGENDA

1. Call to Order by Chair
2. Roll Call
3. Approval of Meeting Minutes from January 6, 2017
4. Department Updates and Announcements
5. Preview: FY 2017-18 & FY 2018-29 Budget Review Process
6. Discussion: FY 2018-22 ICT Plan Update
7. Project Update: Citywide Transition to Web Content Management System
Drupal
8. Discussion: Internet of Things (IoT) Strategy
9. Program Update: Startup In Residence (STIR) Challenge Sourcing
10. Public Comment
11. Adjournment

3. Approval of Minutes

Action Item

4. Department Updates & Announcements

5. FY 2017-18 & FY 2018-29 Budget

BUDGET CALENDAR PREVIEW

	Meeting Type	Meeting Dates
Enterprise Departments	Budget & Performance Subcommittee	March 3 March 10
	COIT	March 16
General Fund Departments	Budget & Performance Subcommittee	March 24 March 31 April 7 April 14
	COIT	April 20 May 5

COIT BUDGET UPDATE

Projected COIT Allocation

\$ millions	FY 17-18	FY 18-19	Total
Annual Project Allocation	11.7	12.8	24.5
Major IT Projects	18.6	20.5	39.1
Total	30.3	33.3	63.6

Note: All figures in \$ millions.

FY 2017-18 ALLOCATION

	FY 2017-18 Total Available	Funds Allocated Last Year	Remaining
Annual Project Allocation	11.7	5.1	6.6
Major IT Projects	18.6	18.6	-

Note: All figures in \$ millions.

MAJOR IT PROJECT ALLOCATION

Major IT	FY 17-18	FY 18-19
General Fund Requests	18.8	18.8
F\$P	-	-
Radio Replacement	8.3	8.3
Property Assessment & Tax System	10.5	10.5

Note: All figures in \$ millions.

ANNUAL PROJECT ALLOCATION

➤ 139 projects submitted for review & approval

Annual Projects		Total Cost	
Source	Number of Projects	FY 2017-18	FY 2018-19
Enterprise Departments	19	31.0	8.8
General Fund Departments	120	108.8	113.1
Total	139	139.8	121.9

Note: All figures in \$ millions.

ANNUAL PROJECT ALLOCATION

FY 2017-18	
Annual Project Allocation	11.7
FY 2016-17 Allocation	5.1
ADM - Electronic Signatures	0.9
COIT - PC Refresh	0.9
ETH – E-Filing	0.2
POL – Police Vehicle Upgrades	0.4
TIS – Citywide AD	0.3
TIS – Upgrade the Network	1.4
TIS – IAM	1.0
DIFFERENCE	6.6

Note: All figures in \$ millions.

ANNUAL PROJECT ALLOCATION

➤ **85 projects requesting General Fund support**

	FY 17-18	FY 18-19
Remaining Annual Allocation	6.6	12.8
General Fund Requests	35.8	31.6
DIFFERENCE	(29.2)	(18.8)

Note: All figures in \$ millions.

B&P BUDGET PROCESS

- Only projects being considered for funding will present!

Tier	Presentations	One Page Summary
Tier 1	All Present	All Projects
Tier 2	Nearly All Present	All Projects
Tier 3	Member Request Only	Member Request Only

B&P BUDGET PROCESS

Item	Description	Weight
Highest Priority Project	Departments may only select one	10%
Scope	Project's range of impact	10%
Compliance	Needed to meet legal requirements	10%
Efficiency	Projected impact on efficiency	10%
Financial Savings	Estimated savings	10%
Infrastructure	Supports City infrastructure	30%
Innovation	Transforms core services	10%
Access & Transparency	Improves access to information	10%

Theme	Number of Projects
Asset Management	2
Case, Customer, Contract Management	16
Collaborative Tools – Data Sharing	12
Cybersecurity	15
Data Storage	4
Disaster Recovery & Business Continuity	4
Electronic Learning	3
General Operations – Workforce Tools	14
IT Hardware Refresh	5
Major IT Projects & Support	10
Mobile Technology	6
Network & Telecommunications	17
Public Safety & Security Infrastructure	10
Records Management & Digitization	10
Website	11

All materials available on COIT Budget & Performance System

<https://sfgov1.sharepoint.com/sites/ADM-COIT/SitePages/Home.aspx>

6. FY 2018-22 Information & Communication Technology (ICT) Plan

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

GOALS

Goal 1 – Support, Maintain, & Secure Critical Infrastructure

Goal 2 – Increase Efficiency & Effectiveness of City Operations

Goal 3 – Improve Access & Transparency to Local Government

PERFORMANCE MEASURES

Goal 1: Support, Maintain, & Secure Critical Infrastructure

Objective	Key Performance Indicator
Networks & Telecommunications: Maintain maximum availability of network and telecommunications systems.	1 – Public safety radio communications, which support 911 radio systems, are maintained available 99.99% of the time.
	2 – 80% of network installations and repairs completed within established timeline.
Cybersecurity: Increase awareness of cybersecurity best practices and establish risk management strategies citywide.	1 – 100% of departments have adopted a major cybersecurity framework by 2018.
	2 – 80% of departments represented in quarterly security roundtable.
Disaster Preparedness, Recovery, Response, and Resiliency (DPR3): Increase the City's preparedness and resilience for an eventual disaster.	1 – 100% IT Continuity of Operation Plans (COOP) completed by department July 2018.
	2 - 80% of departments represented in quarterly security roundtable.

PERFORMANCE MEASURES

Goal 2: Improve Efficiency & Effectiveness of City Operations

Objective	Key Performance Indicator
Strategic Sourcing & Procurement: Make the acquisition of technology products and technical services quicker and faster.	1 – Increase department participation on existing Enterprise License Agreements.
	2 – Increase the number of departments using electronic signatures.
Hiring: Become the employer of choice in San Francisco by improving recruitment and retainment of skilled professionals.	1 – Maintain technologists' vacancy rate below 15% for each Major Service Area.
	2 – Increase participation in TechHire program.
Service Center: Increase the availability of central service centers that connect customers to City services.	1 – Maintain a quality assurance score of 92% for all 311 services.
	2 – Answer 90% of 311 calls without transfer to another service representative.

PERFORMANCE MEASURES

Goal 3: Increase Access & Transparency to Government

Objective	Key Performance Indicator
Open Data: Increase the availability and quality of data available on the Open Data Portal.	1 – Increase the number of Department data inventories.
	2 – Achieve 90% of datasets with required metadata.
Digital Literacy: Increase the number of seniors, youth, and disabled using the Internet.	1 – Increase the percent of seniors who reportedly use Internet following digital literacy training
	2 – Increase the number of participants in digital literacy programs offered at public libraries
	3 – Increase the number of successful job placements following participation in a digital job training programs.
Broadband Internet Access: Increase the availability of Broadband Internet throughout San Francisco.	1 – Increase the percent of San Francisco residents with broadband Internet at home.
	2 – Increase the number of City Recreation Centers, Health Clinics, and Public Libraries connected to City Fiber.

FY 2018-22 ICT PLAN RECOMMENDATIONS

- | | |
|-------------------|---|
| Recommendation 1: | Continue to grow the Major IT Project Allocation and the Annual Project Allocations by 10 percent annually. |
| Recommendation 2: | COIT should prioritize General Fund support for technology projects that align with ICT Plan goals. |
| Recommendation 3: | A comprehensive planning and scoping phase should precede investment for future Major IT Projects to better understand total lifecycle costs and returns. |
| Recommendation 4: | COIT should sequence funding of Major IT Projects on the basis of risk, project readiness, and cost-effectiveness. |
| Recommendation 5: | COIT's allocations should support technology projects that replace or enhance existing services and promote eventual cost savings. |
| Recommendation 6: | The City should set aside a separate funding source for the continual refreshment of IT hardware. |

| Drupal 8 Upgrade

DT: SF Digital Service & Products

2/3/2017



SAN FRANCISCO
DEPARTMENT OF
TECHNOLOGY

| Migration from Vision to Drupal 7



Migration from Vision to Drupal 7

Accomplishments & System Benefits

01 Accomplishments:

- a. Drupal migration contract awarded in Sept. 2015 based on a public RFP
- b. Migration of 100+ websites completed **on-time** in Sept. 2016
- c. Migration completed **on-budget** without the need for additional funding

02 System Benefits:

- a. Ability to leverage the flexibility of Drupal open source cloud solution
- b. Ability to offer greater reliability and scalability for all departments that use the City's web solution
- c. Adopt no-cost license fee software developed by the community

Migration from Vision to Drupal 7

Challenges & Lessons Learned

01 Challenges:

- a. Complexity of effort due to scale of the project
- b. Support parallel demand for immediate project needs
- c. Departments request to delay migration due to business reasons

02 Lessons Learned:

- a. Provide more collaborative process and education program during the migration
- b. Minimize content freeze periods to allow departments to perform updates during the migration
- c. Reach out to City departments early and often to keep them updated on the migration process



| Drupal Overview

Drupal Overview

01 Critical Communication Tool:

- Supports 100+ public-facing City websites, including the Mayor's Office, Board of Supervisors

02 Drupal Stats & Facts:

- 30 million page views in 2016
- Approximately \$1 billion in collected revenue (source FIS)
- 1,000+ City employees publish content using the Drupal solution
- The 100+ websites make up the City's largest "digital product"
- Open source community
- No software licensing cost involved

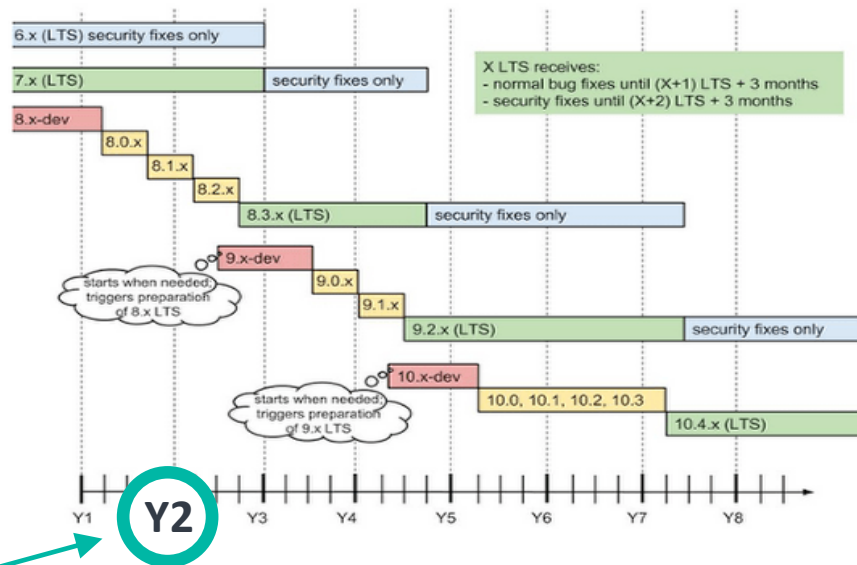


| Release Lifecycle Overview

The background image shows a person from behind, sitting at a desk and working on a laptop. The desk is cluttered with various items: a glass vase with white flowers, a small potted succulent, a metal pen holder with several pens, and a glass of water. The person's hands are visible on the laptop keyboard. The entire image has a blue tint, and the title text is overlaid in white.

Release Lifecycle Overview

- ① New Drupal 8 releases will be delivered every 6 months
- ② The end of the release process will be a Long Term Support (LTS)
- ③ No new features will be added, only security fixes
- ④ The Drupal 7 LTS version will only receive security fixes until the end of 2017



Source: <https://www.ostraining.com/blog/drupal/new-drupal-release-cycle/>

| Key Benefits

A blue-tinted background image of a desk. In the bottom right corner, a laptop is open, displaying a website with various images and text. Above the laptop, a pair of black-rimmed glasses rests on a white spiral-bound notebook. To the left of the glasses, a black pen lies on the desk. The desk surface is a light-colored wood. In the bottom left corner, a portion of a patterned bag or folder is visible, featuring a geometric design with triangles in shades of red, white, and blue.

Key Benefits



Usability

Simplified menu structure,
in-line editing capabilities



Mobile-First Design

Architected to be fully
responsive and work across
any device and screen size



Better Performance

Faster loading webpages
due to more sophisticated
content caching abilities

Key Benefits



Efficiency in Support

Core product includes tools that eliminate external modules, making platform support more efficient



Multilingual Capabilities

Core product optimized to author multilingual websites without the need for separate modules



Maintainability

Release protocols every six months, making site maintenance a predictable process

Key Benefits



Integration Support

Core product built for easy integration capabilities with the REST API support



Development Support

Over 3,000 developers contributing to Drupal 8 through code contributions and testing



New Citywide Template

Provides great opportunity to design and develop a new, user-centric citywide standard template



Risks and Costs of Not Upgrading

Risks and Costs of Not Upgrading

01 Security Risks:

- Limited security fixes and updates on Drupal 7
- Primary focus on within Drupal development community will be on Drupal 8 modules
- End results, increased vulnerability to City websites



02 Service Delivery Interruptions:

- Potential service delivery interruptions would cause 1,000 City employees to not be able to update their websites
- As a result, City residents, businesses, visitors, and staff would be negatively impacted



Risks and Costs of Not Upgrading

03 Financial Risks:

- Eliminate the cost of custom software to fix security vulnerabilities



04 Revenue Loss:

- Potential security vulnerabilities could bring significant downtime to the City's websites leading to loss of online revenue



05 Legal Risks:

- City departments must publish public meeting notices on their public website
- The inability for staff to post public meeting notices could cause cancellation of City meetings





Projected Timeline and Costs

Projected Timeline

FY 2017-18
Complete Professional Services Procurement
Drupal 8 Baseline Site Set up, Upgrade Process Set up, and Standard Template Implementation
Drupal 8 (25% Sites) - Set up, Implementation, Quality Assurance, Content Migration, and Restructure
Drupal 8 (75% Sites) - Set up, Implementation, Quality Assurance, Content Migration, and Restructure

Projected Costs

Project Budget	FY 17-18	FY 18-19
Number of Additional FTE Costs	0	0
Software License Fees	0	0
Hardware Costs	0	0
Estimated Professional Services for:		
Baseline Site Set up & Standard Template Implementation	\$408,000	
Agency Sites (25%) - Set up & Content Migration	\$408,000	
Baseline Site and Sites (25%) - QA & Content Restructure	\$255,000	
Agency Sites (75%) - Set up & Content Migration		\$816,000
Agency Sites (75%) - QA & Content Restructure		\$510,000
Managed cloud subscription with advanced DDOS protection	\$180,000	\$180,000
Total Project Cost	\$1,251,000	\$1,506,000

| Recommendations



Recommendations



The risks and financial impact on the City could be significant if the upgrade is not completed



Leverage the Drupal 8 upgrade as an opportunity to redesign the City's standard template



Retire some of the 100+ websites currently being managed in order to speed up the migration



Use professional services to perform the system upgrade

I Thank You



SAN FRANCISCO
DEPARTMENT OF
TECHNOLOGY

Smart Cities & the Internet of Things

FEBRUARY 2017

A Strategic Plan for SF



SAN FRANCISCO
MAYOR'S OFFICE OF CIVIC INNOVATION

Agenda



SMART CITIES

What and Why



FINDINGS

Listening tour



IDEAS

How might we
make things better



Smart Cities Working Group



SAN FRANCISCO
DEPARTMENT OF
TECHNOLOGY



SF MAYOR'S OFFICE OF CIVIC INNOVATION
OFFICE OF MAYOR EDWIN M. LEE

"We must continue to explore and harness the newest technologies to help make our cities smarter, safer and more efficient, and improve the quality of life all our residents."



Mayor Ed Lee



SAN FRANCISCO
MAYOR'S OFFICE OF CIVIC INNOVATION

JUL

AUG

SEPT

OCT

NOV

DEC

JAN

FEB

Listening tour

*MSA stakeholder
interviews*

Literature review

Workshops

Share findings

*Present to COIT
Draft report*

Develop recommendations

Refine ideas



What is Smart Cities & IoT



SMART CITIES

an approach to use data, technology, connectivity and collaboration to improve the lives of people in their local communities.



IoT

a set of connected products and services, the data they create, the analysis done on that data, the communications systems they use, and the actions taken in the world directly.



Why Smart Cities



GOVT TRANSFORMATION

A more effective, data-driven, and responsive government



QUALITY OF LIFE

Clean, safe and livable communities



ECONOMIC DEVELOPMENT

Creating new job opportunities for all skill levels



2016 IoT Workshop @City Hall



IDEO facilitated workshop
with nearly 100 City staff

Outcomes:

- Training on IoT
- Prototypes of solutions to dept challenges



STIR pairs startups with city departments to tackle civic challenges



CHALLENGE

Current sewage monitoring for saltwater was ineffective: could only send data once a day and required battery replacement every three months limiting deployment and data collection

PRODUCT



OUTCOMES

- ✓ Near real-time data collection
- ✓ Long battery life (15 years)
- ✓ Heavy-duty industrial design
- ✓ Lower total cost of ownership



DOT Smart Cities Challenge



76
Cities



7
Finalists



\$50M
Awarded



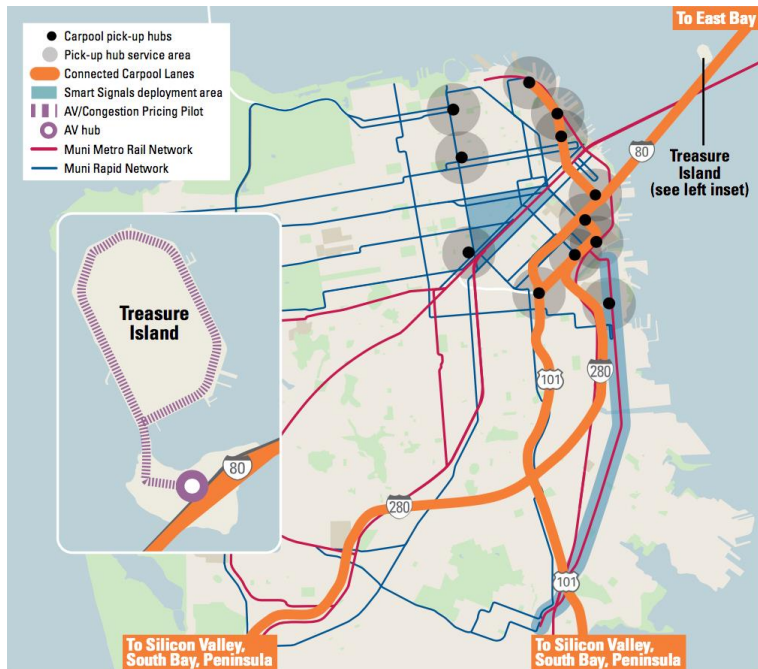
100+
Partners



\$150M
Private commitments



\$11M+ Grant for Advanced Transportation and Congestion Management



Connected Carpool Lane

Deploy new highway HOV lanes for transit/carpools

Desired Outcomes:

- Increased ride sharing, mobility (especially job access) and public transit ridership
- Reduced commute travel times, regional rail crowding, congestion, VMT, and GHG emissions

Dynamic Carpool Pick Up Curbs

Dedicated curb space for pick-up/drop-off by carpools and ridesourcing services

Desired Outcomes:

- Incentives for sharing rides
- Improved safety
- Reduced congestion, double parking, modal conflicts, idling, and travel times

Smart Traffic Signals

Deploy Multi-Modal Intelligent Traffic Signal Systems in the form of Transit Signal Priority and Emergency Vehicle Preemption

Desired Outcomes:

- Increased safety and public transit speeds
- Reduced truck signal delays

Connected Vision Zero Corridor

Deploy multi-Modal Intelligent Traffic Signal Systems located roadside and in-vehicle

Desired Outcomes:

- Reduced public transit travel times, idling and GHG emissions
- Improved safety and satisfaction for pedestrians and cyclists

Autonomous Shuttles

Deploy and test electronic, autonomous shuttles that serve intra-island trips

Desired Outcomes:

- Provide clean, reliable last-mile transportation to Treasure Island
- Deployable throughout City, region, and nation

Congestion Toll System

Deploy a connected, electronic toll system for the congestion pricing program

Desired Outcomes:

- Curb vehicle demand on the heavily congested Bay Bridge
- Fund and increase the competitiveness and attractiveness of transit for commute trips

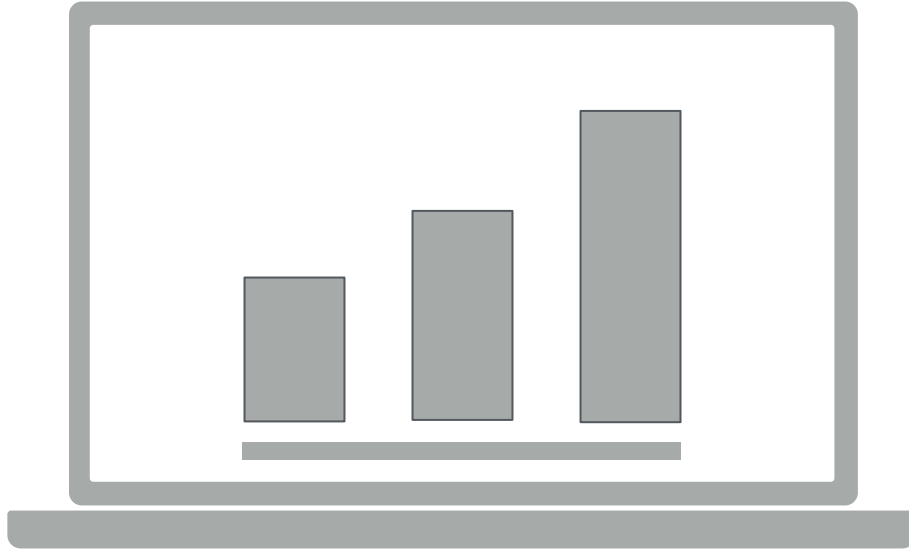


Berkeley
UNIVERSITY OF CALIFORNIA



SAN FRANCISCO
MAYOR'S OFFICE OF CIVIC INNOVATION

Bay Area Leading Region for IoT Companies



Total potential economic impact of **\$3.9 trillion** to \$11.1 trillion a year by 2025 [McKinsey¹]

¹ <http://www.mckinsey.com/business-functions/business-technology/our-insights/the-internet-of-things-the-value-of-digitizing-the-physical-world>



FINDINGS



STRENGTHS

Global leader

- SFpark
- Open data
- \$11M grant



WEAKNESSES

- Efforts not coordinated
- Lack of governance and strategic plan
- No group focused on smart cities
- No process for identifying needs, evaluating opportunities



OPPORTUNITIES

- Improve operations, asset performance, customer service
- Enhance quality of life
- Grants and revenue
- Partnerships
- Coordinating with Capital investments



Potential Ideas for Strengthening Smart Cities



Governance and Strategy

- Develop strategic plan
- Establish governance structure - external and internal
- Create a dedicated role
- Foster interagency collaboration
- Introduce a Smart City lens to Capital Planning and long-range urban planning at the Planning Department
- Evidence driven decisions and outcomes

Partnerships

- Strengthen partnerships with academia, industry, & community
- Utilize STIR and Civic Bridge for Smart Cities
- Seek data partnerships



Next Steps for Smart Cities



STRATEGIC PLAN

Finalize strategic plan for ICT Plan Appendix



REFINE IDEAS

Get further input on ideas



Partnership Case Study: Startup in Residence (STIR)

STIR



STIR OUTCOMES TO DATE



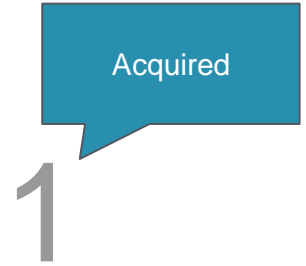
12 contracts secured
with City departments



Raised to date by Startups +
2 currently raising Series A
funding



Cities in conversation to
contract STIR startups



One STIR startup has
been acquired

SPIRALSCOUT assisted the San Francisco Public Works in designing and developing a mobile platform to assist the city of San Francisco with Post-Disaster Evaluation and Reporting for city buildings and structures.





QUALITY OF LIFE

Clean, safe and livable communities

Submit your challenges and ideas for STIR 2017 to SF MOCI by **Wednesday, February 15**

Contact:

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Amardeep Prasad

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Smart Cities & the Internet of Things

FEBRUARY 2017

Thank you!



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10. Public Comment
