COIT
Budget & Performance Subcommittee

Regular Meeting
March 6, 2020

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

- Call to Order by Chair
- Roll Call
- Approval of Meeting Minutes
- Department Updates and Announcements
- FY 2020-21 & FY 2021-22 COIT Budget Overview
- Enterprise Department Projects
- Public Comment
- Adjournment
3. Approval of Minutes
4. Department Updates & Announcements
5. FY 2020-21 & FY 2021-22 COIT Budget Overview
## COIT Allocations

<table>
<thead>
<tr>
<th></th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Allocation</td>
<td>15.5</td>
<td>17.1</td>
</tr>
<tr>
<td>Major IT Allocation</td>
<td>24.7</td>
<td>27.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40.2</strong></td>
<td><strong>44.3</strong></td>
</tr>
</tbody>
</table>

Note: All figures in $ millions.
# Overview of Budget Request

<table>
<thead>
<tr>
<th></th>
<th>Number of Requests</th>
<th>FY 2020-21 GF Requests</th>
<th>FY 2021-22 GF Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Allocation</td>
<td>57</td>
<td>38.8</td>
<td>26.6</td>
</tr>
<tr>
<td>Major IT</td>
<td>4</td>
<td>24.0</td>
<td>32.5</td>
</tr>
<tr>
<td><strong>All COIT Submissions</strong></td>
<td><strong>62</strong></td>
<td><strong>62.8</strong></td>
<td><strong>59.1</strong></td>
</tr>
</tbody>
</table>

Note: Financial figures in $ millions.
## Historical Comparison

<table>
<thead>
<tr>
<th></th>
<th>FY 16-17</th>
<th>FY 17-18</th>
<th>FY 18-19</th>
<th>FY 19-20</th>
<th>FY 20-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
<td>110</td>
<td>149</td>
<td>77</td>
<td>116</td>
<td>62</td>
</tr>
<tr>
<td>Total GF Request</td>
<td>39.9</td>
<td>48.8</td>
<td>44.2</td>
<td>58.6</td>
<td>62.8</td>
</tr>
</tbody>
</table>
## COIT Allocations – Major IT

<table>
<thead>
<tr>
<th></th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major IT Allocation</td>
<td>24.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Budget Requests</td>
<td>24.0</td>
<td>32.5</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td><strong>0.7</strong></td>
<td><strong>(5.3)</strong></td>
</tr>
</tbody>
</table>

Note: All figures in $ millions.
# Major IT Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>FY 2020-21 GF Request</th>
<th>FY 2021-22 GF Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Assessment &amp; Tax System</td>
<td>15.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Radio Replacement</td>
<td>4.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Computer Aided Dispatch</td>
<td>21</td>
<td>19.2</td>
</tr>
<tr>
<td>Telecom Modernization</td>
<td>2.6</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24.0</strong></td>
<td><strong>32.5</strong></td>
</tr>
</tbody>
</table>
## COIT Allocations - Annual

<table>
<thead>
<tr>
<th></th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Allocation</td>
<td>15.5</td>
<td>17.1</td>
</tr>
<tr>
<td>Budget Requests</td>
<td>38.8</td>
<td>26.6</td>
</tr>
<tr>
<td>Difference</td>
<td>(23.3)</td>
<td>(9.1)</td>
</tr>
</tbody>
</table>

Note: All figures in $ millions.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of Projects</th>
<th>FY 2020-21 GF Request</th>
<th>FY 2021-22 GF Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer &amp; Case Management</td>
<td>15</td>
<td>7.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Digitization &amp; Records Mgmt</td>
<td>2</td>
<td>0.65</td>
<td>0.2</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>8</td>
<td>13.8</td>
<td>9.2</td>
</tr>
<tr>
<td>Major IT</td>
<td>4</td>
<td>24.0</td>
<td>32.5</td>
</tr>
<tr>
<td>Residential Digital Services</td>
<td>5</td>
<td>1.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Resource Management</td>
<td>10</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Risk Management</td>
<td>7</td>
<td>3.9</td>
<td>3.8</td>
</tr>
<tr>
<td>Staff Collaborative Tools</td>
<td>8</td>
<td>5.8</td>
<td>6.5</td>
</tr>
<tr>
<td>Business Specific</td>
<td>3</td>
<td>3.9</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
<td><strong>59.1</strong></td>
<td><strong>59.1</strong></td>
</tr>
</tbody>
</table>
Budget Process Overview

- **Budget Intake**: January 17
- **Dept Interviews**: February/March
- **Budget Hearings**: March/April
- **Final Approval**: May
Evaluation Criteria

• **Business Justification** (Project Objective, User Research)

• **Strategic Alignment & Benefits** (Strategic Priority, Impact)

• **Development Plan & Change Management** (Role of Business, Prototyping)

• **Architecture Review** (Application & Security, Data, Technical)

• **Department Capacity** (Staffing, Project History)
## COIT Budget Calendar

<table>
<thead>
<tr>
<th>DATE</th>
<th>EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 6</td>
<td>Enterprise Department Presentations</td>
</tr>
<tr>
<td>March 27</td>
<td>General Fund Departments Presentations</td>
</tr>
<tr>
<td>April 3</td>
<td>General Fund Departments Presentations</td>
</tr>
<tr>
<td>April 10</td>
<td>General Fund Departments Presentations</td>
</tr>
<tr>
<td>April 16</td>
<td>COIT - Budget Review</td>
</tr>
<tr>
<td>May 1</td>
<td>COIT - Final Review &amp; Approval</td>
</tr>
</tbody>
</table>
5. Enterprise Department Projects
**Airport Mission** | *We provide an exceptional airport in service to our communities.*  
**IT Vision** | *To be the most technologically empowering airport in North America.*  

**Situation** | Our analysis of the Airport’s situation.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistent Security Threats</td>
<td>Professional technology services and solutions for a safer and more secure Airport.</td>
</tr>
<tr>
<td>Asset Utilization</td>
<td>Recognize Airport’s virtual assets as a viable source of revenue and value alongside our physical asset base.</td>
</tr>
<tr>
<td>Resource Optimization</td>
<td>Use automation to promote better workforce efficiently and effectiveness.</td>
</tr>
<tr>
<td>Modern Service Model</td>
<td>Airport as platform for tenant &amp; concessionaire technology services, including Common Use replacement.</td>
</tr>
<tr>
<td>Disruptive Innovative</td>
<td>Working with tech innovators to find and harness the next wave of disruptors.</td>
</tr>
</tbody>
</table>
### Actions

Our policies direct our technology priorities.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Persistent Security Threats** | Upgrade core security systems. **MSSP (3bn / 5).**  
Procure SMS, mobile P.139 and Notice of Violation solutions.  
Achieve international cyber-security standards accreditation (ISO27001). |
| **Asset Utilization**        | Establish Airport Data Portal, the exchange hub for all Airport data with airlines and partners.  
Implement airfield vehicle and terminal asset tagging. **Door to Gate API.**  
Rolled out new people processing (FLEX). |
| **Resource Optimization**    | Airport Building Information Management.  
Landside services automation (TNC, Taxi, Shuttle Bus).  
| **Modern Service Model**     | Expand and improve SFO FREE WIFI, Operational Wi-Fi, core tenant fiber (SONET) network.  
Early adopter of **WiFi 6** in Terminal 2.  
Upgrade Common Use 2.0 in International Terminal Building (ITB) and deploy in Terminal 1.  
Implement **Airport Data Hub** and Microservices Platform.  
Pilot **Advanced Security Lanes (ASLs)**, biometrics and RFID. |
| **Disruptive Innovative**    | Whitepaper on **Generic airport location-based services using an integrated indoor positioning system.**  
Partner with Silicon Valley leaders to prototype new solutions. |
**Projects Previously Approved** | Actions including the following projects

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8968 Network Security</td>
<td>11157 Single Sign On Implementation</td>
</tr>
<tr>
<td>9134A IT Security Mitigation</td>
<td>11217 Managed Security Upgrade</td>
</tr>
<tr>
<td>10674 Airport Information Integration Solution (AIIS)</td>
<td>11222 SFO Data Storage Program</td>
</tr>
<tr>
<td>11158 Data Analytics Compute Processing</td>
<td></td>
</tr>
<tr>
<td>8399A Property Management and Billing System (PMBS) Phase 2</td>
<td>10501 Contract Management Compliance System (CMCS)</td>
</tr>
<tr>
<td>8411A Sharepoint ERP Phase 1, Integrated Time and Labor Accounting (ITA) Program</td>
<td>10535 Capital Planning System (CPS) Phase III</td>
</tr>
<tr>
<td>9044 Document Management System (DMS)</td>
<td>11104 Virtual Design &amp; Construction Implementation Program</td>
</tr>
<tr>
<td>9051 Operating Budget System (OBS)</td>
<td>11161 Building Information Technology Upgrade</td>
</tr>
<tr>
<td>10401 CIP Programmatic Support</td>
<td>11433 Contract Management Compliance System (CMCS) Phase II – New</td>
</tr>
<tr>
<td>8410 Distributed Antenna System (DAS)</td>
<td>10622 Operational WiFi Improvements</td>
</tr>
<tr>
<td>8590 Telecommunication Infrastructure Airport Wide</td>
<td>10648 Long Term Parking Guidance and Security System</td>
</tr>
<tr>
<td>9169 Network Expansion</td>
<td>10678 Avaya Communication Manager Upgrade 7.0</td>
</tr>
<tr>
<td>9170 Network Improvements</td>
<td>11139 Dense Wavelength Division Multiplexing (DWDM) Transport</td>
</tr>
<tr>
<td>9304 Public WiFi – Terminals</td>
<td>11149 Access Layer Refresh 10 Gbps</td>
</tr>
<tr>
<td>9304A Public WiFi – Rental Car Center</td>
<td>11153 Internet Hardware Upgrade</td>
</tr>
<tr>
<td>10674 Airport Information Integration Solution (AIIS)</td>
<td>11155 Mobile Application Development and Delivery</td>
</tr>
<tr>
<td>9171 Network Monitoring &amp; Management</td>
<td>11156 Comprehensive Support Plan</td>
</tr>
<tr>
<td>11130 Multi-Use Flight Information Display Upgrade</td>
<td>11211 Terminal Management System Upgrade</td>
</tr>
<tr>
<td>11132 Digital Signature Software System Enhancement</td>
<td>11216 ISO27001 Information Security Management System</td>
</tr>
<tr>
<td>11154 ITIL/ISO Certification</td>
<td></td>
</tr>
</tbody>
</table>

*Projects in Red* indicates that it is part of the Airport’s Strategic Plan.
New Projects | Actions including the following projects

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2020-21 Costs</th>
<th>FY 2021-22 Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11433</strong> Contract Management and Compliance</td>
<td>$750,000</td>
<td>$225,000</td>
</tr>
<tr>
<td>System (CMCS) Phase II</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Accomplishments | Highlights in 2019-2020

<table>
<thead>
<tr>
<th>Description</th>
<th>Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SFO CoPilot App</strong></td>
<td>SFO made app available in the Apple and Google app store. (March 2019)</td>
</tr>
<tr>
<td><strong>Passenger Processing</strong></td>
<td>SFO implemented SITA’s new passenger processing application FLEX in Terminal 1. (June 2019)</td>
</tr>
<tr>
<td><strong>WiFi 6</strong></td>
<td>SFO implemented in Terminal 2, International Terminal and other areas. SFO is an early adopter of the capability. (January 2020)</td>
</tr>
<tr>
<td><strong>U.S Patent</strong></td>
<td>SFO earns U.S. Patent for system that Tracks App-Based Ground Transportation. (January 2020)</td>
</tr>
<tr>
<td><strong>Airport Maps</strong></td>
<td>SFO shipped the first Airport terminal maps to United Airlines (UAL) as part of the recently signed Map Agreement with United. (February 2020)</td>
</tr>
</tbody>
</table>
Thank You
Next Generation Customer Information System

COIT
March 6, 2020
Background

- In 1999, San Francisco piloted the first U.S. real-time information system.
- Since then, technology and transportation choices have changed rapidly.
- For the first time in 2 decades, we have a chance to do a refresh.
1. Ensure a positive customer experience

2. Reduce waiting and total travel time

3. Shift people towards more sustainable transportation options

4. Help customers make better travel decisions, particularly when faced with service disruptions and gaps

5. Increase ridership through discretionary travel

*KEEP THE CUSTOMER INFORMED THROUGHOUT THEIR JOURNEY*
## Project Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Project Requirements Gathering</th>
<th>Procurement</th>
<th>Project Planning</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Request for Information</td>
<td>Request for Proposals</td>
<td>Project Design</td>
<td>Phase I: 1-for-1 replacement of current signs</td>
</tr>
<tr>
<td></td>
<td>Research &amp; Internal Stakeholder Engagement</td>
<td>Proposals Evaluation</td>
<td></td>
<td>New Mobile App</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contract Negotiations</td>
<td>New Mobile App</td>
<td>Trip Planning, Quotes, Multi-Modal, Payment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We are here</td>
<td>Project Design</td>
<td>Phase II: Feature and functional enhancements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Crowding, Alternate route, traffic, re-routes real time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Solar Signage where no power, ...</td>
</tr>
</tbody>
</table>

Phase I: 1-for-1 replacement of current signs
- New Mobile App
  - Trip Planning, Quotes, Multi-Modal, Payment

Phase II: Feature and functional enhancements
- Crowding, Alternate route, traffic, re-routes real time.
- Solar Signage where no power, ...
**Public Outreach**

### Quantitative
- Comprehensive Survey
  - (Available in English, Chinese and Spanish; online and paper upon request)
  - 5,700+ complete responses; ±1.3% margin of error at a 95% confidence level

### Qualitative
- Concept Testing
- Stakeholder Interviews
- Ride-alongs

### External Stakeholder Examples

<table>
<thead>
<tr>
<th>External Stakeholder Example</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>311</td>
<td>SF Board of Supervisors</td>
</tr>
<tr>
<td>BART and other transit agencies</td>
<td>SF Travel</td>
</tr>
<tr>
<td>Chamber of Commerce</td>
<td>SFMTA Citizens’ Advisory Council (CAC)</td>
</tr>
<tr>
<td>Chinatown Community Development Center (CCDC)</td>
<td>SFMTA Multimodal Accessibility Advisory Committee (MAAC)</td>
</tr>
<tr>
<td>Chinatown Tenants Association</td>
<td>SFMTA Policy and Governance</td>
</tr>
<tr>
<td>Hotel Council</td>
<td>SFUSD-Access</td>
</tr>
<tr>
<td>Independent Living Resource Center</td>
<td>Senior Action and Disability Network</td>
</tr>
<tr>
<td>Lighthouse for the Blind</td>
<td>SF Transit Riders</td>
</tr>
<tr>
<td>Rebuild Potrero</td>
<td>Transbay Joint Powers Authority</td>
</tr>
<tr>
<td>Save Muni</td>
<td>Youth Commission</td>
</tr>
</tbody>
</table>

- The SFMTA conducted extensive quantitative and qualitative research to identify customer requirements for the new system
- The SFMTA will continue outreach efforts in project design and implementation
Outreach found the availability and content of real-time information could dramatically influence transit mode share across all income levels.
Coordinate new signage in conjunction with major transit projects and the Muni Service Equity Strategy.
Surface Vehicle Locations
Gathers vehicle locations from CAD/AVL System

Underground Locations
Gathers vehicle locations from Automatic Train Control System

System Software
Generates real-time vehicle predictions, monitors system status through a System Administration Tool, and displays information on customer interfaces through a Content Management System

Automatic Passenger Counters
Gathers real-time ridership loads

Analytics Platform
Provide insights and continual improvement of SFMTA services

Stationary Digital Signage
Displays real-time arrivals, alternatives and other valuable info at rail stations, transit shelters and selected transit stops without power

On-Board Digital Signage
Provides back-end capability to display service updates, transfer connection times and other information on separately-procured on-board vehicle signs

Mobile Platform & Website
Delivers travel information in mobile and online formats; Mobile App features an enhanced Trip Planner
1. Customer Information
   • Generate customer information outputs based on a set of inputs
   • Output examples include vehicle arrival predictions, terminal departures, transfers, trip planner itineraries, route alternatives, etc.
   • Pushes customer information to a variety of customer interfaces

2. System Administration Tool
   • Allows SFMTA staff to interface with, configure and query the system

3. Content Management System
   • Create and layout informational content that can be pushed out to customer interfaces
Temporary Service Changes

Existing System
• Requires significant preparation and lead time to communicate temporary service changes
• Existing system limited to text messages

Next Generation System
• Provide more flexibility for pre-planned and unplanned service changes
• Can archive templates for common (e.g., closing Market Street) and large-scale disruptions (e.g., Bay to Breakers) for future use
Element 2: Stationary Digital Signage

1. Powered Shelter Signage
   - Replace ~850 existing LED signs at powered shelters

2. Powered Signage at Outdoor Rail Platforms
   - Replace ~50 existing LED signs at outdoor rail platforms

3. Powered Signage at Underground Stations
   - Replace existing LCD signs at subway stations and install new LCD signs at Central Subway stations (~30 total)

4. Alternatively-Powered Signage
   - New signs at unpowered locations

- Provide sign hardware, installation and maintenance services
- Ensure uninterrupted service during transitions
- Ensure full ADA-compliance, including text-to-speech
Stationary Digital Signage

Existing System
Light Emitting Diode (LED) screens

Next Generation System
Liquid Crystal Display (LCD) screens with ability to display:
• Graphics
• Maps with the real-time updates of approaching vehicles
• Maps with directions to nearby routes
• Letters and characters in other languages

Durable to the elements and resistant to vandalism
Expanding the Signage Network to Unpowered Stops

Existing Powered Signage
- Stop with Signage
- Stop without Signage

Future Solar-Powered Signage
Element 3: Mobile Platform & Website

1. Trip Planner
   • Point-to-Point Directions, Next Vehicle Arrival Times
   • Live Trip Tracking
   • Enables customers to save trips and their profile at their discretion
   • Configurable to customer preferences

2. Mobile App Integration
   • Ensures a single MuniMobile app that manages current mobile ticketing and provides trip planning functionality
   • Facilitates two-way communications with customers - opt-in
   • Multi-modal
   • Alerts

3. Website Integration
   • Integrate trip planning functionality into SFMTA website
Mobile Platform & Website

- Trip planner automatically accommodates real-time service changes
- Can display other transportation options
- Opportunity to keep customers informed throughout their journey and receive feedback
Accessibility Features

System Software
• Indicate any accessibility limitations at stops
• Indicate any accessibility limitations of vehicles
• Indicate any planned or real-time elevator and escalator outages

Stationary Digital Signage
• LCD screens accommodate larger text
• Push-to-talk

On-Board Digital Signage
• Indicates any accessibility limitations at upcoming transit stops and for connecting routes

Mobile Platform & Website
• Personalized trip planner enables configuration of accessibility preferences (e.g., elevator access, ramps, maximum grade)
• Itineraries provide accessible trips configurable to customer needs
Element 4: Analytics Platform

Provide insights and continual improvement of SFMTA services.

1. Analytics Platform
   • Create reporting tools and dashboards
   • Analytical data models

2. Data Interpretation
   • Analysis will assist to improve service quality and reliability to enhance the customer experience
Performance Management
- On-Time Performance
- Vehicle Travel Time Variation
- Predictions Accuracy
- Interval Reliability
- Stop-to-stop travel times

Customer Engagement
- Usage
- Satisfaction
- A/B Testing

Service and Operational Planning
- Service Interventions Effectiveness
- Transfer Reliability
- Network Connectivity
- Stop Consolidation Impacts

Customer Experience
- Wait Times
- Crowding
- Travel Time Reliability
- Mode Choice
- Internal and External Transfers
- Fare Affordability
- Unserved or Underserved Travel Needs
1. Signage Content
   • Generate customer information (e.g., reroutes, transfer connections) for display on future signs

2. Text-to-Speech Functionality
   • Enable customer information to be announced

3. Integration with Future Signage Vendor
   • Able to push content to a future vendor for display on on-board digital signage
<table>
<thead>
<tr>
<th>System Features</th>
<th>Current</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Software</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictions Engine</td>
<td>✓</td>
<td>✓ (improved)</td>
</tr>
<tr>
<td>Crowding Level Alerts</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Alternative Route Suggestions</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Real-Time Temporary Service Changes</td>
<td>✓ (limited)</td>
<td>✓</td>
</tr>
<tr>
<td>Connections with other systems</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Stationary Digital Signage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered Shelters</td>
<td>✓ (LED)</td>
<td>✓ (LCD)</td>
</tr>
<tr>
<td>Unpowered Shelters &amp; Stops</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td><strong>On-Board Digital Signage (back-end)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop Announcements</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Connection Times</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Service Delay &amp; Reroute Alerts</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Mobile Platform &amp; Website</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile App</td>
<td>✓ (primarily mobile ticketing)</td>
<td>✓ (enhanced capabilities)</td>
</tr>
<tr>
<td>Accessible Itineraries</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Analytics Platform</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usage Trends &amp; Analytics</td>
<td>✓ (limited)</td>
<td>✓ (enhanced capabilities)</td>
</tr>
</tbody>
</table>
General Timing

- **MTAB**
  - April, 2020

- **BOS**
  - April, 2020

- **NTP**
  - May, 2020

- **Design**
  - April, 2020

- **Outreach Begins**
  - April, 2020

- **Plan Milestone Delivery**
  - May, 2020

- **Begin Sign Replacement**
  - May, 2020

- **Begin Backend Set up**
  - May, 2020

- **Plan Milestone Delivery**
  - May, 2020
Additional Capital Projects Planned

Projects Currently Approved via Capital Improvement Program Budgeting

**Trapeze Platform**
- Paycode
- Sign In Terminal – Cable Car
- Workers Comp
- CapID

**Video Modernization Phase 2**
- Rail Expansion
- Tunnel Expansion
- Mobile Stream
- TOLE Expansion

**Train Control Platform**
- West Portal Crossover Activation
- Central Subway Integration Support
- New System RFP - 2020

**Radio-CAD/AVL Platform**
- Virtualization
- New updates to MDT
- Clipper Integration
- CIS Integration
- Central Subway Integration Support
Oh – and did I mention CENTRAL SUBWAY

Questions?
Public Outreach - Research Findings

"Have signs that work at every stop, update outages and line delays, and provide visual information on board vehicles to show transfers available at each stop...bring this very dated system into the 21st century. We live in a city of innovation...utilize it!"

"I do not own a smartphone. Please do not make the system so dependent on owning one"

"On board screens that show arrival times of connecting bus, MuniMetro, BART and Caltrain lines would be helpful. Sometimes it's not always convenient to check times on a phone when standing on a crowded bus or holding bags/handrails/kids, etc."

“Announce expected arrival times of intersecting routes at each stop.”
SFPUC Strategy

The SFPUC Strategic Plan identified the following six goals, each with its own set of objectives:

- Reliable Service and Assets
- Organizational Excellence
- Effective Workforce
- Financial Sustainability
- Stakeholder and Community Interest
- Environmental Stewardship

IT Strategy is mapped to the business strategy
Objective: “Formalize our asset management approach across SFPUC”

Maximo Asset Management System:
- Prioritize IT staffing and funding for Asset Management
- Completing mobile rollout: Wastewater Collections, City Distribution Division and Power Field Operations
- Building out City Distribution Division Maximo solution

Key Performance Indicator
End user satisfaction with Maximo > 85% (currently at 77%)
Objectives: “Ensure SFPUC can mitigate, respond to and recover from threats and disasters” and “Formalize enterprise risk management across SFPUC”

Continuously build out the SFPUC Systems Continuity of Operations capability.
• Maintain local, offsite and out-of-the region data backups
• Drill COO systems one by one over time

Key Performance Indicator
Critical systems availability > 99.95% (Currently exceeding this goal)
Objectives: “Ensure SFPUC can mitigate, respond to and recover from threats and disasters” and “Formalize enterprise risk management across SFPUC”

Continuously improving Information Security Program:
- Inspecting of encrypted Internet traffic completed
- NERC CIP compliance completed
- SFPUC instance of FireEye rolling out
- Multifactor Authentication rolled out for remote users
- Cybersecurity insurance being quoted
Objective: “Improve Operational Efficiency through Technology”

Majority of recent solutions are cloud based and on prem systems moving to the cloud. Current projects include:

- Northern California Network and Internet expansion
- Internet based or Hybrid / Microsoft O 365 TEAMS Unified Telephony / Communications
- Smart City Hubs / Streetlight Controllers
- Electric Billing
- Learning Management System
- Stormwater Flow Cost Allocation Phase 2
- Microsoft Office 365 after email and SharePoint
- Wastewater Dist. Control System (Sewer System Improvement Prog.)
Operational Excellence continued

Key Performance Indicators:

• End user survey regarding satisfaction with IT Services contribution to the Agency > 87.5% (Currently at 93%)
• Service Desk end user satisfaction > 87.5% (Currently at 98%)
• Service Desk ticket aging and closure rate year over year improvement
• Projects on schedule > 85%

?’s
Recent Accomplishments

Windows 10, OneDrive, & SharePoint Team Sites
• 320 customers, 310 Desktops, 33 laptops, 5 conference rooms, IT training lab.
• Functional and project teams.
• New standard for user training.

Collaborative Engagement with DT Cybersec Team
• FireEye agent, Splunk monitoring/reports, mail filtering.
• Excellent communications loop – feedback, ideas, etc.

Draft Technology Strategic Plan
• Focus on collaboration & integration, training, and continuous feedback loop.
Current Challenges

Storage Management & Data Recovery
• NetApp infrastructure decisions.
• Tape backup > Cloud backup.

Collaboration: demand exceeds supply of expertise
• SharePoint workflow/API efforts.
• Teams/Groups structure/hierarchy.

Telephony
• Antiquated PBX @ South Beach Harbor.
• Functionality/admin/cost of Centrex system.

What to do about Accela?
Longer Term Goals

Move Storage and Systems from On-Prem to Cloud

• Data storage.
• EAM, Revenue/Property Management, Harbor Management.

Better align what we “own” and what we “consume”

• Entrust DT with upstream infrastructure, hosting, planning, etc.
• Focus more intently on our business needs. BI dashboards/reporting, system integrations, devoted training to systems and tools.

Telephony

• Subscribe to City VoIP system – perfect business case for “consume.”
Highlights

• Branded and reinforced as a Technology project, not an IT project.
• IT acts as a collaborative contributing stakeholder in support of business stakeholders.
• Project Manager, Matthias Giezendanner, leads the charge with Project Champion and Sponsors engaged. He’s the “cool Uncle.”
• Working group of stakeholders meets weekly, focused on tackling business questions and issues – processes, asset policies and hierarchy, functional requirements, reporting.
Next Steps

• Refine and publish initial RFP. Tasks include validating and refining business processes, identifying reporting and integration needs, and finalizing functional and technical requirements for a new system.
• Timeline: ~ 90 days for RFP submittal; ~ 90 days for engagement.
• Use results from this engagement to finalize and memorialize our requirements and to select a new system. Publish second RFP for system procurement and implementation services.
• Timeline: ~ 6 months for RFP submittal; ~ 12 months to go-live.
Questions & Feedback?

Port of San Francisco

Jerry Burdick
6. Public Comment