



SFMTA
Municipal Transportation Agency

The background of the slide is a photograph of a San Francisco cable car at Pier 39. The image is overlaid with a semi-transparent red filter. The cable car is white with black accents and has "PIER 39" and "ENTER AT REAR" signs. A sign on the front of the car reads "EMBARCADERO WEST STOP FERRYBLOO".

LIGHT RAIL PERFORMANCE IMPROVEMENT STRATEGY

06 | 04 | 2013

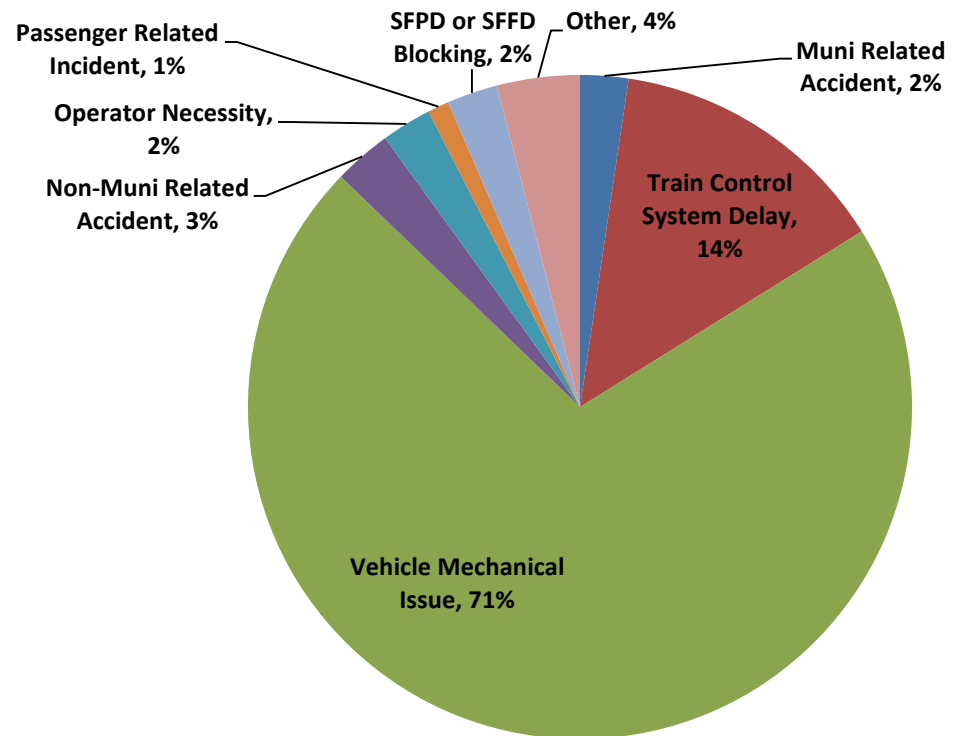
SAN FRANCISCO, CALIFORNIA



Status of Light Rail Service

- Overall light rail on-time performance is under 50% in May
- One in five trips has a gap of 5 or more minutes above scheduled headway
- Peak service at capacity in subway
- Incidents in subway delaying all lines

Rail Delays by Type





Factors Affecting Performance

- **Vehicle Performance**
 - On average, each train breaks down in service every 25-30 days
 - Lower availability means more one car trains and more crowding
- **Infrastructure Performance**
 - Overhead lines
 - Track condition has led to speed restrictions
 - Major bottlenecks at 4th & King, West Portal, Church & Duboce, & Embarcadero
 - Signal priority system



Factors Affecting Performance

- **Service management**
 - Current technology does not allow for efficient service management
 - Limited supervision resources
- **Subway capacity**
 - Service limited by subway throughput capabilities
- **Schedules**
 - Not updated to current operating conditions
- **Mixed flow traffic operations** with complex subway and manual running interface at subway portals



Actions Underway to Improve Service

- **Vehicle Performance**
 - Rehabilitation program completed on 1/3 of fleet
 - Adjusting Breda work schedule to increase vehicle availability
- **Infrastructure Performance**
 - Independent review of overhead lines department
 - Train subway entries under close scrutiny
 - Signal priority repaired along Third Street and reassessing signal timing on Third Street
 - Track replacement projects in the pipeline which will improve travel speeds and safety



Actions Underway to Improve Service

- **Service Management**
 - Standby trains added to fill in service gaps as needed (availability permitting)
 - Additional mechanics assigned to subway to expedite delays
 - Troubleshooting program being rolled out to supervisors and operators to reduce delays
 - Reviewing service recovery techniques to improve customer service
 - Hiring additional rail supervision



Actions Underway to Improve Service

- **Schedules**
 - Updated schedules planned for implementation on July 1
 - Use of new fallback operation at Embarcadero expected to improve throughput
- **Bottlenecks**
 - Fourth/King transit priority implementation in July
 - Traffic control support assigned to West Portal during PM peak
 - Fallback expected to improve Embarcadero
 - Reassessing manual stop locations with Safety



Actions Underway to Improve Service

- **Technology**
 - Double berthing (testing in July)
 - Reviewing opportunities to use advanced train control system on Embarcadero
 - Assessing use of three car trains in subway to improve capacity
- **Customer Communications**
 - More frequent service updates on Twitter and NextBus signs
 - Subway audio and sign upgrades within the next 12 months



Improvements will help

- Improvements will provide more reliable service and better communications with customers
- Look forward to demonstrating our success