

P R E S E N T A T I O N

The Myth of Demand Based Planning

Caltrains “Baby Bullet” Service Experience

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Presentation Outline

1. Description and History of Caltrain Corridor
2. Improvement Program (1996-2005)
3. Baby Bullet Service/Operation Planning
4. Results and Lessons Learned
5. The Future



Excerpts from the S.F. Business Times 11/10/05 & Gilroy Dispatch 11/11/05

San Francisco
BUSINESS TIMES
Caltrain ridership increases

An increase in ridership, despite a budget gap that close a budget gap that Caltrain officials are making. This is credited to the "Baby Bullet" service, which began in June 2004. Revenue, meanwhile, is up 27.6% over last year's figure. Fares increased 17.5% July 1, which had been expected to reduce ridership.

Clearly, passengers want the faster travel times that Caltrain now offers."

GILROY DISPATCH
Caltrain Ridership up Since Baby Bullet Debut in Aug.

San Jose - Caltrain's "reimbursement" as a rail service offering faster trips and steady weekday frequency has led to big increases in ridership, which are helping the commuter rail line close a budget gap that had threatened its survival.

Since Caltrain introduced a new streamlined schedule Aug. 1, average weekday ridership is up about 9.4 percent compared to the same months last year, according to Operating Officer Chuck Harvey.

Revenue, meanwhile, is up 27.6 percent over last year's figure, despite a 17.5 percent fare increase and reduced revenue from the Baby Bullet service.

Average weekday ridership has gone from 26,608 pre-Baby Bullet to 34,430 as of September of this year, & revenue is up 50 percent, Harvey said."





Excerpts from the San Francisco Examiner 09/1/05, 11/13/05

The San Francisco EXAMINER Same beat, different city By Maria L. Gonzalez

More is not always in its budget even — almost every large transit provider in the Bay Area and beyond is grappling with similar problems.

"Usually every agency in the Bay Area has found its own Caltrans service or both," said John Gaudin, a spokesman at the regional Metropolitan Transportation Commission.

"There was good news on the Peninsula last week, however: Caltrain announced a 9% increase in weekday ridership and 27% revenue increase compared with last year."

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The jumps, say Caltrans officials, can be directly linked to the Baby Bullet train the agency rolled out in 2004, which offers faster, more efficient service.

"That speaks to the kinds of things our service planning people are looking at, creative ways to speed up the system," said spokeswoman Maggie Lynch said, referring to several audits of the system that are expected to be completed next year.

The San Francisco EXAMINER Riding the rails enjoys renewed popularity Diesel costs eat Caltrain's rising revenue By Edward Carpenter

SAN CARLOS — The popularity of express train service over the past year has helped push annual Caltrain ridership to its largest gain since the dot-com heydays.

Ridership ballooned more than 17 percent to 9.4 million during fiscal year 2005, compared to the previous year. Average weekday ridership rose nearly 13 percent to almost 30,000 in what was the first complete year of Baby Bullet service, officials said.

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"People really want a transit system that takes them places quickly & delivers them on time, and Caltrain has delivered," said Sue Lempert, Caltrain board member and San Mateo councilmember."

The agency's revenue rose 27 percent to \$122 million, but it also saw a 10 percent increase in diesel costs, which ate into its profits.

"I think Caltrain's performance was 97 percent for fiscal year 2005," said Lempert. "We're looking at the agency's performance and revenue and trying to figure out how to make it better."

On-time performance was 97 percent for fiscal year 2005, officials said. During the first week of July, Caltrain paid \$1.66 per gallon for diesel compared to \$2.35 by last week. The firm, called upon by some bus companies to address the trouble. The adjustments will go into effect Oct. 15.

Partially offsetting the revenue gains from increased ridership are higher diesel fuel prices, officials said. During the first week of July, Caltrain paid \$1.66 per gallon for diesel compared to \$2.35 by last week. The firm, called upon by some bus companies to address the trouble. The adjustments will go into effect Oct. 15.

Caltrain was about 4.4 million gallons of diesel a year, with an engine getting about three miles to the gallon, officials said. Starting last year, ridership increased 7.3 percent and 1.7 percent in June and July, respectively.





Description & History of Caltrain Corridor

- Context
 - 77-mile corridor length, 29 stations
 - Commute-hour service from San Jose to Gilroy
 - 3 Counties, 15 Cities Served Directly
 - Large CBD on both ends (SF, SJ)
 - Solidly suburban in between
 - Stations Typically in Historic Suburban Cores
 - Burgeoning TOD's at Several Stations
 - Parallels Congested US101, I-280 Corridors
 - Connects to Local Transit, Regional Rail, and more...
 - BART, SF Muni, VTA, ACE, Amtrak, Samtrans, others
 - San Francisco International Airport



Description & History of Caltrain Corridor (continued)

- Evolution – SPRR to Public Entity
 - Continuous Passenger Service Since 1861
 - SPRR Owned/Operated Until 1970's
 - Caltrans Operated Until 1991
 - 1991: ROW Purchased by 3-County Joint Powers Board
 - 1998-2001: Dot-Com “Boom to Bust”





Description & History (continued)

➤ Political Climate

- 3-County Governing Board
- Viewpoints Often Differ Among:
 - Member Counties
 - Local Cities
 - Connecting Transit Providers (BART, Muni, VTA)
- Result: Implementing Change Can Be Difficult



Description & History (continued)

➤ Budget Issues

- Operating funds from fares/partner contributions
- Revenues have remained relatively flat
- Partner's Contributions have remained flat over last three years
- One-time revenues have been used in the last three years to close the gap
- Expenditures have continued to grow



Improvement Program 1996-2005

- Capital Upgrades (Ponderosa, Bonanza, CTX & Beyond)
 - 13 miles of Passing Track (3rd and 4th Tracks)
 - Crossovers
 - Grade Separations
 - Rail/Tie Refurbishment Program
 - Station Upgrades
 - Station Redesign
 - Reconfigure “holdout” stations
 - New Maintenance Facility
 - Lenzen Yard
- Goal: Increase Reliability, Safety and Throughput



Improvement Program

1996-2005 (continued)

- Systems Upgrades
 - Expansion of Centralized Traffic Control
 - Signal/Communication System Upgrades
 - Enhanced Dispatch Facility
- Equipment Upgrades
 - New Locomotives/Rolling Stock
- Other
 - Visual Messaging, P/A Systems, Transition to POP Fare System



Along the Line





Through the Communities



*San Antonio Station
Transit Oriented Development*



Eliminate Hold Out Rule



*Side Loading Platform
Across Two Active Tracks*

Center Loading Platform





At the Stations



Menlo Park Station

San Carlos Station





Four – Intermodal Transit Connections

- *Millbrae Station*
Shuttle Service to SFO
Upcoming BART Service



- *Mountain View Station*
with VTA Light Rail



- *Diridon Station with VTA Light Rail / ACE / Capitol Corridor*
- *4th & King Station Muni Light Rail (N Line)*





Yard Construction



*Current Diridon
Maintenance Facility*

*Future Site of
CEMOF Facility*



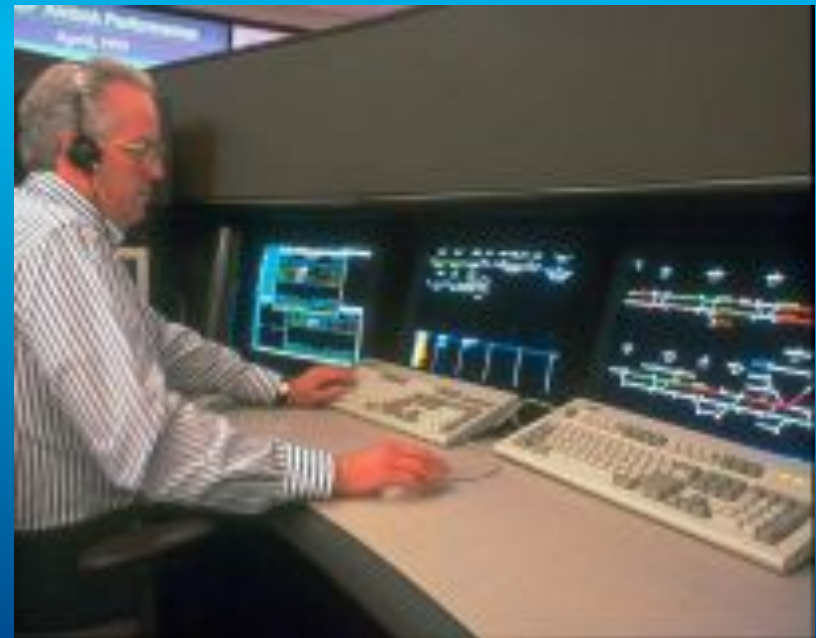


Control Enhancements



Centralized Traffic Control System

Enhanced Dispatch Facility





Track Rehabilitation



Tracks and Infrastructure





Baby Bullet Service/Operation Planning





Baby Bullet Service/Operation Planning

- Framework:
 - Service Based on Business Principles
 - I.e., Focus on High-Revenue Service
 - Maximize Productivity (earned revenue per employee)
 - I.e., Shorten End-to-End Run Times
 - Maximize Efficiency (contain costs)
 - Maximize Revenue by transitioning from “Push” to “Pull” model



Baby Bullet Service/ Operation Planning (continued)

- Planning Process:
 - Reject the Demand Modeling Approach
 - Use Capacity/Operations Modeling Approach
 - What end-to-end runtimes must be achieved to maximize efficiency AND reliability?
 - Reconfigure Service Resources based on Demand and Perceived Demand
 - Link Level of Service to Known Ridership Generators



Baby Bullet Service/ Operation Planning (continued)

- Challenges
 - Limited Choices for Planners
 - Few Service Plans “fit” available infrastructure
 - Some Stakeholders “Lose”
 - Some Service Curtailed for Plan to Work
- Difficult Decisions Made
 - Service Reductions/Suspensions
 - Some Stations Get Less Service
 - Replace Service with shuttle or local bus services
 - Locals Replaced with Limiteds + Timed Transfers

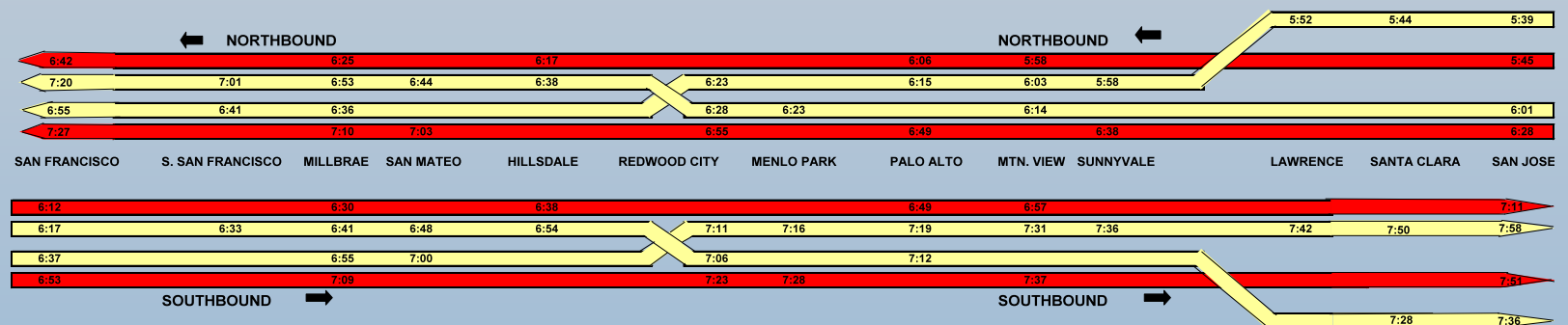


Baby Bullet Service/ Operation Planning (continued)

Initial Service Plan



Current Service Plan



LOCAL



LIMITED

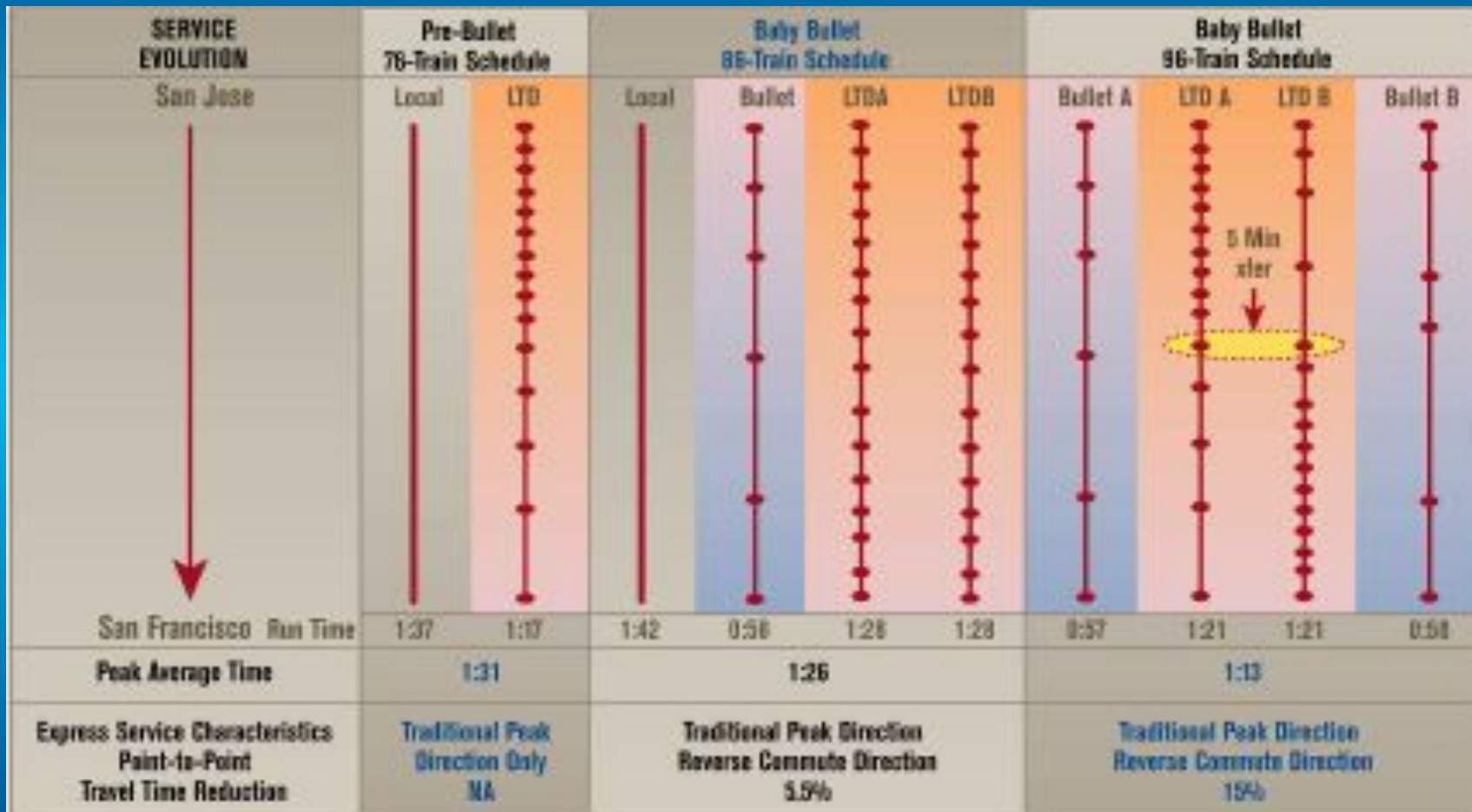


BULLET

➤ Service Changes



Baby Bullet Service/Operation Planning (continued)





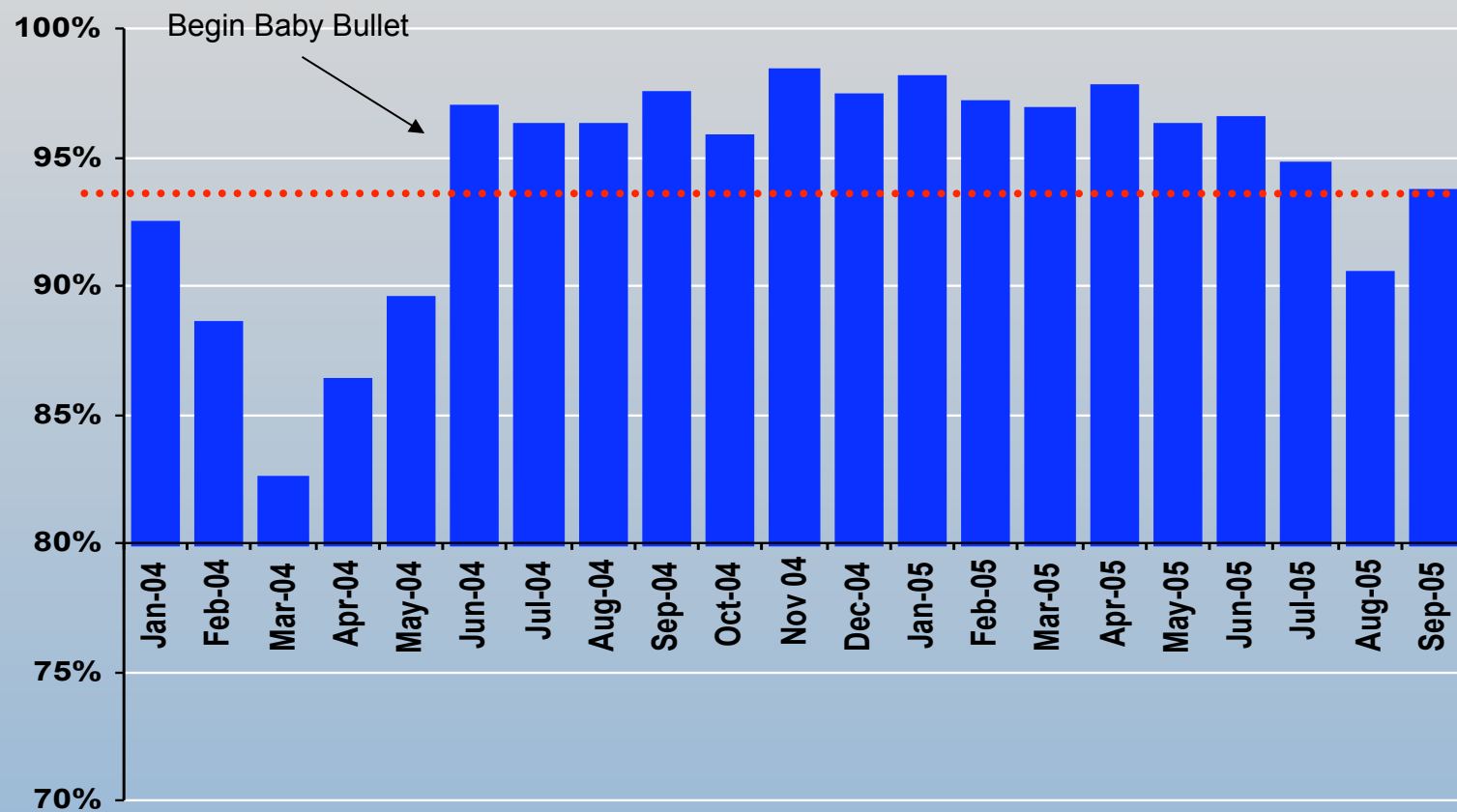
Results

- Service Increase from 76 to 96 Daily Trains
 - Same crew and equipment resources
- Gains in Ridership, Reliability
 - 20% Gain in New Riders
 - 50% Gain in Revenue
 - On-time performance increased
- “Synergisms” Created
 - Budget Deficit Offset with Service Increase
 - 86 to 96 daily trains (August 2005)



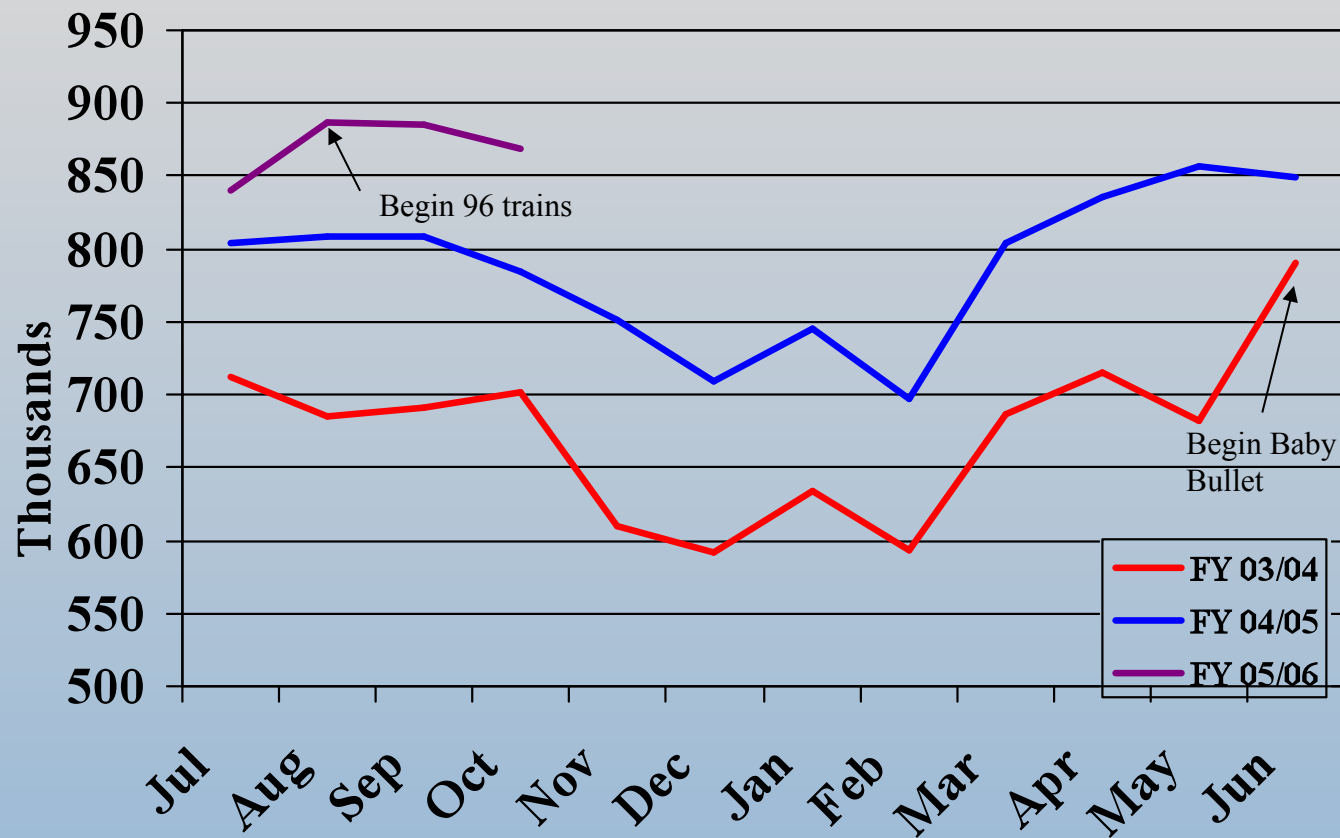
Results

On-Time Performance



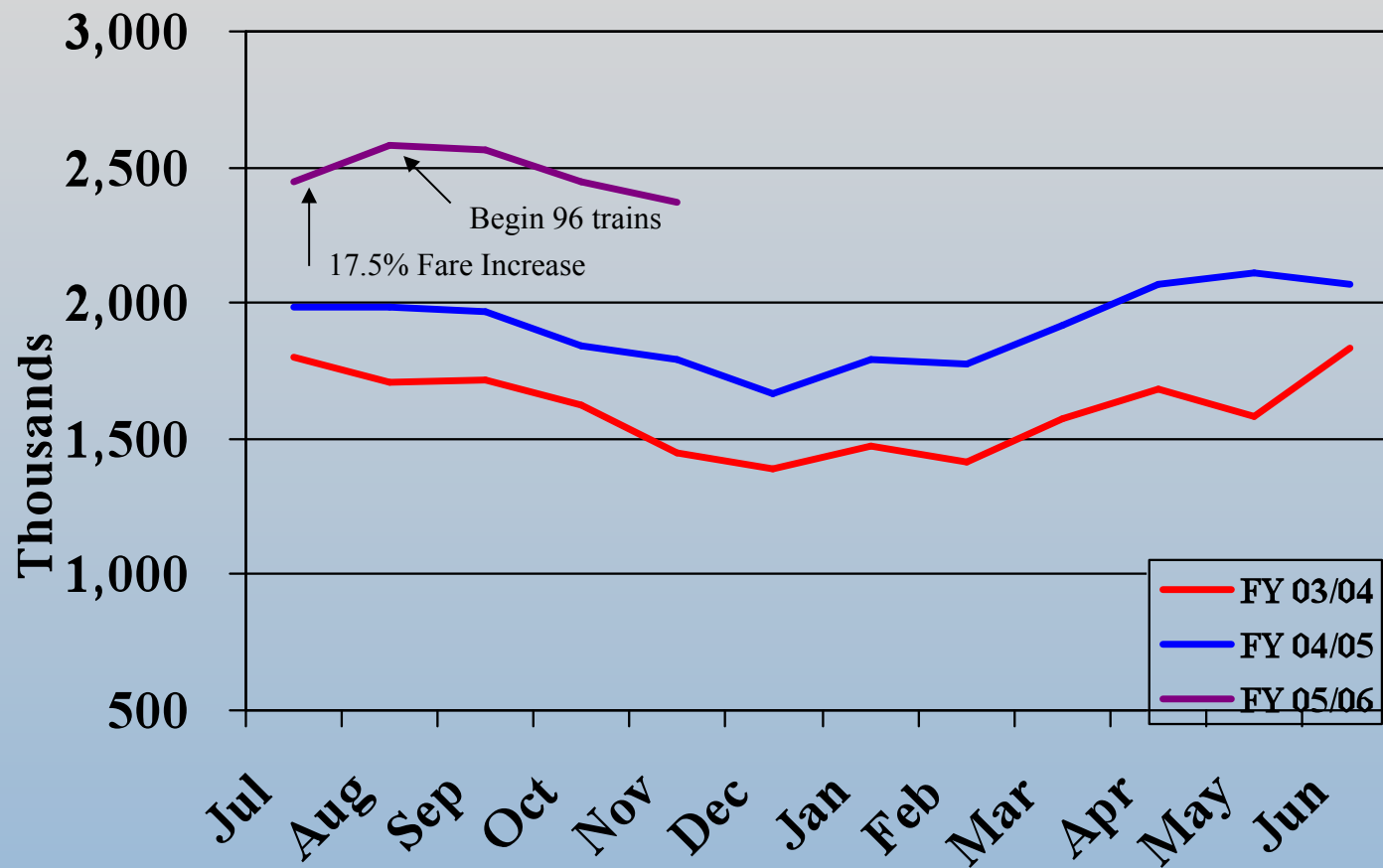


Results-Total Ridership





Results-Fare Revenue





Lessons Learned

- Riders are Flexible, Given Choice of Superior Service
 - Will change Origin/Destination station
 - Will trade off Access for Frequency/Speed Benefits
 - Will Pay More – 17.5% Fare Increase, No Ridership Elasticity
 - Perceived Reliability is Key to Passengers
- Labor Appreciates Enhanced Productivity
 - They like going fast
- Some “Unintended Consequences”
 - Parking Demand at “Bullet” Stations Approaching Supply Limits
 - Capacity limits being reached – rolling stock design, signal system, terminal platform, train storage



Implications for Other North American Operators

- Superior Service Overlain on “Blank Slate” Can:
 - Trump Output of “Traditional” Planning
 - Result in a Rich Mix of Integrated Service (Local, Limited, Express)
 - Significantly Reduce Travel Time (Compete w/Car)
 - Gain Acceptance by Existing and New Riders
 - Drive Demand



Implications for Other North American Operators (cont'd)

➤ Caveats:

- Relatively Few “Bi-Directional” Corridors

- San Jose-Oakland-Sacramento (170 miles)
- Los Angeles-Orange
County-Oceanside (90 miles)
- Chicago-Milwaukee (80 miles)
- New York-Trenton (65 miles)
- Albuquerque-Santa Fe (60 miles)
- Boston-Providence (45 miles)

- Boston-Worcester (45 miles)
- Washington-Baltimore (40 miles)
- New York-Stamford (40 miles)
- Salt Lake City-Ogden (40 miles)
- Dallas-DFW-Ft. Worth (35 miles)
- Seattle-Tacoma (35 miles)

➤ Possible Applications of Lessons Learned:

- High-Speed Rail Initiatives





Keys to Success

- Understand Your Corridor/Ridership
- Question Traditional Planning Processes
- Trust Your Intuition
- Inform the Public/Stakeholders
 - Robust Outreach Program BEFORE, DURING and AFTER Service Changes
- Be Prepared to Respond to Change
 - ...and be prepared to prepare your Board!



The Near Future

- Deal with immediate capacity constraints
 - Increased passenger loads create dwell time issues (rolling stock quantity and design)
 - New storage facilities (to loosen up Diridon station)
 - Install intermediate signals



Long-Range Plans

- Continued Phased Infrastructure Upgrades
- Rail/Service Extensions
 - Gilroy – Monterey/Santa Cruz
 - Dumbarton – Union City
- Major Upgrades
 - Downtown Extension/Electrification
- Anticipating and Responding to Customer Needs
- Other

Questions & Answers



Thank You !

