



# RTD's Performance Management System

Transit Asset Management Roundtable

"Why Set Targets?"

August 29, 2017

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Chief Executive Officer (CEO)

San Joaquin Regional Transit District (RTD)

# San Joaquin RTD: Who We Are

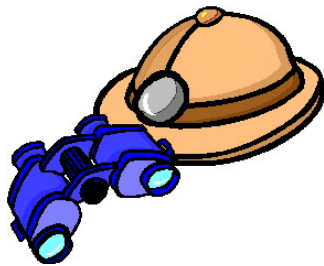
- San Joaquin Regional Transit District (RTD) is the regional transportation provider for San Joaquin County, located in California's Central Valley
- The public transportation provider:
  - Stockton Metropolitan Area (since 1965)
  - San Joaquin County (since 1994)
- Service area: San Joaquin County (over 1,400 sq. mi.)
  - Approximately 680,000 people
    - 7 incorporated cities
    - Rural communities
    - Unincorporated areas
- Services:
  - Fixed-route, BRT, deviated fixed-route, commuter, mobility on demand, vanpools, and a variety of ADA options



# RTD's Journey to Reality-based Management and Planning



- Where are we?
- Where do we want to go?
- How do we get there?
- What have we got?
- What do we need?



MARTIN

[phillipmartin.info](http://phillipmartin.info)

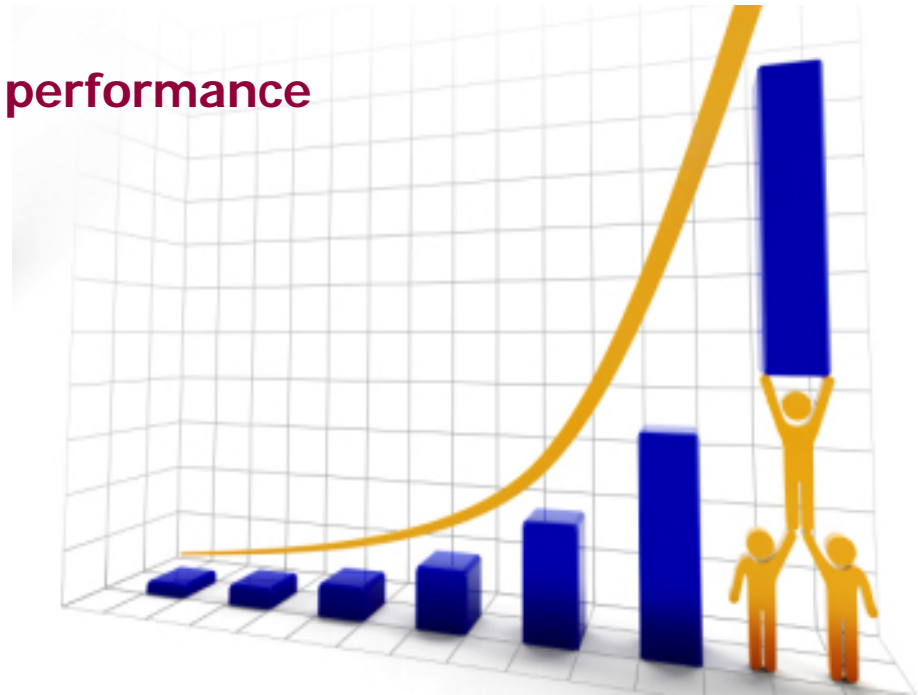


# Why measure anything at all?

## We wanted to measure our performance

- How are we doing?
  - Productivity
  - Efficiency
  - Effectiveness
- How do we compare?
- How can we improve?

*"You can't manage what you don't measure."*





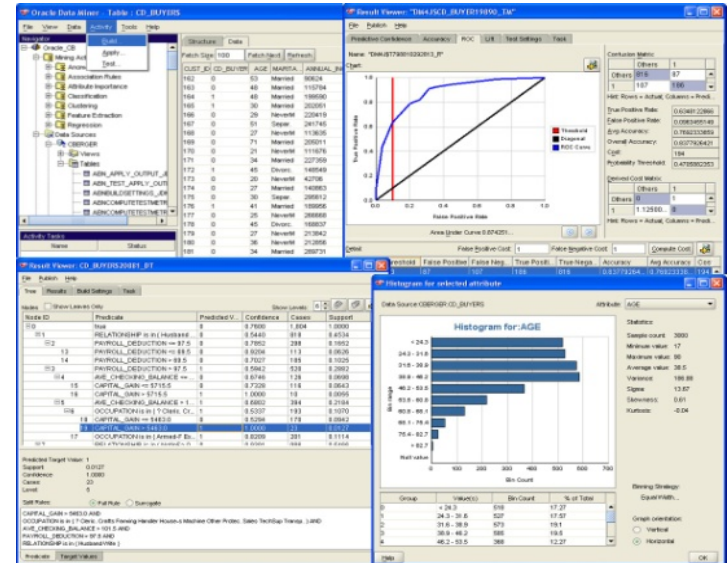
# Where should we look?

## Lots of Data

- Various systems/sources
- Financials (old system vs. new system)
- Operations
- Fare Collection System
- Excel spreadsheets (lots of them)
- Asset lists
- Fleet plans
- Capital plans and budgets

## Great People

- Committed to the organization
- Process-oriented
- Need to understand the bigger picture
- Need to be motivated to manage, not just list or count



# What should we do?

- **Provide support and direction from the top**
- **Assign process owners and make them accountable**
  - Educate (system, data, relationships)
  - Assign responsibility for validating numbers
  - Allow them to tell the story (make sure the story is correct)
  - Encourage challenging the **status quo** and the **myths**
- **Automate as much as possible**
  - Minimize manual entries and corrections
  - Get data from the actual source (if an integrated system is used)
- **Define what is important to the organization**
  - develop key performance indicators, but
  - avoid KPI overload
- **Benchmark with peers**



# Measuring and Benchmarking Performance



RTD struggled with data management and performance planning

- Some internal solutions
  - Route Scorecards
  - TransTrack
  - Strategic Planning

RTD struggled with establishing effective performance metrics

- An external solution
  - American Bus Benchmarking Group

# Route Scorecard

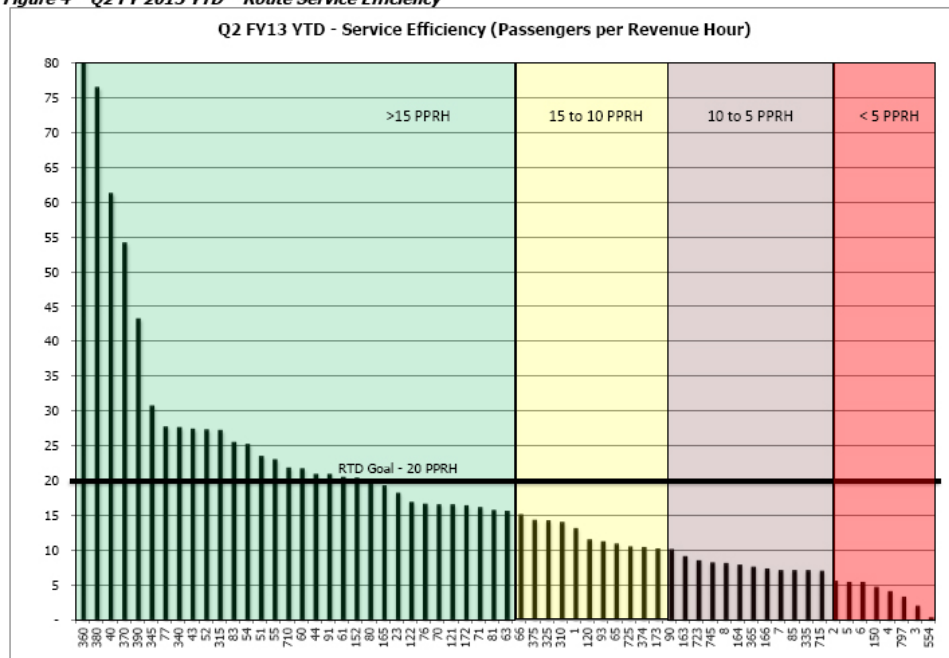
## RTD formalized and improved a ranking system for its routes

- Initial Scorecard outlined: passenger volume, passengers per revenue hour, cost per revenue hour, and fare recovery
- Scorecard was reviewed quarterly by RTD staff to outline service effectiveness and prepare recommendations based on route performance

February 01, 2013  
Quarterly Service Performance Report

February 01, 2013  
Quarterly Service Performance Report

Figure 4 – Q2 FY 2013 YTD – Route Service Efficiency



	Passenger Performance Index	Service Efficiency Index	Revenue Efficiency Index	Cost Efficiency Index	Average Score
<b>Metro Express</b>					
40	1	3	6	12	5.5
43	2	9	18	23	13.0
44	3	18	22	10	13.3
<b>Metro Fixed Routes</b>					
77	13	7	16	5	10.3
83	8	12	19	4	10.8
54	10	13	21	3	11.8
52	6	10	23	14	13.3
51	4	14	27	13	14.5
80	5	22	33	7	16.8
55	12	15	26	21	18.5
61	7	20	32	17	19.0
70	9	27	38	2	19.0
60	15	17	30	19	20.3
76	18	26	37	8	22.3
81	27	31	25	6	22.3
71	16	30	39	18	25.8
63	23	32	40	25	30.0
66	20	33	44	28	31.3
65	60	40	35	11	36.5
85	24	52	50	20	36.5



# Automated Data Collection

- RTD uses TransTrack to manage its data
  - TransTrack is a data integration solution that takes information from a variety of data sources and rolls it up into an NTD-ready report

**OFFICIAL  
BUSride Field Test:**

## San Joaquin RTD streamlines data with TransTrack Systems

Who knew that a chance trade show meeting would completely change an agency's operational culture?

Diana DeBartolo, general manager / CEO of San Joaquin Regional Transit District (RTD), visited the TransTrack booth with Allan Piffale, vice president of San Joaquin Area Public Transit. Piffale indicated that his agency had been using TransTrack solutions for some time, and that it had done wonders for the agency's data reporting. Together, they approached Mary De O'Melia, president of TransTrack Systems. "Our clients are our best reference," O'Melia says. "If they have a need and they can relate to what we're talking about in our presentations, they then go check our client references. If they all check out, we're really a lock."

RTD provides transit services for San Joaquin County, serving the Southern Metropolitan Area as well as nearby, interregional and rural transit services including DeBartolo oversees all departmental operations and procurements and has been with the agency for nearly 10 years.

With such a large area to cover, it is essential for the agency to manage transit data efficiently and report it accurately. In that vein, when DeBartolo saw a demonstration from TransTrack systems at a trade show, she knew it was something her agency needed to have.

"A lot of data flows through our agency," she says. "We have to be absolutely certain that the data is collected accurately, that it's collected properly, and that we're able to turn it into something that's useful for business analysis and decision making."

TransTrack Systems provides a Business Intelligence solution called TransTrack Manager, which turns literally volumes of transit data into meaningful operational and managerial information for optimal transit performance. TransTrack says its solution streamlines operations for operational improvements and greater efficiency



TransTrack Manager turns volumes of transit data into meaningful operational and managerial information for optimal transit performance.

currently hidden within each data source, providing the missing link between operational systems information and management reporting. "We had previously found that information we were providing to external agencies as well as our own board was inconsistent," she continues. "When we realized the data wasn't correct, it was alarming. When I saw TransTrack demonstrated at a conference, I realized it was exactly what we needed."

**Forming a relationship**

Until that point, RTD was managing data and National Transit Database (NTD) reporting with Excel spreadsheets.

"If they get a new source or general ledger account, they had to change all of their spreadsheets," O'Melia says. "Every time they wanted to do any kind of reporting, it literally involved copying numbers from one spreadsheet to the other."

The challenge in that spreadsheet era was complicated by people, and the more that happens, the more likely it is that an error will occur in the process. TransTrack not only reduces the margin of error, it saves a lot of time, as fewer people are handling the data.

DeBartolo says that RTD's challenge wasn't in collecting data - it was in making sure the collected data was correct. "Before there were anomalies, staff would use guesswork to approximate answers."

"It really needed to be accurate, we were gathering the data we needed and combining it on a regular basis," she says.

In the initial agency implementation, O'Melia and DeBartolo met with the RTD's senior management team. This, she says, "helped us to get a better handle on the agency's expectations, pain points and issues."

TransTrack systems that were up, some interviews, called

RTD's Diana DeBartolo, originally met TransTrack Systems' Mary De O'Melia at a trade show.

No ramp-up process is without its challenges, but TransTrack and RTD were able to work through and unforeseen issues as they arrived.

DeBartolo, assistant general manager / CEO of RTD, says that the TransTrack team was essential in helping the agency document the flow of information, identifying the flows associated with the validity and reliability of the data, and documenting the definition of each piece of information.

"We needed to know the definition of each element within revenues, expenses, and other key indicators," Salazar says. "For example, what does on-time performance really mean? Those definitions are critical to us because the entire agency needs to know what they mean before we can really analyze the validity of the data we get."

After that, TransTrack and RTD began developing definitions and appointing staff members to be in charge of each source data.

"Then we had to determine the metrics - what do we want to measure?" Salazar says. "We needed people to own those key performance indicators and be able to explain the story behind the numbers. We needed staff to report on time but also interpret the meaning of data relationships. We've improved a lot since beginning the process, but that's still an evolving process."

**Ramping up**

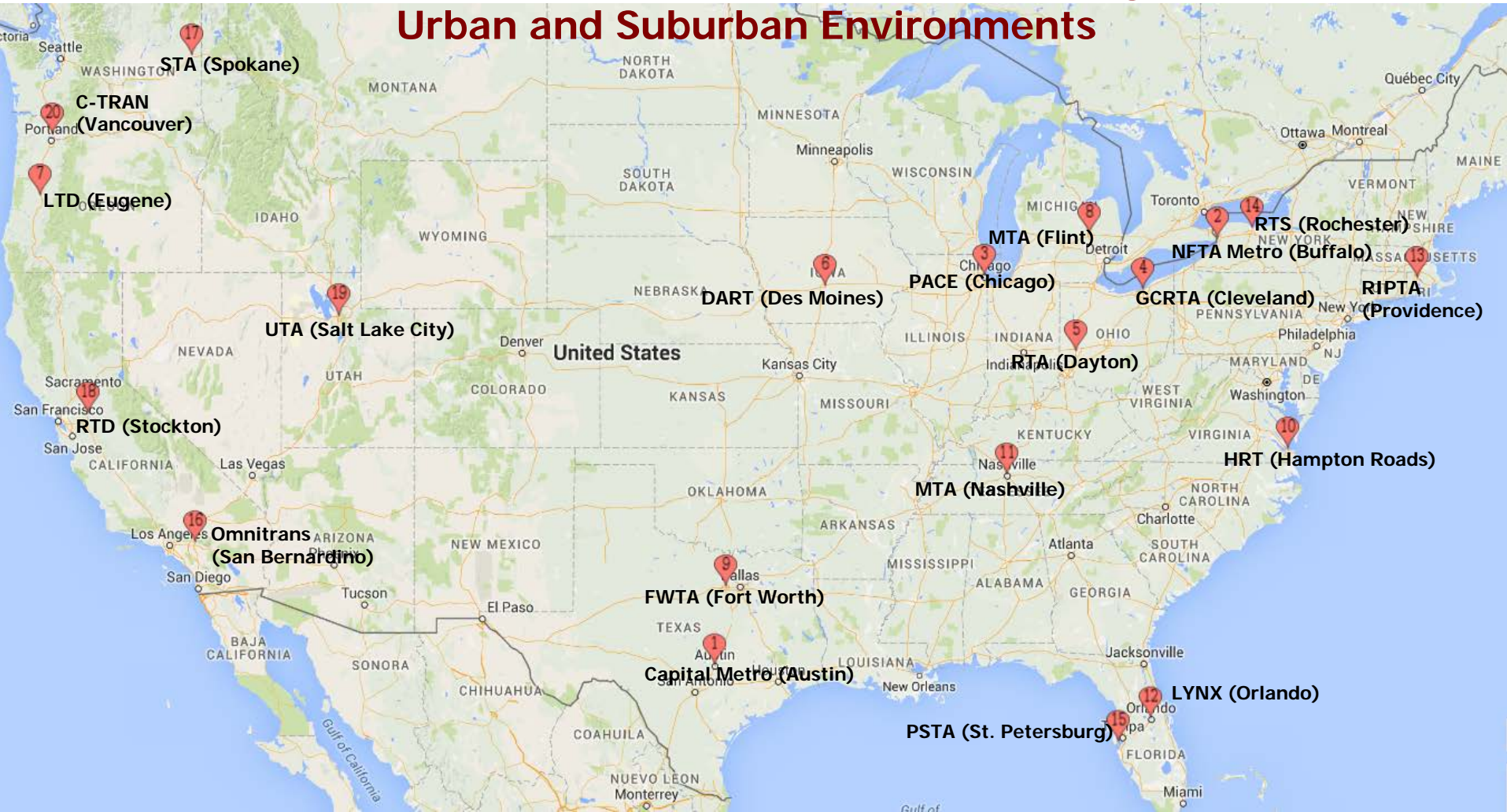
No ramp-up process is without its challenges, but TransTrack and RTD were able to work through all unforeseen issues as they arrived. For one, it's difficult to predict staff changes. As employees leave and new staff members come onboard, data management training becomes even more essential.

"When staff changes, we have to really be on top of things," O'Melia says. "We need to make sure management understands who needs training, and who is the new person responsible for a data stream. Most of the team leads have changed at RTD since implementation, so over the last few years we've returned to the agency to educate an entirely new set of data managers."

RTD wanted TransTrack representatives in some capacity and work with their data managers. As such, TransTrack conducted monthly meetings for a while before RTD staff was ready to take over.

# American Bus Benchmarking Group:

20 Members Across the U.S. in a Wide Range of Urban and Suburban Environments



# ABBG 2013 Fixed-Route Key Performance Indicator System:

Based on the Balanced Scorecard, Customized for Transit

## Growth & Learning

- G1 Passenger Boardings (5-year % change)
- G2 Vehicle Miles and Hours (5-year % change)
- G3 Passengers per Revenue Mile & Hour
- G4 Staff Training (by staff category)

## Customer

- C1 Customer Information (scheduled and real-time)
- C2 On-Time Departure Performance (0 < > + 5)
- C3 Passenger Miles per Revenue Capacity Mile
- C4 Passenger Miles per Revenue Seat Mile
- C5 Lost Vehicle Miles

## Internal Processes

- P1 Peak Fleet Utilization (fleet not used split by cause)
- P2 Network Efficiency (revenue miles & hours per total miles & hours, non-revenue split by category)
- P3 Staff Productivity (total vehicle hours & miles per labor hour, overall and by category)
- P4 Staff Absenteeism Rate (by staff category)
- P5 Mean Distance/Time Between Road Calls

## Financial

- F1 Total Cost per Total Vehicle Mile & Hour
- F2 Total Operating Cost per Total Vehicle Mile & Hour (F3 service operation, F4 maintenance, F5 administration)
- F6 Service Operation Cost per Revenue Mile & Hour
- F7 Total Operating Cost per Boarding & Pax Mile
- F8 Operating Cost Recovery (fare revenue & commercial revenue per operating cost)
- F9 Fare Revenue per Boarding & Pax Mile

## Safety

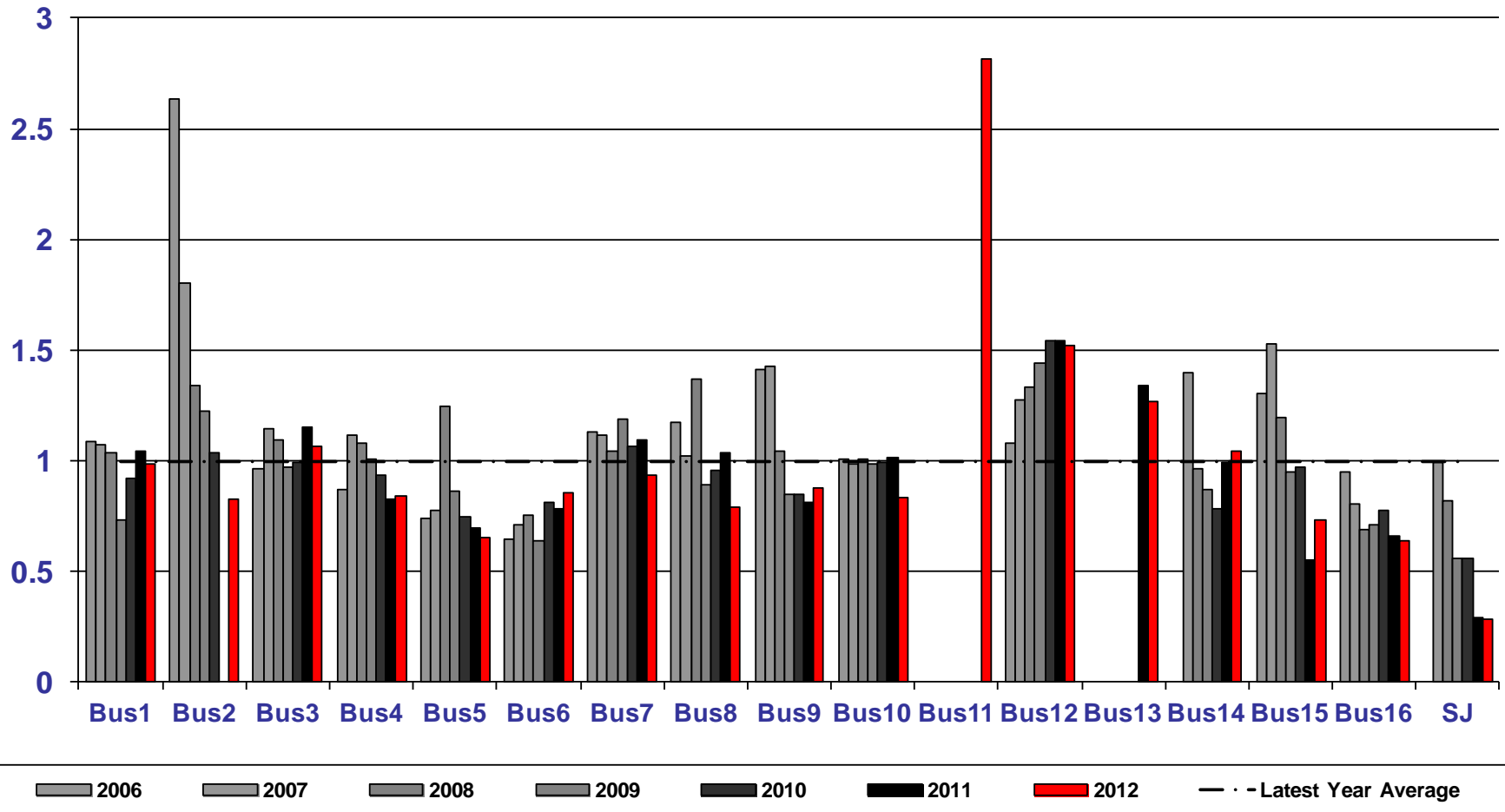
- S1 Number of Vehicle Collisions per Vehicle Mile & Hour (preventable & non-preventable)
- S2 Number of Staff Injuries per Staff Work Hours
- S3 Staff Lost Time from Accidents per Staff Work Hours
- S4 Number of Passenger Injuries per Boarding & Pax Mile
- S5 Number of 3rd Party Injuries per Vehicle Mile & Hour

## Environmental

- E1 Diesel Fuel Consumption
- E2 CNG Fuel Consumption (per total vehicle mile, per pax mile, and per capacity mile)
- E3 CO2 Emissions per Total Vehicle Mile & Pax Mile

# Example where RTD Performs Well: Safety

Vehicle Collisions per Total Vehicle Miles  
Indexed to group average







# Over a Decade of Strategic Planning

**San Joaquin Regional Transit District**  
**FY 2017 STRATEGIC PLAN**  
 Our primary mission is to provide a safe, reliable, and efficient transportation system for the region | Our vision is to be the transportation service of choice for the residents we serve

**CORE VALUES**

- Customer Service**  
We serve our customers well because we are empowered by the strength, contributions, and dedication of our employees. We treat each other, our customers, and our community with respect, integrity, and loyalty.
- Safety**  
We commit to creating a safe and responsible environment for our employees, our customers, and our community.
- Positive Work Environment**  
We promote a positive work environment by supporting each other through effective communication, teamwork, and appreciation for our diverse abilities and contributions.
- Sustainability**  
We commit to a sustainable business model that includes environmental and fiscal responsibility, business continuity, and succession planning.

**GOALS**

Employee Engagement	Customer Engagement	Financial Health	Operations Excellence	Community Relations	Continuous Improvement
<b>INITIATIVES</b> <ul style="list-style-type: none"> <li>Promote extraordinary Customer Service through employee campaigns</li> <li>Promote employee fiscal responsibility and accountability</li> <li>Encourage and support professional and leadership development as part of a continuing succession plan</li> <li>Promote staffwork that is completed with accuracy, quality, and consistency</li> </ul>	<ul style="list-style-type: none"> <li>Engage and communicate with our customers to continuously improve their experience</li> <li>Leverage mobile, online, and social technologies to enhance public engagement</li> <li>Lead the community in coordinating services for seniors, persons with disabilities, and those needing non-emergency medical trips</li> <li>Regularly improve customer amenities</li> </ul>	<ul style="list-style-type: none"> <li>Increase farebox recovery through increased ridership</li> <li>Maximize current and potential funding and cost savings, and explore revenue-generating ideas and partnerships</li> <li>Measure and improve organizational efficiency, effectiveness, and productivity through the use of performance indicators</li> <li>Continuously improve contractor performance through effective oversight and accountability</li> <li>Implement a Transit Asset Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>Increase ridership</li> <li>Provide the highest level of transit service to the greatest number of people within our available resources</li> <li>Use a performance and data based method in designing and delivering transit services</li> <li>Implement efficient and effective transit services, including vanpool, volunteer driver programs, and other opportunities</li> <li>Promote safety and security by developing and implementing the Safety Management System</li> <li>Implement a Transit Asset and Midtown BRT Corridors</li> </ul>	<ul style="list-style-type: none"> <li>Use effective marketing, outreach, and education strategies to increase ridership</li> <li>Implement and promote education and employer pass program</li> <li>Continue educating stakeholders on transit funding opportunities, challenges, and constraints</li> <li>Develop and leverage public-private partnerships</li> <li>Provide leadership through innovative projects that reduce environmental impacts and foster sustainable practices</li> <li>Promote RTD service to regional governing boards and chambers of commerce</li> </ul>	<ul style="list-style-type: none"> <li>Measure, review, and benchmark organizational performance to strategic goals and comparable transit agencies</li> <li>Incorporate best management systems and practices, e.g., project, records, and asset management</li> <li>Leverage technology to improve business, e.g., real-time information and operations management systems</li> <li>Reduce energy consumption, waste, and pollution</li> </ul>

**INNOVATION**

- Enhance public access to information
- Enhance service through technology
- Maximize benefits of technology-based systems
- Implement sustainable/ environmentally friendly practices
- Implement Intelligent Transportation System elements and enhancements

**San Joaquin RTD**  
 sjRTD.com | 209-943-1111 | [f](#) [t](#) [i](#) [y](#) [v](#)

*The places you can go on RTD!*

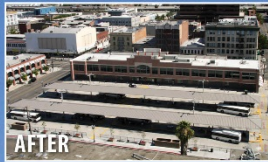
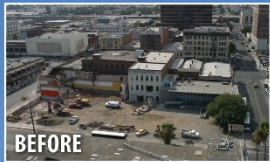


DRIVEN BY PRIDE



# RTD Planning: Addressing Challenges

## Downtown Transit Center (DTC) 2006



### DTC Facts:

- RTD's primary transfer point, it replaced the on-street bus stops and transfers at the "Pulse"
- 20 sheltered, off-street bus stops on two boarding platforms, with additional stops on Channel Street and Weber
- Estimated visits/day: 7,400
- On-site customer service center, police/security office, and snack bar/restaurant tenant
- Important component of downtown revitalization
- Historic preservation and restoration of three facades

**Project Total: \$14,000,000**

#### Funding Sources

Federal: \$10,000,000

State: \$2,000,000

Local: \$2,000,000





# RTD Planning: Addressing Challenges

## Regional Transportation Center (RTC) 2015

### RTC Facts:

- Completed in November 2015 – three months early and under budget
- Replaced the former “Metro” facility built in 1970 for 50 buses
- Consolidates Maintenance and Operations into a facility designed for 250 buses
- Ten-acre, 136,000 square-foot footprint provides room for future growth
- Centrally located siting reduces trip times and associated emissions
- Landscaping swales recharge the groundwater aquifer
- Bus wash facility captures and recycles 97% of the water used
- LED lighting reduces electrical consumption and maintenance costs
- Computerized lighting and air conditioning controls streamline operations
- Fuel and fluid monitoring systems improve fleet maintenance and data accuracy

**Project Total: \$51,100,000**

#### Funding Sources

FTA:	\$17,700,000
Prop 1B:	\$11,000,000
Measure K:	\$16,300,000
Other Local:	\$6,100,000





# RTD Planning: Addressing Challenges

## Challenges: Environmental concerns A severe non-attainment area for air quality

In 2013, through a California Energy Commission grant and its partnership with Proterra, RTD introduced northern California's first 100% battery-electric buses into service.

- ~ 20.1 miles per gallon
- diesel fuel savings
- greenhouse gas emissions reductions
- environmental benefits

In August 2017, RTD introduced the nation's first all-electric BRT Corridor

By 2025, RTD plans to have an all-electric fleet in the City of Stockton



# RTD Planning: Addressing Challenges

## Metro Express 2007



### Metro Express Facts:

- Provides 50% of RTD's annual systemwide ridership
- Three major corridors in the Stockton Metropolitan Area
- Uniquely-branded buses and shelters, use of pre-paid fares, and 10-, 15-, and 20-minute peak frequencies
- Operates 60-foot articulated buses to accommodate its ever-increasing ridership
- In June 2015, RTD received a \$6.8 million grant to fund two new Bus Rapid Transit corridors

**Project Total: \$27,769,556**

#### Funding Sources

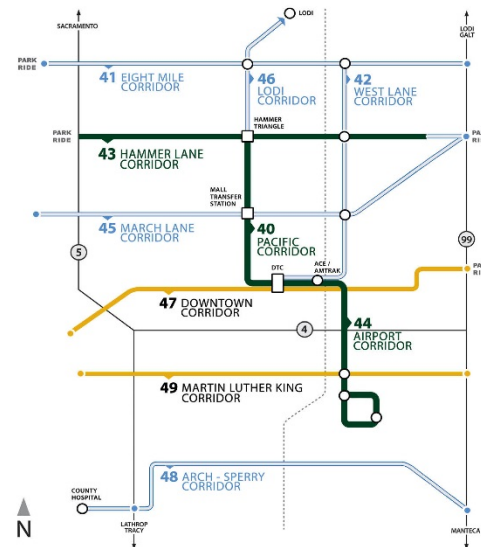
Federal: \$21,788,230

State: \$3,761,932

Local: \$2,219,394

## Proposed BRT SYSTEM MAP

- Transfer Station
- Transfer Point
- PARK RIDE Park-N-Ride Location
- Proposed BRT Corridors
- Existing BRT Corridors
- Future BRT Corridor





# We are not there.... Yet!

While RTD planning has helped achieve significant goals, we hope the TAM process not only help internally, but will improve the relationship and planning process with our MPO

- Next steps:
- Strengthen our data managers; we have established a TAM Team at RTD
- Continue to learn from our peers
- Make good business decisions and long-term capital plans based upon solid data



# How will TAM help?

It will help us continue on our road to reality-based planning and management.

It will help our planning and funding partners understand our needs and hopefully fund our futures.

- What have we got?
- How long can we expect it to last?
- Can it do the job?
- What do we need?
- How much will it cost?





# Questions?

