



# Increased Operational Efficiency Streamline Enterprise Asset Management

## Overview



2,507 employees



1,026 buses



201 Light Rail



66 Commuter Rail

## Industry

Bus, Commuter Rail & Light Rail

## Challenge

Asset Management and data management

## Solution

Trapeze Rail Enterprise Asset Management

## Results

- ✓ Real-time asset condition monitoring and cost tracking
- ✓ Improved asset efficiencies and effectiveness
- ✓ Improved asset governance

Daily reports are an example of how technology can help supervisors and directors manage through facts. By reviewing accurate and dynamic data in Trapeze EAM, RTD can proactively manage staff and workload which increases operational efficiency and translates into increased equipment availability.

## Background

With an average of 300 sunny days per year, Denver Colorado is located in the heart of an outdoor adventure land and home to many major corporations. With so much to offer, it is no surprise that Denver is one of the fastest growing cities in America. To support this rapidly growing region's transit needs, the Regional Transportation District (RTD) provides service to the 2,337 square miles throughout eight counties in the Denver-Aurora-Boulder area. With over 1,000 buses, RTD offers a variety of transportation services to a population of 2.7 million including 140 local, express, and regional bus routes servicing 10,000 bus stops, six light rail lines providing 35 miles of light rail service, and nearly 80 Park-n-Rides. In addition, RTD offers Access-a-Ride demand response paratransit, free mall shuttle service, and transportation for many of Denver's special events.

## The Challenges

Among the significant challenges of managing a transit system as large as RTD is capturing and retrieving meaningful information promptly for the wealth of various types of assets and their associated maintenance activities. This means that any data entering the system must be captured easily and as close to real-time as possible in a consistent matter. We know that quality data in = quality data out. One of the critical uses for this data is staying on top of regularly scheduled maintenance and inspections while being able to accommodate unscheduled repair work as it arises. This is key to ensuring that the riding public has the safest possible journey when using RTD.

Another challenge has to do with the complexity of many of RTD's assets. Trains, for instance, are designed so that most major components such as the HVAC, traction motors, gearboxes, and pantographs, can be removed and swapped out. Many of these components may have their own subcomponents as well as their own maintenance cycles independent of their parent assets. Adding to the complexity is that some of these components may also be rebuildable and may need to be rebuilt at RTD's Unit, Body, or Electronics shops while ensuring that all costs related to the rebuild process are captured.





## The Solutions

Trapeze's fully integrated Enterprise Asset Management (EAM) software product line — for Fleet, Rail, Equipment and Right-of-Way Management — has been RTD's solution for total asset and maintenance management since 2007.

RTD uses the Trapeze solution in all of its maintenance facilities to manage bus, paratransit, support fleet, and light rail operations as well as its maintenance of way, rebuild, body, and electronics, treasury, and facilities operations. RTD tracks all aspects of its operation on Trapeze's single database, including real-time labor capture, work order management, materials management and fuel and fluid data to ensure that it is tracking real-time operating costs.

## The Results

Reports are only as accurate as the information that is put into the system. Since implementing Trapeze EAM in the Bus Department, RTD has become a paperless shop. Daily tasks performed by several hundred supervisors and technicians are now captured in real-time by Trapeze EAM including recording labor, processing work orders, ordering, and issuing parts.



The ease of use offered by Trapeze EAM ensures that all employees, regardless of computer-skill level, utilize the system comfortably and consistently. Terry Emmons, Assistant General Manager for Rail Operations, relies on a Service Request Report to manage his department's workload. "Based on the inspection items that require follow-up repairs listed on the report, the supervisors and I are able to identify effortlessly which segments or equipment are in need of work and send the appropriate staff to handle the job," said Emmons. "The reports that we get from Trapeze EAM are an important tool for us to manage our workload." Each day, Lou Cripps, Senior Manager, Asset Management SGR, runs two reports: Scheduled Activity by Equipment; to show which cars are due for multiple inspections, and Scheduled Activity by Meter; to show the miles until inspection is due.

He uses this information to schedule work orders and maintenance activities. As required by the Public Utilities Commission (PUC) and Federal Transit Administration (FTA), both of whom oversee the operation, inspections, and defect reporting must have a paper trail. "Inspections and audits are an important part of our maintenance practices," commented Lou Cripps. "Prior to using Trapeze, an audit from the PUC or FTA may have taken several days. Trapeze software now helps us organize all the inspection and maintenance data. It's very easy to access when we need it."

The Serialized Components functionality in EAM is an extremely effective tool for managing the complexity of tracking asset component structures. It keeps track of components and parent units silently behind the scenes so that technicians can focus on the work of keeping railcars running on the track. "It took a great amount of effort to set up all the components the way that we wanted. However, it was worth the time. Now that the system is running full steam, the Serialized Components tool is extremely useful. I am constantly amazed by how powerful the system is," said Lou Cripps. The Serialized Components function is also instrumental in determining the lifecycle cost of the trains.

The costs associated with purchase and upkeep travel with the serialized components and the rail cars. This allows RTD to understand which rail cars paired with which components are the most economical to operate. Trapeze Production Planning functionality allows RTD's Unit, Body, and Electronics shop supervisors to monitor and schedule incoming production requests. Generated by the Inventory Control department, these requests alert the Unit, Body, or Electronics shop supervisors that stock is needed on a rebuildable or fabricated part.



These production requests appear in a central repository called the Production Management portal. From this portal, the supervisor has visibility into the number of pending and active production requests as well as the number of open work orders for part and component rebuilds or fabrications. With a single click, the supervisor can drill into the Production Management screen and view the details of each request or work order.

“We got what we were hoping for when we went to the Trapeze EAM system. We are able to capture the costs for what we do. This creates and easily shows the true value for what these technicians do,” said Steve Gieske, Assistant General Superintendent. Because of their stellar performance, commitment to excellence and their ongoing investment in both their staff and the transportation infrastructure, RTD is often recognized as one of the nation’s premier transportation agencies. The American Public Transportation Association (APTA) has awarded RTD with the Outstanding Public Transportation System Achievement Award three times. Trapeze is proud to count RTD in our list of over 450 clients, including over 80 public transit agencies in North America.

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Terry Emmons  
Assistant General Manager for Rail Operations  
RTD Denver

## TRAPEZE GROUP

Trapeze Group works with public transport agencies and their communities to develop and deliver smarter, more effective public transport solutions. For more than 25 years we have been Here for the Journey, evolving with our customers around the world to helping them move people from point A to Z, and everywhere in between.

[info@trapezegrup.com.au](mailto:info@trapezegrup.com.au)

Australia +617 3129 2092  
India +91 98104 07444  
UAE +971 4 252 6640

Canada +01 905 629 8727  
UK +44 0 8445 616 771  
Switzerland +41 58 911 11 11

[www.trapezegrup.com.au](http://www.trapezegrup.com.au)

  
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