

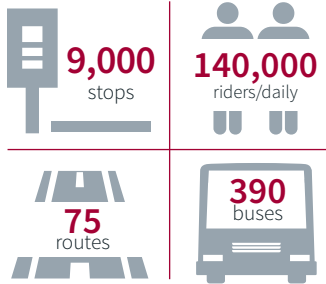


**Metro**

A Bi-State Development Enterprise

# HOW METRO TRANSIT REALIZED \$2.4 MILLION ANNUAL SAVINGS AND GAINED 3 ADDITIONAL YEARS OF REVENUE SERVICE OUT OF THEIR FLEET

## Metro Transit – St. Louis



### Industry

Fixed Route

### Products

ITS

### Results



Metro Transit – St. Louis transitioned from a break fix maintenance model to a predictive replacement maintenance model resulting in \$2.4 million in annual savings on their operational budget.

**Background:** Metro Transit – St. Louis services more than 140,000 riders daily. Despite funding staying stagnant or declining, ridership has increased 18 percent over a five-year period. In order to continue to provide efficient, cost-effective service, Metro Transit needed to better forecast its asset lifecycle and predict outcomes rather than act reactively.

**Challenges:** Metro Transit’s break fix, or “reactive” maintenance program, resulted in excessive road calls, disruptions to service, inaccurate asset management and high costs due to the time required to manually inspect assets to find the causes of failure.

They also were forced to rely on guesswork to determine things such as miles driven on the heaviest duty cycle for each asset. Their existing solution did not allow them to forecast parts that would be needed in the future.

They were looking for a way to proactively keep equipment in top shape, prevent accidents from asset failure, improve passenger experience and reduce operating costs for the agency.

**Solutions:** Metro Transit adopted a predictive replacement maintenance program. By implementing Trapeze Group’s Vehicle Intelligence solution, they are able to use business intelligence data gathered from the vehicles and the controller area network to proactively manage their fleet and extend the lifecycle of their vehicles.

Two key aspects of Metro’s success are the close monitoring of each bus in the fleet and the proactive replacement of key components instead of waiting for them to fail.

Fueled by real-time data and powered by the industry’s most powerful algorithms, Metro Transit’s solution includes an alert system set up to pre-alert before faults, enabling them to predict when components will fail. The same data can be examined from a macro perspective to show patterns from a fleet-wide view.

“We’ve had dramatic reductions in cost and reduced road calls, since we changed to a predictive maintenance model.”

Darren Curry, Chief Mechanical Officer, Metro Transit – St. Louis

**Results:** Using this predictive replacement maintenance model, the average lifecycle of their vehicle has increased from 12 years to 15 years and an additional 225,000 miles of revenue service (825,000 total miles traveled!), well above the transit industry standards of 12 years and 600,000 miles.

In addition, their MTBF (mean time between failure) has risen from 4,000 miles to more than 22,000 miles.

“We’ve had dramatic reductions in cost and reduced road calls, since we changed to a predictive maintenance model,” said Darren Curry, Chief Mechanical Officer, Metro Transit – St. Louis. “We’re now getting three additional years of revenue service out of the entire fleet.”

Metro Transit has optimized investment and maintenance decisions and have reaped overall lifecycle cost savings, setting the agency up for an easier road to MAP-21/SGR compliance.

“Vendors and partners now have improved transparency into our asset data and as a result are more accountable to the agency,” he said. “Passengers are better served by improved fleet availability and fewer breakdowns and they’re also safer.”

As a result, Metro Transit was recently recognized by the FTA as a model for transit asset management.

To date, Metro Transit is now realizing a \$2.4 million annual savings on their operational budget.

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