

Customer Case Study: Tri-County Metropolitan Transportation District of Oregon (TriMet)



Transportation District Uses Prolog® Software to Achieve Immediate Cost Control, Time-Saving Document Management and Visibility into Potential Problems

The Tri-County Metropolitan Transportation District of Oregon (TriMet) is a national leader in transit service, providing public transportation for much of the three counties in the Portland metro area. TriMet operates a comprehensive transit network, including a 44-mile, 64-station MAX light rail system, 93 bus lines, service for seniors and the disabled and enhanced amenities. TriMet has received numerous awards and recognitions, including the National Arbor Day Foundation's 2005 Lady Bird Johnson Award for exemplary leadership in roadside beautification and the American Public Transportation Association's 2004 Innovation Award in recognition of its productivity improvement process. TriMet continually invests in services and amenities to better serve the Tri-County area.



For the Tri-County Metropolitan Transportation District of Oregon (TriMet), managing its capital projects has never been easier. That's because TriMet uses Prolog Manager from Meridian Systems® when constructing the tangible assets it uses to provide transportation services to the people of Washington, Multnomah and Clackamas Counties.

But project management before Prolog wasn't pretty.

In the 1990's, when TriMet built its West Side transportation line, managing the job was a challenge. "At that time," says Linda Tribbett, TriMet's Business Systems Analyst, "we were using numerous software applications and spreadsheets for project management. Our document control was one piece of software and cost control was another. We had applications all over the board."

In 2000, TriMet was preparing to construct the \$350M Interstate Max Light Rail system.

Because of the intricate construction needs and funding accountability of these projects, TriMet made the decision to consolidate its project management system into a single solution.

"Our greatest need," explains Tribbett, "was in the area of cost and contract management. Our funding is split between the Federal Transportation Administration (FTA) and local sources. To report to all of these agencies, we needed a system that could track our dollars in unique ways. We were not able to track funding splits or budget commitments in our current system, but we were confident that such a system existed." After much research, TriMet chose Prolog because of its robust cost control capabilities.

TriMet has recently begun work on two significant capitol projects: a \$125M heavy

rail commuter line that would run from Wilsonville to Beaverton and a \$557M "South" project that would restructure the downtown Portland light rail system and extend I-205.

Because of their success using Prolog on the Interstate Max project, there was no question that Prolog would be the construction management tool of choice on these new projects.

Mandates for Standardization on Prolog

Tribbett attributes TriMet's successful implementation of Prolog to upper management buy-in of the conversion. After initial Prolog training provided by Meridian Systems for core staff, TriMet developed its own in-house, hands-on training facility. With Prolog installed and training capabilities in place, upper management then created mandates for project management standardization using Prolog.

"Initially, it was mandated that all of our contracts, costs, potential change orders and actual change orders be tracked in Prolog," states Tribbett. "Shortly after that it was mandated that all of our document control tasks be tracked in Prolog as well."

"By standardizing on Prolog software we now have the immediate cost control we need to mitigate the risk associated with complex transportation projects."

Linda Tribbett, Business Systems Analyst, Tri-County Metropolitan Transportation District of Oregon

To ease the transition to these mandates, TriMet used Prolog's extensive customization capabilities to re-create the work breakdown structure that its employees were comfortable with and added data fields to allow staff to track the things they were used to tracking. In addition, Crystal Reports was used to design the report formats that everyone was familiar with.

Document Management Saves Time and Money

In the early years of Prolog use at TriMet, management was more flexible on engineering documents such as RFIs, submittals and field orders, leaving it up

to each employee to decide whether to use Prolog or spreadsheets to create and track these items. When the engineers realized how well Prolog handled these tasks, however, they began to utilize more of the software's many features.

Now TriMet's 75 Prolog users fully utilize the software's Document Management module. "When we purchased Prolog for the cost side," says Tribbett, "we considered the Document Management piece and the engineering functions to be a bonus. But the document control we now have integrated into Prolog is a huge time saver."

And, according to Tribbett, Document Management saves TriMet more than just time. "Having immediate access to our documents in Prolog has undoubtedly saved us a lot of money in litigation costs because we can track down documentation in a hurry."

Because of the software's time and money saving benefits, when TriMet hires new people today, they get them trained and using Prolog from day one.

Increased Visibility into Potential Problems

For TriMet, tracking potential change orders is essential for cost control. Prolog brings potential problems to the table in a timely manner so that corrective action can be taken.

But the District takes potential change tracking one step further: it also uses Prolog to track potential issues it calls "pressures."

A pressure, says Tribbett, is something that could impact the cost of a project, is not yet a full blown problem but is something they need to keep an eye on. For example, a pressure might be a city government that is considering rezoning an area where TriMet construction is currently taking place.

"Prolog provides visibility into potential problems so they don't get lost or fall through the cracks," explains Tribbett.

A Single Tool for Controlling Costs

It's been several years since TriMet implemented Prolog and according to Tribbett, the biggest benefit has been the replacement of a bits-and-pieces project management system with a single integrated tool for managing contracts, costs, documents and engineering functions. "By standardizing on Prolog software," she states, "we now have the immediate cost control we need to mitigate the risk associated with complex transportation projects."



TriMet Project Profile: Washington County Commuter Rail

The Washington County Commuter Rail Project will establish a new 14.7-mile passenger rail line between Beaverton and Wilsonville. The line will offer a new transportation route within the heavily traveled Interstate 5 and Highway 217 corridor. It will connect to TriMet MAX light rail in Beaverton and serve Washington Square, Tigard, Tualatin and Wilsonville.

This innovative project is one of the few suburb-to-suburb commuter rail projects in the country. The project has received strong support from the public and business community.

Key Project Elements

- The line will use existing freight tracks in a dedicated corridor to create minimal construction impacts
- Passengers will ride in self-propelled diesel train cars; TriMet is working with Colorado Railcar to design and build the vehicle
- The line will share freight train tracks with the Portland & Western Railroad in eastern Washington County
- The line will serve five stations in Beaverton, Washington Square, Tigard, Tualatin and Wilsonville
- Commuter Rail will operate weekdays every 30 minutes during morning and afternoon rush hours; the trip from Beaverton Transit Center to Wilsonville will take 27 minutes
- Train speeds will average 37 mph, with a top speed of over 60 mph

Estimated Project Cost: \$125M

Estimated Completion Date: The line is expected to open in 2008. Average daily ridership is estimated to reach between 3,000 and 4,000 by 2020, with half of the riders new to transit.



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