

A Smooth Ride for BNSF

The merger of two of the country's largest railroads meant two sets of rolling stock, two workforces and two operational structures. But since BNSF's integration of Primavera with its enterprise data warehouse system, everything is on track.

Project Management Highlights:

- BNSF complies with regulations such as Sarbanes-Oxley by using Primavera.
- BNSF has improved communication of project information to the executive team, stakeholders and team members.

Project Statistics:

- 900 employees and contractors use Primavera
- 150 projects are managed simultaneously
- 1,500 projects are managed annually



Running a railroad that spans 32,000 miles across half a continent requires considerable coordination of routing, shipping and scheduling of ongoing maintenance. Building and managing the applications and networks to help accomplish this coordination is a challenge in itself. But it's all in a day's work for the Technology Services Project Office at Burlington Northern Santa Fe Corporation (BNSF).

BNSF operates one of the largest rail networks in North America, covering 28 states and two Canadian provinces. The mega-railroad was formed in 1995 as the result of a merger between two major rail systems – the Burlington Northern and the Atchison, Topeka and Santa Fe. BNSF has a workforce of about 38,000 employees and had revenues of close to \$11 billion in the most recent fiscal year.

Along with melding two sets of rolling stock, two workforces and two operational structures, the company also had to

bring together two information technology infrastructures. "We're a culture that came from two different railroads," says Jeff McIntyre, assistant vice president of Technology Services for BNSF.

"During the late '90s, we had two major missions," McIntyre continues. "The first was to merge all of the applications and the two railroads into one seamless railroad. Then we had to focus on Y2K. Coming out of that, we entered a period where we had to focus on project management."

"Rather than disband the Project Office following the Y2K project, Technology Services incorporated it into a fully functional team," says Lynné Joplin, manager Technology Services Project Office. "The Project Office today consists of 13 employees who train and mentor application development and infrastructure teams on processes implemented enterprise wide."



FIRST TRAINING, THEN ROLL OUT

In 1999, faced with the challenge of forging a more consistent approach to developing and maintaining its large and diverse inventory of applications, BNSF began an intensive training program to familiarize IT managers with project management methodologies. That was followed in 2001 by a roll out of Primavera as the software solution to put project management into practice. The goal of the training and software implementation was to improve time-reporting accuracy, better manage resources and costs and provide more visibility on project status and costs to upper management. "We spent a year and a half working with our staff on a project management process," comments McIntyre. "We focused first on the process, and then followed with the software solution."

A COMPLEX NETWORK

Following the merger, the railroad moved the Burlington Northern IT shop from St. Paul, Minnesota to Fort Worth, Texas, where BNSF is headquartered. Telecommunications and networking are also run out of Fort Worth, while the company continues to maintain IT operations at Santa Fe's data center in Topeka, Kansas.

Although day-to-day data center operations are run under contract by IBM Global Services, BNSF builds most of its applications within its own development department of about 400 staff members and contractors. The department currently upgrades and maintains 230 applications, the largest

of which is a Transportation Support System that processes 16 million transactions a day.

At any given time, BNSF's application development team has about 150 development projects underway. In 2004, the group oversaw a total of 1,500 projects. The size of the operation continues to grow, and the Project Office is currently bringing telecommunications projects under its wing, one of the final pieces in combining the two organizations.

Implementing Primavera played a significant role in helping BNSF manage its ever-growing project load, and according to Brian Cattle, senior technology analyst of Technology Services Project Office, adoption of the software solution came quickly.

"Our first concern was the time tracking, so we rolled the timekeeping module out to everybody. The project management piece was initially rolled out to a select few, and that grew organically, very quickly." Cattle adds that there are currently about 900 users and 250 project manager licenses installed at the site.

Today, BNSF has more accurate time reporting, better management of resources and costs, an improved method of tracking time spent against plan and increased the application of project management principles.

BALANCED SCORECARD

BNSF's Technology Services Project Office is also now able to make projects more visible to management. The company has integrated Primavera into its Teradata enterprise data warehouse system, where data on various projects is sent and stored for later analysis. "Information from Primavera is fed into our data warehouse – our offline data store," says McIntyre. "We feed it on an hourly, daily and weekly basis with information out of our transactional systems." Information from Primavera as well as other parts of the business, such as finance and human resources, is then delivered to BNSF's executive decision makers.

Those decision makers can gain a measured perspective on project performance through a dashboard that accesses Primavera and other enterprise data sources for a "Balanced Scorecard" application, built on top of an Excel spreadsheet that draws on the warehoused data. The Balanced Scorecard tracks, aggregates and weights various key project metrics as indicators of how the business is doing.

"With the Balanced Scorecard and other metrics that change on a fairly frequent basis, we built an online dashboard that



our management team uses," says McIntyre, adding that Primavera feeds the analytical dashboard on a weekly basis. "A huge benefit has been the visibility that the dashboard provides about what our projects are, what stage they're in, which ones are on schedule and which ones aren't. The visibility has been huge."

The transparency of BNSF's project data also helps the company to be in compliance with recent laws and regulations, including Sarbanes-Oxley. "We, like most of corporate America, have ample compliance opportunities," McIntyre comments. "Use of the methodology and Primavera software gives us a view into how well we're complying with those laws, and also provides a place for internal and external auditors to view our data."

METHODOLOGIES ARE KEY

While Primavera automates much of the project management process, BNSF takes proactive steps to make sure its employees are well versed in project management practices. "We have a team of mentors across the department who help train new people on our methodology," McIntyre explains. "Before people get the project management tool, they have to have been trained in our project management solution first."

This additional training helps BNSF get more out of its Primavera deployment, explains Susan Masters, senior technical analyst of Technology Services Project Office. "We want to make sure we have good project management skill sets developed," she says. "We don't want people to just see Primavera as a way to track their time or schedule. We really want them to understand the whole project management methodology. We're very conscious of rolling the principles and the tool out together, like a marriage."

Masters considers Primavera to be "the delivery tool for BNSF's project management methodology. It enables us to set up templates for people to use – to copy and to set up their project – and helps us to adhere to standards."

A common set of standards, as supported in Primavera, also helps integrate the work of end-users who may already be knowledgeable in project management. "Our people not only have their own technical skill sets, but they may also bring their own project management backgrounds and practices to the organization," Joplin says. "We not only needed a standardized and consistent way for everyone to manage projects, but also a consistent method of communication to ensure we all speak the same language and understand the status of our projects."

With the help of Primavera, BNSF is on track for a smooth ride ahead.

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