Case study

Real-Time Information Puts Rail and Transportation Finance Customers Back on Track

Client

A railcar and locomotive finance subsidiary of a New Jersey-based financing and leasing company. Serves customers involved in the transportation of commodities in several industries, from agriculture and chemical to energy and steel.

Industry

Financial Services.

Offering

Application Design, Application Development, Application and Infrastructure Maintenance and Support, Data and Analytics, APIs.

A leading rail finance company reenergized its operations and profitability by capturing real-time information to be shared among its industrial customers, repair shops, and industry databases.

In the transportation business, financing and logistics go hand-in-hand. A major rail finance company in the U.S. needed to provide better information to its customers about servicing and repair of railcars. The existing workflow was too slow, and lacked sufficient detail for planning and logistics.

LTIMindtree optimized the workflow and designed an IT solution encompassing four modules:

- Railcar servicing, maintenance, and repair status
- Railcar maintenance history
- Railcar mechanical attributes
- Railcar documentation management

The LTIMindtree solution enables real-time transfer of information and improved accuracy for planning and logistics, which will yield significant benefits in customer service, streamlined operations, and improved financial results.

Challenges

Several domestic U.S. industries rely heavily upon railroads to transport goods, such as paper, chemicals, plastics, coal, steel, sand, food products, grain, utilities, lumber, and autos. Instead of purchasing railroad freight cars (or "railcars") directly from a manufacturer, companies in these industries typically finance or lease their railcars from a specialty rail finance company.

Tank cars are expensive – and they're even more expensive when they're sitting idle in the shop, waiting to be repaired or upgraded.

That's what the industry discovered following a 2014 derailment in which several tank cars were involved. During the entire time the railcars were in the shop, the companies involved had very limited information as to their railcars' status or availability.

For maintenance and repair, the rail finance company turns to one of its rail manufacturing partners. However, repair shops vary in their ability to respond to requests for information. For example, a repair shop might take two days to respond to a single question – or in some cases, it may take two whole weeks.

The inconsistent and slow turnaround time raised critical logistical issues for the industrial users of the railroad. Furthermore, the delay also created serious customer service problems for the rail finance company. Even though not directly responsible for servicing and repairing tank cars, the rail finance company could not provide customers with a simple answer to the question: "When will our railcars be ready?"

Compounding the issue, regulations were on the cusp of changing. Following a series of incidents involving tank cars, the U.S. Department of Transportation (DOT) started to put enhanced tank car specifications into effect. Under a new rule finalized in May 2015, the entire legacy fleet of crude-oil tank cars built under the DOT-111 standard will have to be upgraded within three years. Other railcars meeting the newer CPC-1232 standard will require retrofit on a five-year timetable.

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One of the major U.S. rail finance companies is a division of a $65 billion, New Jersey-based, financing and leasing company. The company manages a fleet of over 120,000 railcars, and of these, approximately 20,000 are "tank cars." With capacities ranging from 15,800 gallons to 33,600 gallons, tank cars are built with special safety and performance features engineered to accommodate the chemical properties of the cargo.

For a rail finance company with significant holdings in legacy tank cars, these retrofits are a big deal. To maintain high quality of customer service, information about repair status and timing has become a competitive necessity.

LTIMindtree Solution

To develop a solution, the rail finance company turned to LTIMindtree, with whom it had an existing business relationship.

LTIMindtree analyzed the existing manual processes to come up with an optimized, automated workflow supported by an IT solution with four modules:

Railcar Servicing, Maintenance and Repair Status

Tracks the tasks performed at repair shops (known as "shopping"). Additionally, a dashboard shows the real-time status of key performance indicators (KPIs), enabling managers to hone in on problem areas.

Railcar Maintenance History

Shows all information for a single railcar, for a group of railcars, or for all cars of a given type. Every single change – whether a new type of wheel or a different paint job – goes into the maintenance history.

Railcar Mechanical Attributes

A railcar has up to 1,200 attributes to be tracked – and tank cars are among the most complex railcars in use. The attributes fall into various categories related to manufacturing, marketing, testing, regulatory, and several other areas.

Railcar Documentation Management

 Repository for all documentation associated with each railcar.

(As of October 2015, the Car Shopping Portal is complete. Other modules are scheduled to be completed by Dec 2015.)

To support these modules, LTIMindtree established an API-based data exchange between the rail finance company and the repair shops. This enables sharing of industry-standard Car Location Message (CLM) data, along with other relevant information.

The rail finance company sources raw data from the repair shops through the data exchange. By doing so, the rail finance company can make its own determinations as to scheduling and availability, rather than relying on the repair shops for their estimates. This level of control and oversight allows the rail finance company to do a better job in answering important customer questions on logistics.

The new solution will also share information with Railinc, an industry utility for real-time interline rail data. Established in 1999 as a wholly-owned, for-profit subsidiary of the Association of American Railroads, Railinc provides rail data throughout the supply chain. Railinc operates the Umler system, the rail industry's official, mission-critical source for information about rail equipment. Umler data elements include internal and external dimensions, capacities, weight information, and specific characteristics of freight cars, trailers, and containers.

Business Benefits

Technology Benefits

The LTIMindtree solution delivers real-time information throughout the value chain, from repair shops to Railinc and from customer service to customer logistics. Benefits include:

- Real-time information about the location and mechanical attributes of each railcar available to all involved parties.
- Proactive alerts shown to employees and repair personnel regarding required documentation reviews, mechanical attribute reviews, and track disposition status.
- Simplified compliance with Railinc reporting through the Umler system.

Customer Service Benefits

The solution provides immediate support for front-line personnel at the rail finance company. By having access to real-time information, customer service agents will be able to provide higher levels of service and support. Benefits include:

- Faster responses to customer queries, based on accurate, real-time data about railcar status, and on aggregated documentation on railcars and railcar types.
- Instant status reports on individual railcars, as well as reports by customer, by rail shop, and by car type.
- Instant documentation with full details of a railcar, including its repair history and modifications.

- Faster and more accurate repair, retrofit, and upgrade estimates.
- Real-time status messages throughout the repair process.
- Manages the abatement process for customers, by which customers are credited for the time that cars are not in service.

Operational Benefits

Access to real-time data yields significant advantages in operations. Benefits include:

- Higher visibility into operations through dashboards with role-specific KPIs.
- Simplified reporting for customers and repair shops, as well as for internal users within the company.
- Easier to schedule routine maintenance.
- Improves safety by giving safety engineers complete railcar details to ensure full compliance with a wide range of safety-focused regulations.

Financial Benefits

The ultimate benefits will be found in the financial results. Through the new solution, the rail finance company expects to increase customer satisfaction and improve retention rates. In addition, improved logistics planning leads to more efficient utilization of railcars. In turn, customers can reduce their per-unit transportation costs, generating competitive advantage in their respective marketplaces.

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