CASE STUDY



GIS SOLUTION IMPROVES Inventory management

ACCURATE RAILCAR LOCATION REPORTING REDUCES TRANSIT TIME

Abstract

A leading oilfield services company partners with railroad companies to transport products across North America. The movement of railcars, both loaded and empty, needs to be monitored for logistics and inventory management.

A third-party service provided the location information for each railcar at frequent intervals. The Enterprise Geographic Information System (EGIS) department sought a web-based GIS application to track railcars in real time. The company selected Infosys to create an interactive railcar tracking application.



Accuracy in railcar tracking

Each railcar that transports products is barcoded. The barcode system records details of railcars arriving and exiting stations. The barcode system and transportation data was managed by a third party. Infosys developed a solution that geo-coded the location of each railcar and displayed it on a map.

The Infosys application facilitates real-time traffic management by tracking specific railcars as well as the entire fleet. Advanced search tools ensure easy retrieval of historical data and transportation logs. Our solution has intuitive features to improve the search functionality, and enable users to save and print freight records and location maps.

Search results can be exported to a Microsoft Excel worksheet, saved in a tabular format and printed as a map. We offered a map navigation toolbar with full extent, previous extent, next extent, zoom in, zoom out, and pan out buttons. Plotting geographic coordinates on a map displays details of railcars at the location. The maps can then be saved and printed.

Infosys created the railcar tracking application by combining diverse mapping services and GIS technologies, including Esri ArcSDE, ArcGIS Online, Microsoft Virtual Earth, and ArcGIS Server API for Flex, and SAP.



More informed logistics

The company can track railcars based on the equipment number, fleet series, product transported, and destination. The system generates a 15-day event history for a railcar enquiry, which helps accelerate transportation planning.

The GIS-based tracking application for monitoring railcars ensures smooth transportation of oil and gas products. Identification of bottlenecks in transit enables escalation and follow-up with railroad companies. Significantly, it improves logistics as well as inventory management.



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