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Industry: Railroad
ProKarma Service Domain: Application Development

Deployment of Domain Driven Design at a Major Railroad

About the Client

One of America's leading transportation companies, the client is a large railroad network that covers 23 states across the western two-thirds of the United States. Serving over 10,000 customers per year, the client connects major western ports to eastern gateways and links to the rail systems of Canada and Mexico.

BUSINESS CHALLENGE

As one of the earliest examples of an interconnected system, railroads continue to require innovative and agile technological solutions to gain efficiencies, improve operating ratios, and maintain an edge in a competitive transportation market. The client contracted ProKarma, an experienced consultant in the railroad industry, to develop a robust enterprise application to handle its terminal operations. The application needed to accommodate testability at various levels to minimize downtime and ensure the efficiency of terminal operations.

THE PROKARMA TOTAL SOLUTION

ProKarma developed a web-based enterprise application for terminal operations that could be easily integrated with other applications and provide an efficient system for terminal operations.

APPROACH

The client required an application that would drive productivity and allow integration with other applications with minimal or no code change required. ProKarma developed a domain-driven, web-based application using reusable J2EE components and Spring Integration Framework to ensure compatibility with other applications. The enterprise application was divided into several domains so that each domain would be a self-contained deployment unit. The domain-driven design was chosen to ensure minimum downtime, accommodate testing at multiple levels, and increase productivity.

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TECHNOLOGY

The enterprise application was developed using Java-centric J2EE components and Spring Integration Framework to enable messaging between Spring-based applications and maximize integration with other applications.
The application was divided into several domains, with each being a self-contained deployment unit.
All domains except the User Interface were deployed on Linux servers; the User Interface was deployed on a Weblogic cluster.

EXPERTISE

With a long history of collaboration with the railroad industry, ProKarma developers have a unique knowledge base and understanding of the technological needs of the railroad industry.

IMPLEMENTATION AND RESULTS

Reusable J2EE components and services developed specifically for the enterprise application facilitated integration with other applications with minimal or no code change. The domain driven design resulted in a more efficient, more easily tested system that increased speed, productivity, and response. Snapshots of domains can be deployed individually, without having to deploy the whole application, resulting in minimum or no downtime.
The separation of domains resulted in increased efficiency because individual team members can focus on their particular domain. Adopting domain driven design enhanced testability at the unit and integration levels, resulting in efficient troubleshooting and increased productivity.

ABOUT PROKARMA

ProKarma delivers integrated technology and business process outsourcing solutions for over 150 global leaders in a wide range of industries and markets. ProKarma is headquartered in Omaha, Neb., with sales and delivery centers in the U.S, India, Argentina and Peru. ProKarma was ranked as the fastest growing IT services company in America by Inc. 500.