# Case Study: Refactoring for Major Retailer

Modernized undocumented legacy architecture under-budget, under-time and without disruption

**18-Month Project**
**Executed in <10 Months**
## Cut Project Time by 50%

**Reduced Project Cost**
## $1.9 Million Savings

**Mitigated Risk**
## Zero Disruption

## Overview

A major European retailer hired consulting firm R Systems International to modernize its IT landscape in preparation for an expansion into Asian markets. It needed to quickly deploy new applications that would comply with both European and Asian regulations.

The retailer had no documentation of its architecture. Using Crosscode Panoptics™, R Systems quickly documented the retailer's application environment. It replaced 70+ legacy systems with 36 new applications, completing the project in half the budgeted time.

## The Challenge

In order to facilitate a European retailer's Asian expansion, R Systems needed to convert its legacy architecture to service-oriented architecture (SOA) and refactor its applications. It then had to integrate the refactored applications with compliance software required by regulations in the target market.

The client's European operations depended on 70+ key systems. Written primarily in Java, C++ and .Net, these legacy systems were mostly undocumented. Many were 25+ years old, and most of the people who had developed them had retired. In the absence of documentation, the risk of business disruption was high, as were the odds that the project would run over time and budget. Timely integration with the mandatory compliance software was likely to prove difficult.

## Client: R Systems International

Industry: IT Consulting
Location: El Dorado Hills, CA
Size: 7500 employees

## Company Bio

A global technology and analytics services company that transforms clients' businesses by helping them accelerate time-to-market of applications & products, overcome digital barriers and create business value.

*"Using Crosscode Panoptics™ we were able to mitigate key business and IT risks, deliver quickly and effectively to our customers, and substantially increase our engagement margins."*

***- Avirag Jain***
*EVP, CTO & Head of Global Delivery*

## The Approach

Faced with a time-sensitive engagement, R Systems explored ways to avoid the time-consuming process of manually mapping dependencies between legacy systems and analyzing the impact of such a complex scope of change.

R Systems chose Crosscode Panoptics™ because its discovery and mapping features provide far more detail than the ADDM or APM tools that some companies use to partially map application environments.

Since the Panoptics™ dependency map was designed to accelerate change while minimizing risk, it was the perfect fit for a modernization project.

## The Solution

Within hours of installing Panoptics™ agents on the retailer's servers, R Systems had a complete, detailed map of the legacy architecture, with dependencies mapped down to the level of application method and database column.

After defining the precise scope of change for each application and database, R Systems used the impact analysis feature of Panoptics™ to discern which additional elements it would have to modify in order to avoid system breakage once the refactored applications were deployed.

R Systems likewise used the Panoptics™ instant impact analysis feature to integrate the retailer's new financial applications with the mandatory compliance software quickly and without disruption.

## The Results

- The original project time-frame was 18 months. Automating application environment discovery and analysis enabled the consultancy to deliver 9 months early.
- Cost to execute the project fell by an estimated $1.9 million.
- New applications launched with zero disruptions to business.
- By reducing critical systems count from 70+ to 36, the retailer was able to adopt a more efficient model of Disaster Recovery, lowering costs even further.