

CASE STUDY

A Leading ISV Modernizes ERP System and Lowers TCO

About the Client

A leading firm based at Ohio, provides enterprise software to distributors and fabricators in the fluid power, fluid handling, hose, sealing, belting, automation, motion control and related industries. Its flagship product TrulinX, an industrial distribution ERP system, helps distributors become efficient at handling financial operations.

Business Needs

Our client's flagship ERP system had a robust financial modules. The module capturing general ledger transactions were integrated with Microsoft Dynamics SL and with Microsoft FRx for financial reporting.

Our client wanted to increase profitability, as much of their operating cost was consumed due to a high licensing cost of Dynamics SL and FRx. The existing application was using only limited functionality of the MS Dynamics SL, but were paying for the entire license cost. Further, the mainstream support as well as the extended support for both MS Dynamics SL and MS FRx were to expire soon.

Faced with such constraints, our client wanted to modernize their existing application suites, with low-cost, custom built, integrated modules while retaining the user experience and functionality of existing "GL and Financial Reporting". The client chose Trigent to modernize its existing system and control cost.

Challenges

During the discovery phase, it was found that there was no third party tool available in the market that could replace the functionality of Microsoft FRx. As a result, the entire Financial reporting engine had to be built grounds up. Trigent had to ensure that the application built had lower cost of ownership.

Major challenge was to understand business reporting rules currently incorporated in the current FRx product. In the absence of engineering documents detailing existing customizations on FRx, understanding the complete reporting rules from a few sample reports given by clients was quite a task.

Another challenge was to develop a framework to replicate the native commands used in report's definition into the new application, which meant building a whole new domain specification language.

Technology

- ✓ C# 4.0
- ✓ WPF
- ✓ Entity Framework
- ✓ WCF
- ✓ PRISM
- ✓ DevExpress UI controls
- ✓ SQL SERVER 2008

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While extending existing application's database to contain GL and Financial Reporting data, the extension must ensure there was no impact on existing application's data and application functionality.

Transaction mapping, data migration and real-time integration in the new system were also some of the challenges.

Trigent's Solution

The Discovery phase employed by Trigent, closely examined the existing environment and based on a detailed requirements gathering and validation exercise, our team built a comprehensive Software Requirement Specifications and architected the To-Be system for client's approval.

To understand business reporting rules currently incorporated in the current FRX, Trigent employed reverse engineering methodology by testing with various input data and investigating the output.

Trigent incorporated and developed end-to end reporting engine involving three phases: (1) Report definition, (2) Report execution and (3) Report rendering. Trigent developed a new domain specific language to manage the report definition. This report definition file was fed into "Expression Parser", developed by Trigent, to execute the complex mathematical expressions. The rendering phase involved usage of third-party UI framework for interactive visualization.

During the transition, the team also performed iterative integration testing to ensure there was no impact on existing application's data and application functionality.

Trigent also built an SSIS package to manage the data migration to the new system.

Finally, the new modules developed by Trigent was merged with the installation suite. The newly built application conformed to all the attributes of an enterprise software and met all the acceptance criteria that formed the basis of proposed deliverables.

Benefits

- ❑ Trigent was able to build the new application within the scheduled time-line
- ❑ All minor bugs provided with a fix date of no more than 2 weeks from date of deployment. There were zero critical bugs
- ❑ All features implemented with the functionality as per business requirement had a much lower TCO
- ❑ Extended Onsite support for training, demo and exhibition