

Case Study

TEKsystems converted a financial services company's Lotus Notes- and Domino-based applications to an open-source platform using the Agile application development approach

Client:

A large provider of advisory and capital market services

Industry:

Financial Services

Service Offering:**Global Services**

Application Services

- Application Development
- Data Management



The Situation: One of the leading Canadian providers of advisory and capital market services had applications written in disparate platforms, including Lotus Notes® and Domino®, which challenged the IT department responsible for maintenance and support. An internal assessment determined that the Lotus Notes and Domino platform did not meet the client's future IT goals due to long-term support and product licensing costs.

The Challenge: The client approached vendors with a request for cost-effective technology options and a migration strategy away from the Lotus Notes and Domino platform. A successful solution would meet the following criteria:

- The solution platform must be maintainable, scalable, extendable, and secure
- The platform must minimize third-party vendor software dependency and licensing costs
- The platform must have a significant pool of technical resources available in the market
- The application performance on the new platform must be the same or better than on the existing platform
- The end user community must accept the new applications

The Response: TEKsystems recognized that the client needed a scalable and flexible solution. It proposed a blend of open source platforms that would bring the following benefits to the client:

- Java™/J2EE™ is operating system-independent and scalable
- Object-oriented design and architecture techniques provide flexibility of the architecture
- Open source technology platforms require lower or no licensing fees
- Widely used open source technology platforms provide easier access to technical resources

TEKsystems saw that the migration methodology would be critical to the success of this initiative. Not only was the end user community unconvinced of the need for the project, the requirements of the end users were also largely undefined. In TEKsystems' experience, failure to capture and incorporate these requirements into the final product could cause the users to reject otherwise healthy applications. To address this



need, TEKsystems proposed using the Agile application development approach. The incremental approach of Agile would allow the client to remain in control of the project deliverables after contract signature while simultaneously allowing TEKsystems to respond quickly to changes in the project as user requirements were developed.

Despite the benefits of the proposed technologies and migration methodology, both were untraditional solutions for corporate IT departments. To minimize the client's risk, TEKsystems proposed an initial six-week proof of concept that would include a select group of small applications. This would allow both TEKsystems and the client to test the proposed solution and confirm the selection before the client invested a large amount of money into the migration.

The Result: TEKsystems began the proof of concept in May 2004. The client was impressed by TEKsystems' demonstrated competence in both open source technology and Agile programming techniques, and it awarded TEKsystems a contract to migrate two large applications using the same technologies and methodology.

TEKsystems formed a project team with extensive experience in open source technologies and Agile programming techniques:

- Engagement Manager
- Project Manager
- Senior Architect
- Business Analyst
- User Interface Designer
- Developers
- Testers

TEKsystems successfully delivered and deployed into production the final applications on schedule and within budget. The daily interaction between the development team and the end users—a trait of the Agile method—proved to be successful in obtaining user acceptance of the final products. Because of the end user input, the final migrated applications had an improved user-interface appearance, improved performance and additional functions. TEKsystems' overall approach was credited as a key reason for the successful completion of these projects.

The Technology: TEKsystems used a variety of open source technology for this project, including the following:

- Alkocon OpenCms™ for content management
- Apache Tomcat®, a J2EE Servlet engine
- Apache® Struts, an open-source J2EE MVC framework
- Apache® Tiles, an open-source front-end framework
- Apache® Lucene, an open-source search engine
- Eclipse™, an open-source integrated development environment
- JUnit a unit testing framework
- Red Hat® Hibernate®, an open-source data access framework
- Spring Framework®, an object-manager infrastructure framework

The final applications run on an Oracle® database server.