

Strategic SOA Roadmap

Edgewater Technology provides a strategic roadmap and delivers a customized technology solution utilizing industry standards to increase market share of student loans

Edgewater Technology partnered with an educational financing organization to:

- Provide a strategic roadmap to migrate their existing systems to a new originations platform;
- Assist in defining the business requirements for the development of a web-based loan application entry system; and
- Develop a solution for processing new alternative loan applications utilizing industry standard protocol.

As a national bank-based financial services organization, this organization provides investment management, retail and commercial banking, consumer finance, and investment banking products and services to individuals and organizations.

This organization has an education financing arm which provides federal education loans, private loans, monthly payment plans, and education consolidation loans for student and families in the K-12, undergraduate, graduate, and professional education institutions.

This organization performed an assessment of their education loan program and set a goal to grow the origination business from \$1 billion to \$5 billion over the next 5 years. To accomplish this goal, they reviewed the systems that support their loan programs. The assessment resulted in the decision to continue to outsource their FFELP loans, outsource loan servicing and rewrite its loan origination system for alternative loans. To accomplish this task, the organization partnered with Edgewater to leverage their vast expertise in the Student Lending industry.

Strategic Roadmap:

To reduce risk in migrating to a Services-Oriented Architecture (SOA), they leveraged Edgewater's expertise to develop a strategic SOA roadmap. The roadmap enabled them to coordinate a controlled phased approach of service-orientation and SOA characteristics enabling the migration to be planned not only on a technological and architectural level, but on an organizational level while providing incremental business value as well. The roadmap included an impact analysis that estimated the change an SOA implementation would have on resources, processes, standards, and technology. In addition, transition architectures and implementations were identified as the implementation moved from a hybrid to a pure state.

Business Requirements Definition:

As a result of their assessment, the organization decided to develop a new originations system with the primary goal of process and platform simplification. They decided to begin the development of the new system with the on-line application entry. Edgewater teamed with the organization to define the business requirements for the on-line application. Edgewater participated in a series of meetings and interviews with line of business owners to gather their requirements and to identify needed efficiencies with their business process flow.

The requirements definition team utilized Input, Guides, Output, Enablers (IGOE) diagrams, storyboards, and use cases to draw out and define the requirements.

CommonLine Implementation:

To grow their market share, the organization aims to partner with institutions and become their preferred lender of both alternative and FFELP loans. Many institutions require lenders to be CommonLine compliant in order to become preferred lenders. While the organization was already CommonLine compliant for their FFELP offering, they opted to partner with Edgewater to enhance their system for CommonLine compliance for their alternative loans services. The outcome was an enhanced system that is able to accept new alternative loan applications in the CommonLine 4 format.

The technical solution is as follows:

- A CommonLine 4 file is received by the webMethods front end from the ELM loan application aggregator organization. webMethods parses the CommonLine 4 flat file and converts it to XML. webMethods then posts the XML to the Business Tier (BT) main servlet. The BT main servlet forwards the XML to the Enterprise Platform (EP) via a Web service.
- EP stores the CommonLine data to the CommonLine staging tables. File level and business rule validation is performed on each record in the file. Any errors are stored in an error queue. Error-free records are saved to the database, and an email notification is sent to the student.
- Errors are resolved by a CommonLine Specialists. The specialist logs onto the Edison PowerBuilder application and fixes the record errors in the queue. Once the changes are saved, the corrected application is resubmitted to BT. BT forwards the corrected application to EP for reprocessing via a Web service.
- When an application is error-free, the student receives an email asking them to accept or decline the loan. The student logs onto the Electronic Loan Origination (ELO) Web application using a link provided in the email message. If the student accepts the loan, then they complete the remainder of their application and submit it for processing. If the student rejects the loan and the institution is setup to receive notification, a response file in the CommonLine 4 format is sent to the institution informing them that the student rejected the loan.

Technology and Tools:

- App Works (FFELP)
- Custom Business Rule Validation Framework
- HTTPS/SSL/X.509 certificates
- IBM Rational Application Developer 6.0 (Java)
- IBM WebSphere Application Developer 5.1.2 (Java)
- IBM WebSphere AS 4.0 & 6.0
- JAXB/XML object mapping
- JCE authentication
- PowerBuilder
- Scrum Agile Development Methodology
- SOAP/SAAJ Web Services
- Sybase RDBMS (Transact-SQL, stored procedures)
- Web-based GUI
- webMethods