

Case Study: Technology Transformation - GUPTA Desktop Application to Java/Oracle Web Application

Project Summary

Major financial services company had been using a legacy corporate trust information and risk management system, which was developed in GUPTA (front and back-end). Due to the business & technological strategy to conform to web based solutions, the company wanted to transform this desktop application into a cutting-edge web-based application to be more flexible with their business works as well as technology updates.

Major concerns to address from the project were:

- **Strategic Direction:** Create a common reusable technological framework to transform/replace all legacy applications
- **Usability:** Ensure minimal changes for users i.e. front-end should introduce least amount of changes from the previous framework (similar/identical look-and-feel of the application)
- **Common framework:** Use a common toolset to deploy a web-based solution with the flexibility of future enhancement:
 - ⇒ Java (JSP/JSF For Presentation)
 - ⇒ Hibernate (Object Relational Mapping)
 - ⇒ Apache MyFaces (JSF Open Source Implementation)
 - ⇒ Oracle 10G Database (Database Server)
 - ⇒ Apache Tomcat Web/ Application Server (Business Logic Processing)
- **Proof of Concept:** Accomplish a successful POC that will actually serve as a roadmap for migrating other critical legacy applications to web-based solutions.

Periscope's Involvement

- Analyze existing desktop GUPTA application's business processes, code, reports.
- Design web application architecture, database architecture, and technical processes
- Develop transformation techniques for each module/functionality
- Develop Web-front using JSP/JSF (to match with desktop GUI)
- Develop ORM (Hibernate) objects
- Develop Java application code for all modules/functionalities
- Develop more than 30 reports in Jasper Reporting Tool that were previously accomplished in GUPTA Report Builder
- Execute unit and system test of the application
- Deliver the finished application to the client for further testing (UAT) and production deployment

Periscope Resources

- US-based Technical Lead/Project Manager
- US-based Dedicated Account Manager
- Offshore Technical Lead/Project Manager
- Offshore Technical Architect
- Offshore Technical Developers
- Offshore Testing team
- Offshore Project Coordinator

Project Coordination Summary

The coordination with the client was being accomplished in three different aspects:

- Produce daily package/update to the client including status, source code, deployable portion of the application, and action items for client resources.
- Produce weekly management scorecard for the project and timesheets for each offshore developer
- Attend periodic and need-base conference calls with the client
- Provide real-time support during critical stages of the project as US-based technical lead and account manager are always available
- There is a ensured after delivery support within the life time of the application

Key Challenges

- **Business Process Analysis:** Understanding the application's business process with minimal documentation had been a challenge – Periscope adjusted to this need by deploying their own process experts in the middle of the project
- **Platform shift:** Major technical change had been introduced when Periscope was asked to shift Java development work from Struts Framework to Apache MyFaces Framework. Periscope successfully adjusted to the change and still delivered the application on time.

Periscope's key accomplishments

- Periscope formalized requirement gathering for GUPTA application
- Periscope project plan and methodology
- Periscope instructed client on best practices and project coordination (including weekly scorecards/project trigger and milestone tasks)
- Periscope began and completed entire JAVA GUI, Application and Data Layer Structure on time and budget
- Periscope stepped in and assisted client in completing their outstanding tasks in order to make in time delivery which includes GUPTA mainframe code analysis and the reporting application