

Client

A large company developing and supplying flight planning solutions since 1980s

Business Challenge

The client has developed and successfully marketed a family of Flight Planning products, the comprehensive solution to airlines for flight planning, flight and weather briefing, and route management.

In 2005, the client made a decision that the existing system needed to be remade based on the following limitations impeding further growth:

- Only up to 250 users could work simultaneously.
- Number of aircrafts under operation that could be managed efficiently was 2 to 200.
- No Web interface.
- Low compatibility.

Legacy technology of the existing system did not allow re-engineering or reuse of the existing components. Luxoft was chosen as a partner for full-cycle development of the most critical components of the new system.

The Solution

Working closely with the client's experts Luxoft designed and delivered the following components to the new solution:

- Flight planning – based on required payload, route time and cost, departure and arrival fuel;
- Pilot briefing – Ad-hoc and scheduled, route specific, charts and plans;
- Weather briefing – route specific and overlay, statistical winds, user-defined charts;
- Flight handling – stored and optimum routes, route group attributes;
- Web interface design – based on regulations compliance and usability requirements.

Project Facts:

- Technologies
 - Java/J2EE
 - Web
 - Struts
 - Hibernate
 - PostgreSQL
- User profile
 - Aircraft operators
- System geography
 - Worldwide
- Project Statistics
 - Source Code Size ~30 KSLOC
 - 24x7 availability
- Team information
 - 7 people
 - Collaborative distributed environment (Moscow, Omsk)
- Present project phase
 - Complete



Flight Planning. Development of Flight Planning and Briefing System Components



Luxoft applied the Rational Unified Processes methodology and made complete design for server and client layers based on Java technologies. The self-created framework for Web-based rich client application was introduced.

To ensure the best in class quality of the system components Luxoft employed full unit testing, intelligent integration testing, and system testing automated with Rational Robot scripts.

The new system incorporated the wealth of the client's experience in aircraft operations and Luxoft skills at the cutting edge of the software technology. Thus the new system has become the revolutionary web-based weather briefing and flight operations product, the one of the primary 'Software as a Service' solutions in the industry.

Client Benefits

The set of advanced components were successfully developed in 20 months and were seamlessly integrated into the system. The new flight planning and briefing solution enriched with Luxoft's components achieved the following benefits for the client:

- Significantly improved usability and look-and-feel of the application
- Improved reliability and maintainability of the entire system
- Increased number of the client's customers attracted by advanced features and interface convenience
- Secured 24x7 availability

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