

# Business Intelligence and Reporting Solution For Global Automaker

*The client is a U.S. based Fortune 500 automaker company and one of the top rankers in this sector. It has manufacturing operations worldwide. Also, it has given new methods for managing industrial workforce and large-scale manufacturing of cars. The client wanted ad-hoc reporting system which could filter out the necessary data fields as required for generating the reports. Dealer systems integration offers solutions to help our automotive client and their dealer networks improve retail performance through integration between systems.*

## The Vision

To provide reporting and analytics software solution that enables to query and build custom reports to reduce the high complexity of data by identifying the date range, period and data fields within the selected data links.

## Application Overview

e-Zest team developed an integrated dealer system for various reports that is an online portal for the client. The development work included a set of reports that reflect OTC parts sales and RO labor and parts sales from Export & Growth region dealers as of the current date. The users of the application were client employees and dealers.

The categories of the reports are -

- Internal Use Reports
- Dealer Use Reports

For each of the report category the following reports were generated:

- Weekly Performance Reports
- OTC Parts Sales by Salesperson
- RO Labor and Parts Sales by Service Writer
- OTC Parts Sales by Sub-Dealer
- RO Labor and Parts Sales by Sub-Dealer

Dealer can figure out sales monthly, quarterly, yearly etc. Also they can view the performance of the sub dealers. The client can view the performance of all the E&G regions and compare the performance of each region with other regions.

## *Technologies and Tools*

**Liferay** – It is an open source enterprise web platform for building business solutions to deliver immediate results and long-term value. The encouraging features of Liferay that insisted us to use are as follows -

- Simplified UI Development
- Out-of-the-box Tools
- Custom Fields
- User Groups, Organizations and Sites
- Auditing & Performance Monitoring
- Search & Tagging
- OpenSocial
- Flexible Enterprise Integration Framework
- Secure Single Sign On (SSO)
- Rules Engine Integration
- SOA Framework
- Role Based Content Delivery
- Dynamic Drag & Drop
- User-Driven Workflow & Approval

**Pentaho** – We used Pentaho as it is building the future of business analytics by tightly coupling data integration and business analytics into a modern platform that brings together IT and business users to easily access, visualize and explore all data that impacts business results.

**Saiku** was used as a user interface for ad-hoc reporting. It offers a user friendly; web based analytics solution that lets users, quickly and easily analyze corporate data and create share reports.

**MySQL** was used as a database.

## *Challenges and Solutions*

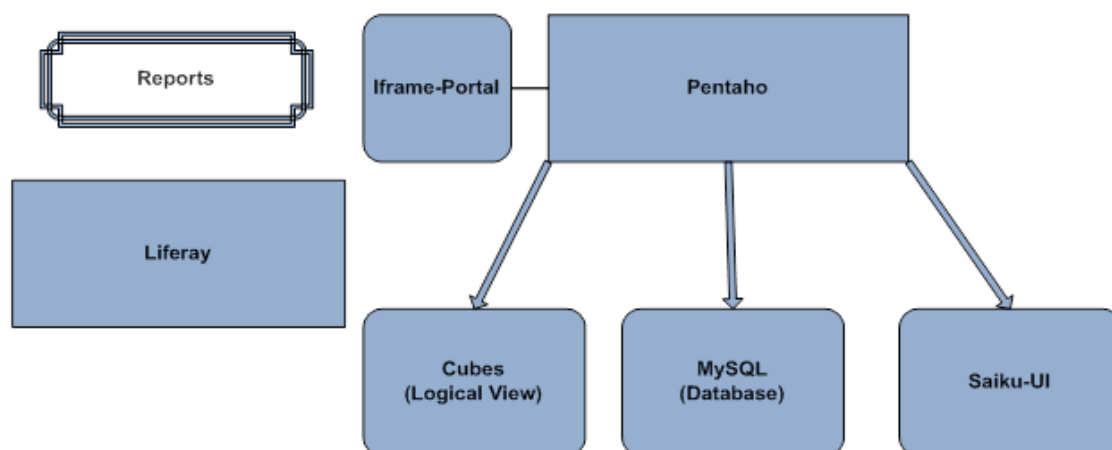
The challenges for the development team were –

- The generation of ad-hoc reports
- Managing the high level of complexity
- Building real time reports with summarized and aggregate information from legacy data model was challenging

These challenges were faced successfully by defining the cubes for logical views which made fields easy accessible. The report generation was complex in nature as it was based on a number of different selection results. The product of ad-hoc report analysis was typically a statistical model, analytical report, or other type of data summary. The Saiku-UI was used as it is a modular open-source technology. It helped as analysis suite which offers lightweight OLAP. It also remains easily embeddable, extendable and configurable. The Business Intelligence process allows for quicker response times when a business question comes up, which in turn helps the user to respond to issues and make business decisions faster. The solutions proposed were highly admired by the client.

## Solution Architecture

Our dedicated team's research to get the optimal BI tool resulted positively. It required strong business analysis and technical architecture skills, converting business requirements to technical specifications and architectural designs. In addition, it also served as a subject matter expert during development, test and deployment activities, and is responsible for understanding and ensuring adherence to the technology and design goals. The iframe portal used as interface between Liferay and Pentaho proved as a good solution. The high level diagram shown below depicts the idea behind the approached solution.



## Business Benefits

The reporting solution made comparisons easy and results are based on all data available, and are not limited to any particular week or other time-frame. This helped in fast response to the queries. Also flexible software solution allowed dealers to increase business agility, enhance customer experience, and improve operations, while minimizing costs, risk and complexity.

## Bottom Line

The excellence of our solutions have gathered industry recognition for the client and solutions reflected positively to handle all the data fields and map them positively in reports.