

A SUPPLY CHAIN INTELLIGENCE SYSTEM TO MONITOR AND CONTROL DISTRIBUTION TIMES AND COSTS

For a large enterprise operating in the Automotive industry Technology Reply has implemented a new Business Intelligence system aimed at monitoring the Key Performance Indicators of the Logistics area. The solution allows the Customer to monitor distribution time and costs and, therefore, the goods transportation system to the relevant distributors' network. The overview information is provided through a Web dashboard enabling navigation according to the different analysis dimensions. The information is forwarded to users via e-mail in push mode using an Excel report.

The solution is addressed to Logistics managers and is also accessible to factory, marketing and sales managers. The system helps to monitor both in-house activities and the activities performed by third parties in the logistic area. In this regard, it is filled in with data from internal business systems and with data from external suppliers. Based on Oracle 10g with the relevant Business Intelligence components, the solution offers a best-in-class combination with the new Oracle Business Intelligence systems and provides the basis for a possible introduction of the new Oracle Business Intelligence Suite Enterprise Edition that is currently being evaluated by customers.

SCENARIO

Information is a key component which enables companies to drive and control each single business area. In this regard, the mass of data and information existing in business databases must be rationalized and transformed from a set of raw and disjointed data to a set of contextualized information imbued with meaning.

Business Intelligence systems, integrated with a business Data Warehouse structure, represent tools of crucial importance in order to fully leverage the potential of the data and to provide managers with information in a format enabling a business-effective decision-making process.

For years Technology Reply has designed and developed Business Intelligence systems for its Customer i.e. a large enterprise operating in the Automotive industry. From the very beginning Technology Reply has supported this customer designing, developing and deploying the business Data Warehouse, a unique and integrated structure; subsequently, it has designed and implemented several thematic Data Marts including the Marketing, Logistics and Sales Data Mart.

In order to monitor the main quality and quantity indicators related to the operation of the company's logistics division, the Customer has assigned Technology Reply the development project of a new Business Intelligence system in the logistic area. The objective of the project was to develop a system providing a unique and integrated tool and making available the reporting required for monitoring the operations in the logistic area through Key Performance Indicators (KPI).

SOLUTION

Technology Reply has developed a new Business Intelligence solution that allows the Customer to monitor both in-house activities and the activities performed by third parties in the logistic area. The solution is integrated with the business Data Warehouse and multiple Data Marts and is filled in with data coming from internal business systems and from external suppliers.

The Business Intelligence solution can be used via the Web, is addressed to logistics managers and is also accessible to factory, marketing and sales managers.

The system provides a set of Key Performance Indicators (KPI) and synthetic indicators which have different dimensional values. Within the KPIs there are summarized dimensions of information coming from different business areas and anyway related to the distribution network of finished products such as, for example, the completion status of outbound orders from the factory vs. already delivered orders or orders to be delivered. Other information comes from customer-external systems such as the information coming from the shipping companies' network from which, for example, it is possible to learn the status of circulating goods and the relevant transportation times.

Other elements defining KPIs are related to the shipping costs. Each single KPI is continually compared to a target threshold highlighting the achievement or non-achievement of the required values.

A set of KPIs is displayed on a single dashboard. Users can therefore obtain an overview of the situation and of any anomalies that should be corrected. Drill-down functions allow users to analyze in real time the sequence of information which, for example, has caused an anomaly.

The system implemented has significantly contributed to a prompt and immediate information usage. Before its implementation, information was based on Excel sheets from which the Customer had to manually extract the summarized data. Therefore, there was no immediate and synthetic evidence of the trend of single logistic processes. The new system is accessible via the Web and the relevant data can therefore be displayed by all users enabled to use and display information. Through the automatic transmission of KPIs which are respectively processed via e-mail, the user is not required to log on to the system; users can retrieve synthetic information both from their mailbox on their PC and through mobile devices such as smartphone.

The physical architecture of the system is based on the Oracle Business Intelligence Oracle 10g Standard Edition platform and uses the main relevant components: Oracle Warehouse Builder, Oracle Discoverer and Oracle Portal. The front-end application has been developed using Java and has been integrated with the e-Mail System currently used by the customer.

THE PROJECT APPROACH

As the success of a Business Intelligence and Data Warehouse system is strictly related to its usage by the end users, Technology Reply has involved end users starting from the very first phases of the project. The system has been developed through an active interaction with users in order to meet user-specific requirements. In addition, Technology Reply has adopted an incremental approach with an interactive and circular working method. In particular, Technology Reply has worked using subsequent prototypes which have gradually mapped the new user requirements. By its own nature, a Data Warehouse can not be faced with a "big bang" approach but it must be treated as a continuously evolving environment.

In brief, great attention has been given on the easy and effective access to data as well as the prompt and immediate use of information. The access to information through Web-based applications is unleashed from the physical constraints of the environment and dramatically simplifies the usage.

Based on its competence related to the new Oracle BI Enterprise Edition suite, Technology Reply is presently evaluating, together with the customer, the possibility of evolving and enhancing the application using these new Oracle tools. The objective is to further facilitate the front-end usage and to improve data navigability. The new

Oracle Enterprise Edition tools should also allow the Customer to access not only Oracle Data Marts history data, but also data from heterogeneous business systems, collected in real time, in order to perform immediate Budget vs. Actual comparisons.

REPLY VALUE

Technology Reply, Oracle Certified Advantage Partner is focused on the implementation of projects based on the Oracle technology. Leader in the design, development and deployment of the new SOA architectures based on Oracle Fusion Middleware, Technology Reply has participated in Beta Sites on Oracle DB (Oracle 8 and higher) and recently on Oracle Fusion Middleware components (BPEL and ESB). Technology Reply supports its Customers in the continuous technology innovation process with a team of professionals able to support all project phases.



Technology Reply is the company of the Reply group specialized in ORACLE technology: besides being an Oracle Advantage Partner, it has been Beta Site Oracle DB, partner and competence center on Oracle Collaboration Suite for years.



The Technology Reply mission is to support customers in their technology innovation processes by designing, developing and managing systems based on Oracle Internet Platform Track and targeted to data dissemination and knowledge transfer.

Leveraging its in-depth competence and experience, Technology Reply boasts a team of professionals that support customers in each phase of a system design and deployment: from initial assessment to requirements analysis and architecture definition, including the drafting of functions and technology requirements as well as the development, deployment and evolution of systems.

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