

IMPLEMENTATION OF A DATA WAREHOUSE AND BI SYSTEM

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Abstract

Companies that operate with many customers and processes invariably create large amounts of data. The utilization of this data is important when analysing and conducting operations of the business and how this can be further improved for future business needs.

Business Intelligence (BI) provides the ability for decision makers of the company to make informed and correct decisions based on real time data. The ability to predict the future based on historical data would provide the company an opportunity to beat its competitors while also increasing shareholder value.

Companies all over the world are now using BI to identify problems, propose solutions and improve business.

As an example, American Express uses BI to identify customers who will close their accounts within the next 4 months and then takes steps to retain these customers.

Coca Cola has a massive social media presence (105M Facebook users and 35M Twitter users) and using AI and BI analyses photographs of its beverages that are uploaded by users to generate better targeted advertising to increase the clickthrough rates.

In order for Business Intelligence systems to function, Data warehousing techniques are crucial to understand how best to structure and store data. Incorporating existing systems along with unstructured data would provide users more flexibility to understand and make better decisions.

An ETL tool will be used to analyse and query for insights based on Storing data on OLTP (Online Transaction Processing) systems where transactions are maintained in a database on multiple fields while OLAP (Online Analytical Processing) queries this OLTP database to aggregate and analyse based on the business logic.

Finally a BI tool will be used where visualisations are created for users to interact with in order to understand the underlying data and generate insights from it. Data mining and predictive elements are also incorporated into this solution that will provide EFL with a significant competitive advantage.