Business Intelligence :
Turning Information into a strategic Asset

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Abstract:

BI is about putting the vast information resources to human intelligence. It is about the way people and organizations think, and the technology solutions they can use to understand their operating environment, processes, products and customers. It enables them with forward-looking insights like how an impact on supply chain can affect financial planning, human resource and other important factors. It presents a comprehensive view of the status of each measurable element of a company including its past and present trends and builds insight into the cause and effect associated with every change and thus develops projection of future trends. BI is an end-to-end process spanning Data Integration, Data Management, Analytics, and Reporting that collectively makeup a comprehensive BI environment. BI Enables businesses with better faster decisions, helps increase profitability and Improves employee reporting and accountability thus facilitating instantaneous analysis with Parametric Graphical Analysis of vast databases and worksheets without any programming.

Some of the challenges of BI are To integrate and manage activities, improve productivity and forecast profitability, To monitor highly competitive and constantly changing market, To make efficient use of available data to perform in-depth analyses, To standardize criteria for data analysis, To provide advanced functionality to customers in competitive market and To integrate and manage activities, improve productivity and forecast profitability.

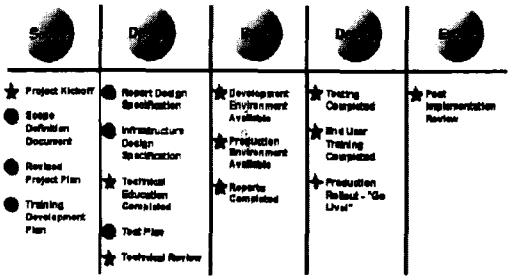
Some of the Benefits of BI are Lower operating and maintenance costs, Improve customer satisfaction through providing additional functions for better efficiency, More efficient use of data, Capacity to quickly, meet new information requirements, User independence without impairing data clarity and precision, Better ability to compete in the market place with pricing based on hard facts and Increase profitability, better customer and employee satisfaction.

Keywords: Data Integration, Data Management, Analytics, ETL, BI.

Introduction:

Business Intelligence (BI) allows organizations to gain access to, explore and communicate information throughout all levels internally and externally with customers and business partners. Facilitating accurate and timely information across the enterprise allows for better business decisions. The increases of digitization enables enterprises acquire phenomenally high quantities of data. This gives them an opportunity to convert this data to information, and knowledge. BI is pedagogically recommended to help improve revenue and customer service. At this stage, enterprises need to cross boundaries of their organization, acquire and analyze data from the external world, including customers, competitors and environment. BI uses a well-organized source of information from where it can draw out intelligent response for business users. A data warehouse is a good source of data for BI. A range of technologies and products are used to generate BI. The most common

tools are simple query and reporting, OLAP, statistical analysis, DSS and data mining. So BI is a broad range of software tools and database architecture aimed at the collection, consolidation and analysis of data. Finally, BI using data with the highest degree of aggregation and covering the longest period of time corresponds to traditional data warehousing applications. In addition to being used for tactical decision-making, these are often used to make strategic decisions, such as whether a company should develop a new set of products or services, enter a new geographic or demographic market, or redesign core business processes. BI tools are used by companies to increase business and gain competitive advantage. Since this activity is very important to an organization, it's a good idea for a company to have a separate BI unit. This unit will analyze the results thrown up by the BI tools and fulfill the information requirements of departments across the organization. This is an emerging trend in telecom industries in India," said CTO, SAS international.



Deliverables designed to speed effective deployment

Business Intelligence – Concept

In the competitive world of business, the survival of a company depends on how fast they are able to recognize changing business dynamics and challenges, and respond correctly and quickly. Companies must also anticipate trends, identify new opportunities, transform their strategy, and reorient resources to stay ahead of the competition. The key to succeeding is information.

Companies collect significant volumes of data, and have access to even more data from outside their business. They need the ability to transform this raw data to actionable information by capturing, consolidating, organizing, storing, distributing, analyzing, and providing quick and easy access to it. This is the competitive advantage, but also the challenge. All of this is the goal of business intelligence (BI). BI helps a company create knowledge from that information to enable better decision making and to convert those decisions into action.

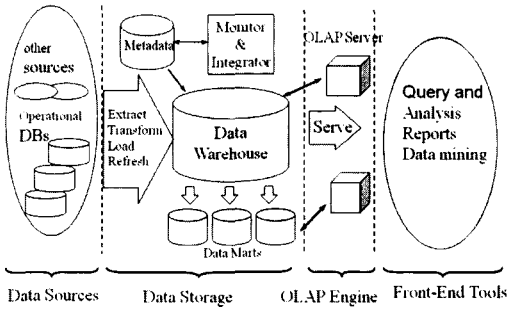
The extract process reads data from various sources. The transform process converts the extracted data into a scripted and defined format, which fit for the warehouse. The process standardizes the various data structures so that they can be accessed and analyzed with high accuracy. This is done with the use of rules, lookup tables, and by combining the data with other data. The load process writes the data into warehouse. The efficiency and performance of a BI solution mostly depends on the effectiveness of the ETL tools.

BI is a broad category of application and technologies for gathering, storing, providing access and analyzing data to help enterprise users make better, faster business decisions. The information provides timely and accurate insight into business conditions about customers, products, services, finances and markets. Business Intelligence is a process for increasing the competitive advantage of a business by intelligent use of available data in decision making. Business Intelligence

empowers intelligent fast and precise decision making on Sourcing the data, Filtering out unimportant information, Analyzing the data, Assessing the situation, Developing solutions, Analyzing risks and supporting the decisions made. BI can be used in the resource management like Aligning payroll and incentives with corporate goals, Monitoring key metrics like turnover, demographics, cost per employee, recruiting, and training effectiveness, Analyzing opportunities for improvement in areas such as recruitment, attrition, and retention and Minimizing the administrative burden of manual processes involved with spreadsheets.

BI can be used in manufacturing like Increase the value of customer relationships, Respond quickly to changing markets and company sensitivities, Launch new products sooner, Reduce inventory investment, Improve planning, scheduling, and the procurement schedule and Maintain high quality standards. BI can be used in finance like Aligning plans and budgets with actual results and analyzing business trends, Monitoring key financial metrics and ratios with a focus on DSO, liquidity, cash flow, receivables and payables, and profitability, Minimizing administrative burden of manual processes involved with spreadsheets, Aligning financial performance with incentive compensation to your employees and Managing complex compliance environments and targeting potential material events. BI can be used in operations and supply chain like Tracking operations performance across hundreds of metrics, Identifying inefficiency in any business process including production, customer service, and order processing, Reducing working capital, Supporting initiatives such as Lean and Six Sigma, Forecasting demand and aligning resources against delivery, Measuring and managing vendor performance, Reducing stock outs and improving on-shelf availability and Analyzing cost effectiveness of distribution centers.

Architecture of Business Intelligence Platform



BI Platform to generate strategic assets from available information in retail

In the typical retail IT infrastructure, there are two fundamental categories of systems: transactional/operational systems, such as POS and purchase order management and analytic/BI systems.

Operational and transactional systems such as merchandise management, ERP (enterprise resource planning), and POS, are very good at what they do -- organizing huge amounts of operational data and transactions. These systems can tell retailers what has happened in their business and what their customers have done. It's critical, however, for retailers to understand what will happen: what the demand will be for a select assortment of merchandise, what impact an incremental price change will have on demand, which floor plan will sell more designer shoes, which customers will Real value comes from systems that go beyond the limitations of operational software alone, systems that can take operational data and create enterprise intelligence and predictive

insights. These BI systems must combine data management (consolidating, organizing, and cleansing huge amounts of disparate data from varying systems and platforms) with predictive analytics (data mining, forecasting, optimization). When they do, retailers can make sense of customer, product, supplier, and operational data and draw insights through which it will help them run their businesses better and more profitably.

Leading retailers around the globe -- like Wal-Mart, Foot Locker, Staples, Williams-Sonoma, and Amazon.com in the United States; Carrefour and Karstadt in Germany; Marks & Spencer and J. Sainsbury's in the United Kingdom; Pao de Acucar in Brazil; and many others -- have begun using BI and analytics to make an array of strategic decisions. These include where to place retail outlets, how many of each size or color of an item to put in each store, and when and how much to discount. The effects of these decisions can save or generate millions of dollars for retailers.

This is clearly the most important area of a retailer's business and an area where retailers are beginning to exploit the full value of BI. Analysis of past performance, combined with plans and forecasts of future customer behavior, leads to more accurate initial allocations of merchandise across channels and stores. Assortment and size optimization that are based on customer demand patterns ensure that the correct assortments, size, and case-pack distributions get sent to the correct stores. Daily price, promotion, and markdown optimization ensures that items are priced for optimal profitability, both preseason and in season. Space automation and optimization ensure that departmental sales and profit per square foot are maximized, and products are given the correct inventory and space on the shelf or on the rack. Optimized fulfillment ensures that products are allocated or replenished based on demand. Accurate analysis also results in a more efficient use of manpower in picking, packing, and shipping the first wave of product, while minimizing additional, costly payroll expenses to facilitate transfers between stores, vendor returns, changing signage and labels for markdowns, and otherwise correcting mistakes.

By understanding customers better -- whether by profiling, segmenting, gauging propensity to respond, or using market basket analysis -- retailers can create better-defined targeted campaigns, reducing expenses (printing, paper, postage) while increasing response rates, revenues, and gross margins. Also, as retailers gain a better understanding of their customers' buying behavior, this analysis can then be used to create more effective merchandising plans for the next season.

Understanding and predicting changes in demand -- by hour, by day, by location, by promotion, by price change -- means that the store floors, the catalog call centers, and the fleet crews delivering replenishment orders from the DC to the store are all appropriately staffed. This understanding also leads to optimal productivity since store-level human capital costs can be scheduled better and managed more efficiently.

Some of the BI Tools Providers

Business intelligence is a very wider domain and lots of providers are available in the global market who provides business intelligence platform like Actuate, Business objects, cognos, Dataflux, Hyperion, IBM, Informatica, Information Builders, Microsoft, Microstrategy, Oracle, Panorama, SAP, SAS, Siebel etc.

Benefits of Business Intelligence

- Improve revenue and profits by acquiring and retaining high value customers
- Reduce costs through more effective and responsive management
- Automate compliance with regulatory reporting requirements
- Improve customer loyalty through improved quality and superior service

Challenges:

In the competitive world of business, the survival of a company depends on how fast they are able to recognize changing business dynamics and challenges, and respond correctly and quickly. Companies must also anticipate trends, identify new opportunities, transform their strategy, and reorient resources to stay ahead of the competition. The key to succeeding is information.

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1. To provide more advanced analytic functionality and greater control of their hosted marketing data
2. To provide advanced functionality to customers in competitive market
3. To integrate and manage activities, improve productivity and forecast profitability
4. To monitor highly competitive and constantly changing market, To make efficient use of available data to perform in-depth analyses, To standardize criteria for data analysis

Conclusion:

BI is a broad category of application and technologies for gathering, storing, providing access and analyzing data to help enterprise users make better, faster business decisions. The information provides timely and accurate insight into business conditions about customers, products, services, finances and markets. Business Intelligence is a process for increasing the competitive advantage of a business by intelligent use of available data in decision making.

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