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15th -16th February 2017

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New Era of Business Intelligence in the Current Market Scenario

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Abstract- Business Intelligence (BI) facilitates businesses to achieve management by “facts”. It helps in data-based decision making that would make and get better the business and find out hidden trends. In the current energetic market conditions, in order to maintain and extend the business, client wants to undertake the following challenges. Business Intelligence solutions offer proven services to assist you influence your organizational data and listen to your customers better, adapt faster to changing market conditions and, most importantly, improve profitability, using the obtainable resources optimally. According to the list of best business intelligence tools prepared by experts from Finances Online the leading solutions in this category comprise of systems designed to capture, classify, and evaluate corporate data and extract best practices for improved decision making. Business Intelligence (BI) refers to a variety of software applications,

enables the organizations' raw data for intelligent decision making. These BI's are formed with some related performance, which includes online analytical processing, data mining, querying and reporting along with the techniques that include multidimensional analyses modelling, mathematical projection, ad-hoc queries and 'canned' reporting. The fact-based decision making is the main concept of BI that results in a single version of truth. The BI system provides the decision maker, the tools and methodologies which result in effective and timely decisions. Decisions can be classified in terms of methods such as stagnant Decision making and dynamic decision making. Traditionally, the mathematical models and algorithms are used to analyze large amount of alternative actions, which helps to attain more exact conclusions and achieve efficient and timely decisions. By implementing the BI system, it



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would be concluded that that decision-making process is amplified efficiently.

Keywords: Business intelligence, decision making, data

1.Introduction

BI, that can be defined as the development of turning data into information and then into knowledge, was born within the trade world in the early 90's, to satisfy the managers' request for professionally and successfully analyzing the enterprise data in order to better appreciate the circumstances of their business and for improving the decision process. In the mid-90's BI became an entity of interest for the academic world, and ten years of research managed to change a package of naive techniques into a justifiable approach to information removal and processing[1].

Generally, BI applications get data that is gather from a data warehouse or data marts. It's not a requirement to have data warehouse for BI applications but its most common perform. In order to differentiate between concepts of business intelligence and data warehouses, Forrester Research often defines business intelligence in one

of two ways: using a broad definition: "Business Intelligence is a position of methodologies, processes, architectures, and technologies that modify raw data into significant and useful in order used to enable more efficientplanned, planned, and ready insights and decisionmaking." When using this definition, business intelligence also includes technologies such as data addition, data excellence, data warehousing, master data management, text and satisfied analytics, and many others that the market sometimes lumps into the Information Management section. Therefore, Forrester refers to data training and data usage as two divide, but closely linked segments of the business intellect architectural stack. Forrester defines the latter, narrower business intelligence marketplace as "referring to immediately the top layers of the BI architectural stack such as reporting, analytics and dashboards"[2]. Today's business surroundings is a world of steady change, characterize by dynamic markets, mergers and acquisition, business diversification, and strongopposition. To achieve and maintain leadership, your endeavor needs to expand a superior capability to sense and react



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quickly and neatly to market changes. The key lies in taking progressive steps towards rising service oriented, plug-and-play business capabilities. You will be able to operate in a self-optimizing style if these capability are supported by business solutions that enable you to monitor business behavior as they happen, energetically align business processes to changing marketplace conditions, measure and accurately forecast business performance[3].

2.Literarture Review

BI is defined as the method of converting data into information and subsequently to knowledge. The types of knowledge obtained are about the customer requirements and decisions, organizational performance in the industry and the global trends. Another definition of BI, particularly the BI systems is, BI systems put together the gathering and storage of data and knowledge management with analytical tools to present a ready-foraction and complicated information to the

planners and decision makers.This is to assist them to obtain the right information at the right time, location and form[4].

Business intelligence provides organizational data in such a way that the organizational knowledge filters can easily associate with this data and turn it into information for the organization. Persons involved in business intelligence processes may use application software and other technologies to gather, store, analyze, and provide access to data, and present that data in a simple, useful manner. The software aids in Business performance management, and aims to help people make "better" business decisions by making accurate, current, and relevant information available to them when they need it. Some businesses use data warehouses because they are a logical collection of information gathered from various operational databases for the purpose of creating business intelligence[5].

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		Query, Reporting, Analysis	Advanced Analytics
End-User Requirements	Ad hoc/ exploratory query and analysis	<ul style="list-style-type: none"> Data visualization In-memory processing Content categorization, search, navigation 	<ul style="list-style-type: none"> Number and type of algorithms Model life-cycle management Automation of the data preparation and model testing processes
	Operational information access or embedded analytics	<ul style="list-style-type: none"> Self-service production reporting and search Application-embedded guided analytics Contextual information delivery 	<ul style="list-style-type: none"> In-database model execution and scoring Application-embedded deployment through guided analytics Decision optimization

Figure.1 End-User Business Analytics Requirements Matrix[6]

Statistics are used throughout the media and in day-to-day life to try to make sense of why events have happened the way they have and to try and predict how they may happen in the future. In business there are occasions when, despite the statistics, companies can still perform well. But this is an exception to the rule. It is generally accepted that analyzing your data gives your company the ability to measure success, and to take advantage of competitive opportunities. It is surprising therefore, how many companies have not made the critical

investment required in a Business Intelligence Strategy. Often large programmes of development are directed towards operational systems, to enhance customer experience, as it should be. Yet often little thought is given to measurement and analytics of the data goldmine captured by those same systems. The Business Intelligence afterthought is very often minimal and reactive - which leads to a whole host of problems. In the era of analytics, it is crucial to create a Business Intelligence Strategy that is aligned with your

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overall corporate strategy. SAS Software is a truly Enterprise wide technology which can underpin the implementation of a Business Intelligence Strategy; from capturing the correct data initially through to integrating all manner of sources to then be able to exploit and analyze the information within. SAS Software offers the right tools for the right people to access the right data[7].

3.Implementation based on the Requirement

Businesses need intelligence during their company structure to determine the health of metrics and how different metrics and data points are associated. This analysis can establish opportunities and areas of development and is essential to carry on adapting and refinement

business strategies. BI platforms consume data in its many forms, through file uploads and direct connectors to databases and business applications[8].The applications of BI include the query and reporting, decision supports activities, statistical analysis, Online Analysis Processing (OLAP), forecasting and data mining. The business intelligence solution brings the required information to the experts or the users who actually need it: those include the consumers (dynamic queries and simple analysis) analysis and experts (multidimensional analysis, statistics) and information users (reports).

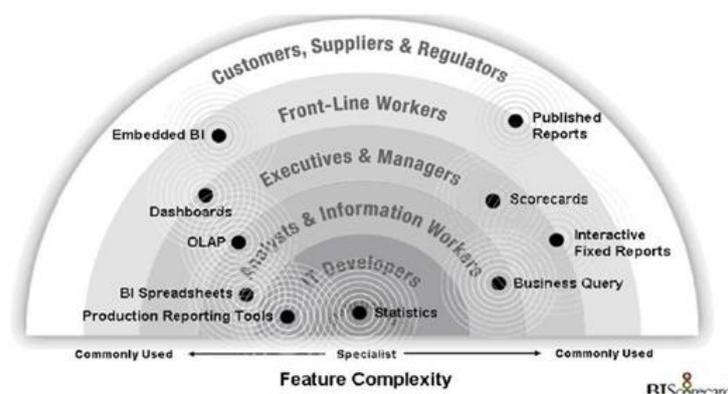


Figure.2 BI tools and User Types

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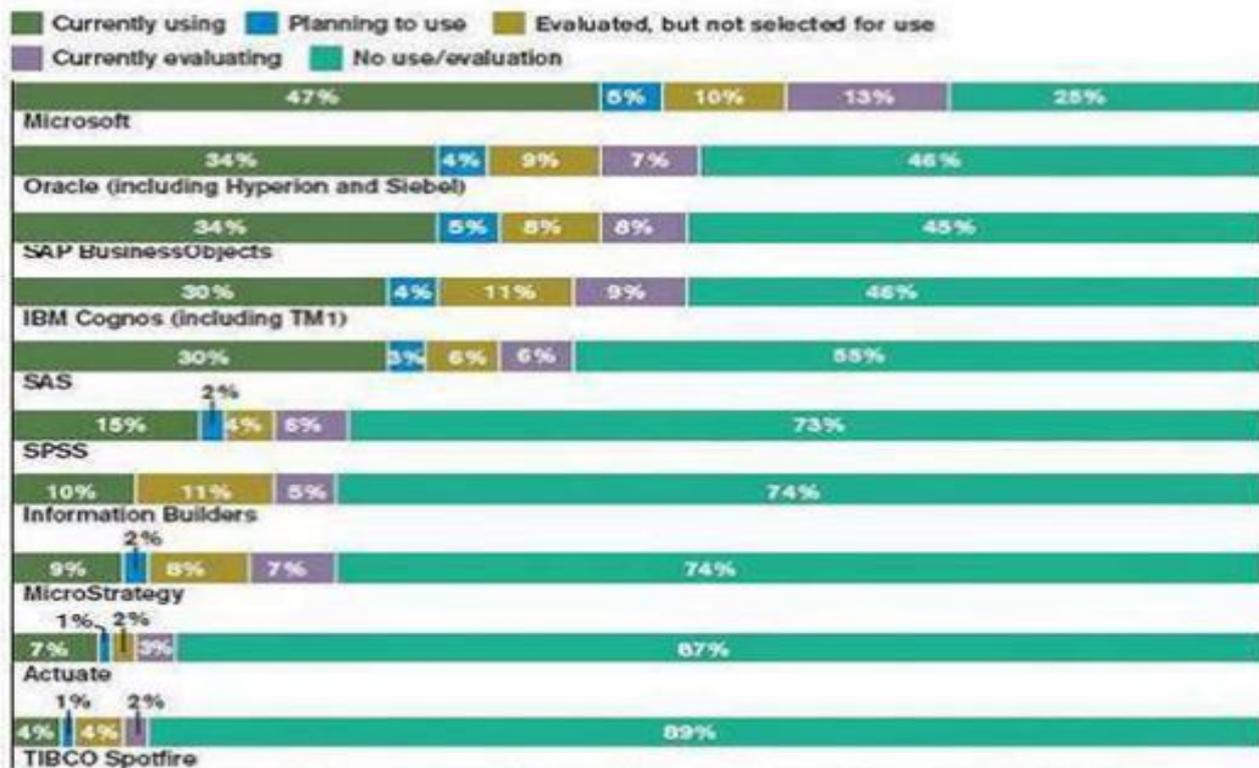
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The analysis was done for the prominent Business Intelligence platforms by Gartner: MicroStrategy 9.3, SAS 9 Enterprise Intelligence Platform, QlikView, Oracle BI Foundation Suite 11g, WebFOCUS 8, IBM Cognos 8, Microsoft SQL Server and SAP Business Object BI Platform. The

above mentioned platforms were assessed using a total of 16 technical capabilities, which were in-turn divided into five categories that are Scorecards, Mobile integration, Infrastructure and Development Analysis and Data visualization.

BI Vendors

Are you using, planning to use, or evaluating BI products from the following vendors?



Data: InformationWeek Analytics/Intelligent Enterprise 2009 Business Intelligence Survey of 534 business technology professionals

Figure.3 BI vendors

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3.1 Infrastructure & Development

- BI integrated infrastructure: common security, administration, query engine;
- Development: Development tools and SDK for developing applications or tools;
- Metadata: The storage and reusing capability of metadata objects across the variety of users and applications.

3.2 Analysis

- OLAP: The capability to raise fast queries, sophisticated sorting, inter-row calculations, hierarchies, ROLAP calculations.
- Data mining services: The prediction modelling creation with the help of complex algorithms such as clustering, optimization and statistical models like Beta distribution, Average Deviation and Fisher transformation.

3.3 Scorecards

- Six Sigma: Support to enhance this

process management methodology;

- Balanced Scorecards: support for strategic management methodology;
- KPIs: supporting KPIs (Key Performance Indicators) in order to measure the company's performance, classification or forecasting
- Statistical modelling: Analysis data using software

3.4 Data visualization

- Reports: From multiple operational and analytical sources, the ability to create reports that is interactive with complex settings.
- Dashboards: To publish key indicators, interactive reports creation using a web-based interface which uses gauges, dials or traffic lights to emphasize on the information and making it easier to understand.
- Microsoft Office integration: In order to achieve data export and import, dashboards, render reports and scorecards, gaining the ability to integrate to MS excel.

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3.5 Mobile integration

- Data Visualization & Exploration: Interaction, exploration and modification of the data with touch-optimized graphs, grids
- Analysis: Interaction with the, scorecards, OLAP analysis and dashboards
- Alerts: Receive alerts during the instances

such as change in key indicators or requiring manager approval;

- Offline Analysis & Data Exploration: Interaction, exploration and modification of the reports, dashboards, graphs and grid when the BI server is not connected also.

Table.1 Scores for Business Intelligence Platforms

Platforms / Characteristics	IBM Cognos	Oracle BI Foundation Suite	SAS Enterprise Intelligence Platform	SAP Business Objects BI platform	MicroStrategy	Qlik View	WebFocus	Microsoft SQL Server+ MS SharePoint Server
BI Infrastructure	100	75	75	100	100	75	75	50
Development	100	75	75	75	100	75	100	75
Metadata	75	100	100	75	100	25	50	50
OLAP	75	100	100	75	75	50	50	100
Data Mining	25	100	100	75	75	0	75	75

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Statistics	50	25	100	75	75	0	75	50
Predictive Modelling	25	25	100	75	75	0	75	75
Six Sigma	0	75	75	25	100	50	75	25
Balanced Scorecard	100	75	75	25	100	50	75	50
KPIs	100	75	50	25	100	50	75	75
Reports	100	100	75	75	100	75	75	75
Dashboards	100	75	75	75	100	100	75	75
MS Office Integration	75	75	75	75	75	50	75	100
Mobile Data Visualization	75	75	75	100	75	75	100	75
Mobile Analysis	75	100	75	75	75	75	100	50
Alerts	0	50	0	75	75	75	75	0
Offline mode	75	75	0	75	75	50	0	0



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3.6 Global Scores

MicroStrategy 9.3.1 scores the maximum in this platform table with a score of 88.33 which means that this platform has functionalities with various range and customization options. In addition to that Oracle BI Foundation Suite as well as SAS Enterprise Intelligence also possess the similar characteristics and placed at first position. Scored in the range of 50 to 75, the other platforms possess characteristics with an average range of features, which need to be customized with the help of programming tools.

Conclusion

The term Business Intelligence may turn out to be a fad. However, the underlying concepts, using information technology to deliver actionable information for decision makers, are essential for managing today's global businesses. BI uses both structured and semi-structured data. The former is much easier to search but the latter contains the information needed for analysis and decision making. Business intelligence could inform better decision making in business. Everyone in management needs to be alert to this opportunity

and the threat that early adapters may achieve a competitive advantage. But BI is only a technology enabler. Management accountants have important roles to play if BI is to be of value. The necessary changes will have to be implemented properly. People will have to use it to produce information and that information still has to be applied in decision making and, for those decisions to be effective, they will have to be managed through to impact.

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