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# Business Intelligence & IT Governance

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The current trend and its implication on modern  
businesses

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**12/3/2008**

Prepared for:  
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BA458 IT Governance  
Fall 2008

The purpose of this report is to take a look at Business Intelligence and how it is being used within modern businesses to make better business decisions. There is an emphasis on the practices and the trends of Business Intelligence while mentioning some of the common tools used achieve desired results.



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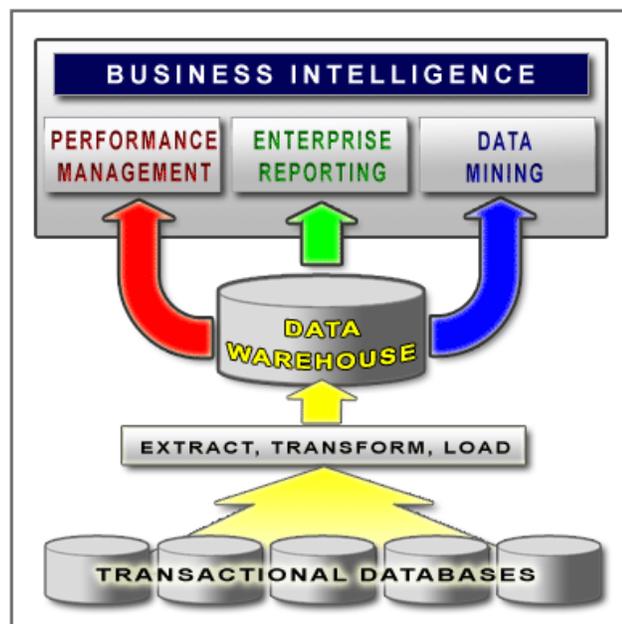


## INTRODUCTION

Businesses go through many changes and challenges during its lifetime whether those changes threaten the stability of the business, improve its business processes, or even affect its internal structure. The changing market is constantly introducing new challenges for businesses every day whether it is through a shift in trends or a change in consumer behavior. In order for a business to stay two steps ahead of the market, it needs to be able to analyze and collect the necessary data in order to determine the

current trends and pinpoint which direction to shift the business. By doing this, businesses will be able to gain new customers and at the same time retain old customers; therefore, make them more successful. Business Intelligence helps address these issues and provides the tools necessary for businesses to make better business decisions. These better

decisions are made through the use of key indicators and through the analysis of benchmarks within the industry such as taking past performance measures and using them to make better decisions in the future. This is what is commonly known as Business Intelligence.





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Business Intelligence is the process through which the collection of information in the area of business is enhanced into information and then turned into knowledge that can be used to support business decisions. Business Intelligence gives modern businesses the advantage to gain more market share through understanding consumers' needs, consumer decision methods, and current trends in the entire industry. Overall, Business Intelligence is driven by the fact that companies use it to measure company performance of meeting a long or short term goal set by the company through the analysis of collected information (Flanglin).

## **IT GOVERNANCE**

As we have come to understand, IT Governance has played a crucial role in the business processes within a business. IT Governance is mainly the responsibility of executive and directors, which consists of the leadership, organizational structures, and the processes to make sure that the enterprise's IT sustains and extends the organization's strategies and objectives (IT Governance Institute). IT Governance makes sure that each business institutionalizes good practices to ensure that the IT supports the business's objectives. As a result the enterprise has more access to its own information which therefore allows it to maximize its benefits, capitalize on opportunities, and gain a competitive advantage. IT Governance is made up of the five focus areas: Strategic alignment, Value delivery, Resource management, Risk management, and Performance measurement (IT Governance Institute). In this report we are going to look at the Performance measurement area of IT Governance in order to see how Business Intelligence fits and what processes are in place that governs it. Since Business Intelligence deals with the analysis of huge amounts of data, it makes sense to classify it as Performance measurement since this area tracks and monitors strategy implementation, project completion, resource usage,



process performance and service delivery, using key performance indicators, in order to translate strategy into action.

## **BUSINESS INTELLIGENCE**

### *Evolution & History*

Over the years since the day a business first establishes itself, the business tries to know themselves better than anyone and know their market of business as well. A good example of this is in warfare when each side, in order to win the war, needs to understand the groups' strengths and weaknesses (Flanglin). This will give them the necessary knowledge to execute a successful attack similar to a business releasing a new product into the market. Even since the early days, businesses had to collect data even if it wasn't automated, although some didn't have the necessary tools to analyze data in order to support business decision-making. As an increase in the amount of data took place, systems became automated, and most of the effort went to the data issue; Business Intelligence was defined. In 1989 a Gartner Group analyst, Howard Dresner popularized Business Intelligence with his description of BI, "concepts and methods to improve business decision making by using fact-based support systems." As a result most modern businesses use standards, automated software, and analytical tools in order to take large volumes of data to be extracted for better decision, such as data integration, data quality, data warehouse, data mart, and data modeling which can be broken down into three core capabilities: Enterprise Performance Management, Information discovery and delivery, and Information management (Business Objects).

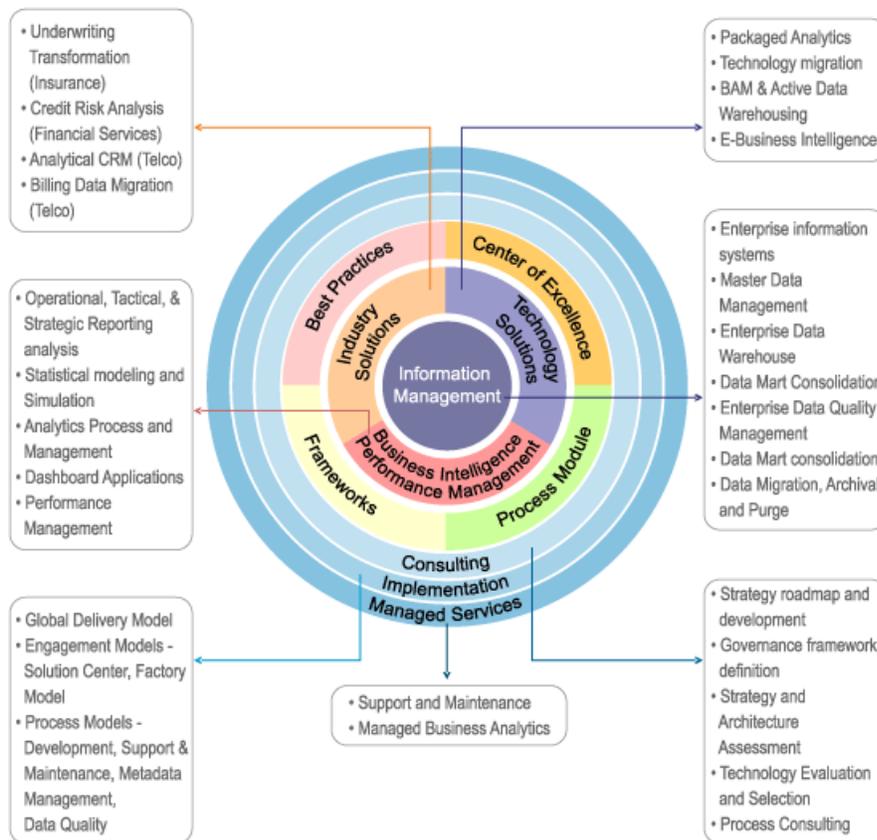
### *Enterprise performance management*



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This core capability of Business intelligence puts an emphasis on key performance measures and is responsible for the transformation of information into a strategic asset for the business

(Business Objects). This is mainly done by using various methodologies such as a top-down



framework to align planning and execution, strategy and tactics, and business objectives. The BI tools used include six sigma, dashboards, total quality management, and balanced scorecards that provide upper management with visibility on

organizational strategy and on the metrics that will help improve business performance. The use of these tools will help align actions with strategy through the assignment of goals to users. It would then be up to the users to perform more decisively by collaborating with others to expand knowledge, taking necessary actions, and utilizing best practices to optimize future organizational performance. The core BPM processes include financial and operational planning, consolidation and reporting, business modeling, analysis, and monitoring performance indicators linking to the strategy (Business Objects). There are continuous and real-time reviews enforce



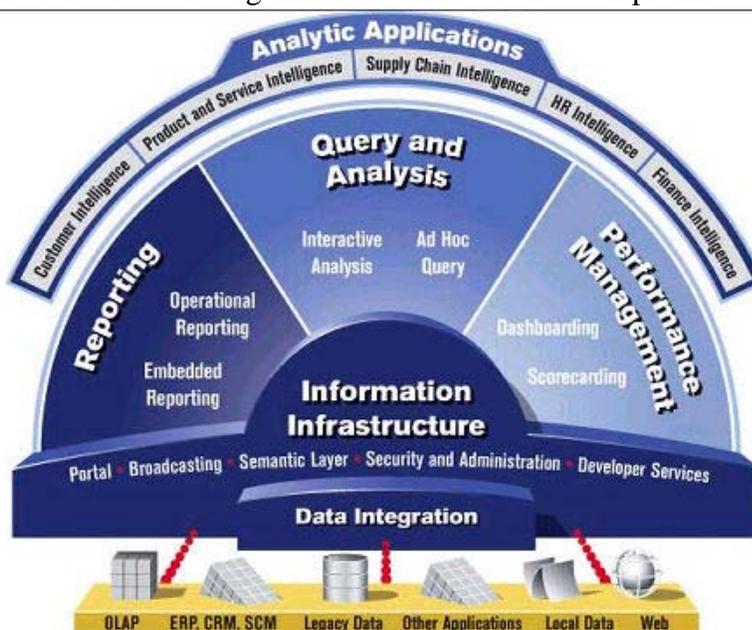
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that help in identifying and eliminating problems before they get much worse and in helping the business take corrective action in time to meet earnings projections. In addition, there is a consolidation of data from sources, querying involved, and an analysis of the data while putting in it into practice (Business Objects).

### *Information discovery and delivery*

This core capability is responsible for making the process used by decision makers simpler by allowing users to share information across the organization. The tools that compromise

information discovery and delivery are enterprise reporting, query and analysis, dashboards, and scorecards (Business Object).



### *Information management*

The core capability of information management is responsible for improving the quality of data, the understanding of the relationship and usage of information, allowing end-to-end data compliance, and to ensure consistency across the business. This is done by providing data integration methods that will allow organizations to integrate data from sources and reconcile disparate data for consistency (Business Objects). By ensuring real-time information access and historical trending, it will help



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minimize the amount of time of BI projects in order to make decisions quicker and at the same time it will allow the distribution of that information to one or more audiences. Overall information management deals with the organization, retrieval, acquisition, and maintenance of information (Business Objects).

*Key performance indicators*

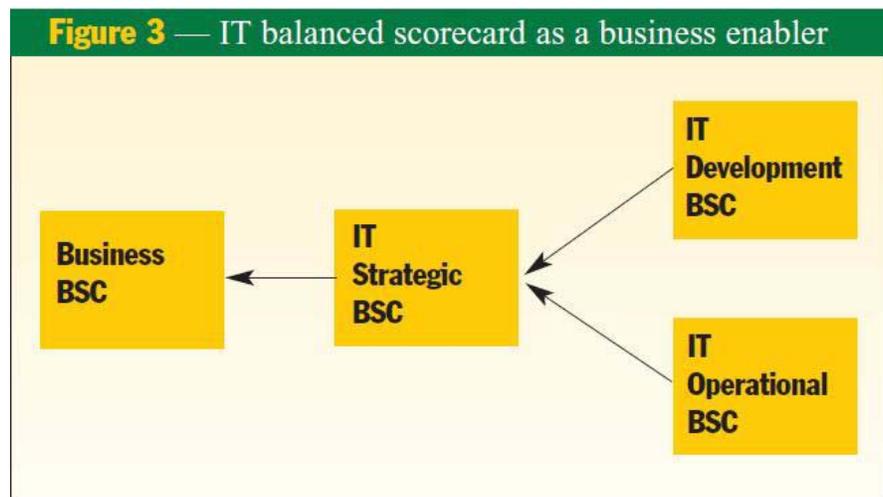
In order for a business to be able to assess how it is doing and whether drastic changes need to be made, key performance indicators are analyzed. These indicators are used to measure the progress made toward a business's organizational goals. Some of the tools that are used as key performance indicators consist of data modeling, data warehouses, and data mining which collect the data and perform the analysis. In some businesses Online Analytical Processing (OLAP) is used in the analysis process while others use vendors' tools (Flanglin).



*Differing Views on Business Intelligence*

Since the introduction of the balanced scorecard to the enterprise level, by Kaplan and Norton, evaluations of the organization weren't falling back on just the traditional methods. Kaplan and Norton wanted to introduce measures that focused more on customer satisfaction, internal processes, and innovation

which will help better assure the financial future of the organization and drive it to meet its goals (Van Grembergen). This proposed measure was a three-layer



structure for the four perspectives: the mission, the objectives, and the measures (Van Grembergen). As a result scorecards have become integral to supporting the alignment of business and IT strategy which lead up to the introduction of the IT balanced scorecards. This proposed set of balanced scorecards made the fusion between business and IT possible in a way that still support the IT governance process. These new sets of balanced score cards can be classified as IT Development, IT Operational, IT Strategic, and Business BSC. Within each IT balanced scorecard there are four perspectives: User Orientation, Operational Excellence, Future Orientation, and Contribution of which has to be translated into corresponding metrics and measures to assess the given situation (Van Grembergen). This must be done repeatedly in order to build a good IT scorecard with a mix of these two measures. As a result that is the reason why



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establishing these links between IT and business can be more expressed through this scorecard since it will give the business an edge for aligning IT and business strategy together in order to determine how business value is created through IT (Van Grembergen).



## **BUSINESS INTELLIGENCE 2.0**

After much progress and development since 1958, Business Intelligence has been able to leave its mark on the modern business. As a result of its impact and the many advances, the 2006-2007 year is recognized for the emergence of Business Intelligence 2.0 to the public. This new form of Business Intelligence represents the more developed analytical software which is more proactive than reactive compared to the earlier version. While the first version of Business Intelligence dealt mainly with the analysis of information in business decisions and the support for already made decisions, this new version is made to help make ad hoc decisions. It includes features such as visualization capabilities allowing users to see the data relations, interactivity, manipulations, and a new manner of working that suits business user thinking (Mehta). The demand for service-oriented architectures, which enables a flexible and adaptive middleware, has been a contributor to BI 2.0's high demand. BI 2.0 allows for continuous, real time analysis input, and flexibility as an event occurs. Based on the semantic data model, BI 2.0 allows practically any person to find information that is needed without assistance whether the information is structured or unstructured; therefore, enabling a new level of collaboration within businesses that shrinks the space between the analysis and action (Mehta). Even though the current BI capabilities are a good fit to many current tasks, this new version will help extend it to a whole different horizon.

### **Advantages of BI 2.0**

- User interfaces are focused on the user's experience.
- Packaging and distribute work as interactive applications.



- Assist people in meeting goals.
- Capability of managing security in a granular manner, managing versioning, and collaboration and dependencies.

**Predicted Effects of BI 2.0 (Raden)**

- Convergence between BI technology and staff with the operations of the business
- Reduction in the rate of batch data warehousing. Faster computers will support a better data comprehension and reduce data integration.
- Emergence of new data warehouse methodologies
- The disappearance of the “Pyramid” model of BI usage
- Gradual advances in the development of BI licensing
- Emergence of new Data comprehension tools; therefore, reducing the time-consuming work load (Mehta).

BI 1.0 Fallacies	BI 2.0 Realities
Most users want to be spoon-fed information and will never take the initiative to create their own environment or investigate the best way to get the answers they need.	The Consumer Web invalidates this idea. When given simple tools to do something that is important and/or useful to them, people find a way to “mash up” what they need.
Vendors will obfuscate and slow down the drive for simpler and more affordable tools to preserve their bases	They will, but demographics will pressure them. Most BI “users” will be members of a generation that lives in technology and will reject the functionality of current BI
Only air traffic controllers and credit card approval applications need real-time data	The availability of fresh data, from ever-widening sources, generates its own demand
Analytics cannot be supported until there is an enterprise data warehouse, with a metadata repository, data stewards and a comprehensive data model that represents the “single version of the truth.”	Data comprehension will displace data warehousing, to some extent. The single version of the truth will give way to context, contingency and the need to relate information quickly from many sources
Operational systems cannot be queried for analytics	There is no longer a good reason for this prohibition. In fact, with SOA, it doesn’t even make sense.
Data must exist in a persistent data store for analytics	Message queues, logs, sensors “transient data and caches, temporary aggregates, lingering partial results files” all of these can be leveraged now with the resources at hand.



The table listed has some of the main differences between BI 1.0 and BI 2.0 that are significant to upper management (Raden).

*Future and Beyond*

BI 2.0 will slowly and naturally develop overtime and there are no doubts about that since forces build and changes happen abruptly (Raden). Since most of the time people are reluctant to change, Enterprise technologies will be sought at first not just for the familiarity aspect, but also due to the cost issues. There is one fact, enterprise applications are becoming more Web-based with the popularity of collaboration, social networks, no-cost software, version-less software, and the ability to get what you need. Since BI 2.0 is still in its early stages, the challenge of balancing the need between creativity and control has still to be overcome. There is an expectation that data supply will be ad hoc, dynamic, and coming from heterogeneous data sources that will increase the volume of data and increase the importance of control on data flow (Mehta). This change in the BI industry is inevitable and according to Neil Raden, founder of Hired Brains BI consulting, to prepare for the next wave of BI (Raden):

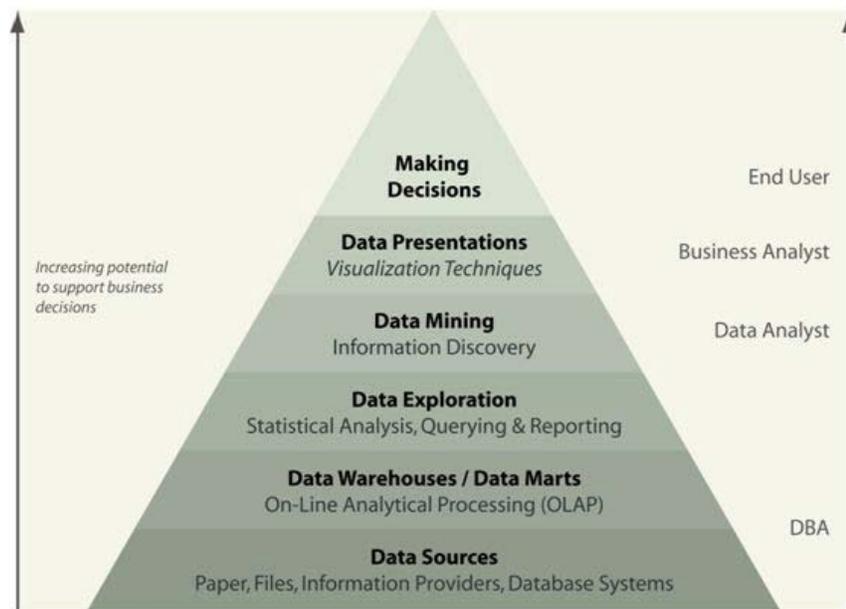
1. Recognize the situation
2. Rethink analytics
3. Think out of the BI box
4. Shift your focus from data to people
5. Think less about features and more about how people work effectively



## CONCLUSION

Businesses already know and understand that satisfying the customer's needs is the key to success in any type of business (Flanglin). By utilizing Business Intelligence into their everyday business processes, modern businesses can collect data about the customer and analyze it to determine future decisions. As the markets continue to grow and the number of customers within that market grows, so will the number of companies taking advantage of Business Intelligence. Since customers are the keys to success, why not grab those keys and take advantage of their

purchasing habits by analyzing them or even the market trends in order to walk through the door of success. For that reason Business Intelligence also deals with knowing the market the business is in which



also includes its competitors and any market trends. A business that has the necessary tools and understanding of its market will be more prepared for the changes that are inevitable within their market. It will give them a competitive advantage over any other company in its market. For this reason Business Intelligence is an important concept for any business to understand because in the long run it will help them to put the necessary tools and procedures in place in order to gain new customers, retain current customers, see a positive ROI, and make their shareholders happier



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(Flanglin). With the emergence of Business Intelligence 2.0, a new perspective on BI will take place and begin to gradually make its way into business processes. For this reason it is important to note that in the near future we can expect to come across some form of BI technology.

Collaborations within a business can be expected to change from the traditional way of collaborating since at the emergence of BI 2.0 there was also a growth in web-based collaboration. In the near future we can expect to see a greater growth in BI within the modern business and the adoption of web-based technologies to help companies make better business decisions.



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