VERITIS

Business Intelligence

Converting Data into Actionable Insights.

Contents

Abstract

Today's businesses increasingly rely on software to perform at peak efficiency and maximize revenue. Business Intelligence (BI) plays a key role not only in helping identify problems, but also provides business insights to identify opportunities.

Introduction

Gartner, a major research firm that provides technology-related insight, defines business intelligence as an "umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to, and analysis of, information to improve and optimize decisions and performance." This means, BI provides real visibility into a company's operations so that management can make sound decisions based on actual data, not on guesses or instinct. This white paper talks about the importance of business intelligence, challenges and opportunities, tools, strategy, process and more.

Business Intelligence: Converting data into actionable insights.

Business intelligence is one of the top trending buzzwords in the modern business landscape. Its adoption is rapidly increasing. As businesses generate more data than ever before, it is observed that many of these businesses are embracing BI to capitalize on that data. Whether it is an already-successful business, or a start-up, they need the ability to make informed decisions through proper data analysis.

Business Intelligence helps key decision makers make intelligent decisions based on timely and accurate information reports.


Increasingly, businesses are using BI for many advantages, but the most common among them all is turning data into insights for better decision-making. Business intelligence helps organizations find significant information easily and identify business trends in order to keep up pace with their changing customer demands.

Business Intelligence helps improving decision making processes and enhances tactical and strategic management. For example, business intelligence can boost the ability to analyze the current consumer buying trends, which allow businesses know what their consumers are

buying, and offer products that match the current consumption trends. This will result in improving the profitability since they will be able to attract target customers.

It can improve the visibility of processes and make it possible to identify any areas that have a room for improvement. BI tools help skilled intelligence analysts to quickly go through numerous detailed periodic reports to assess the performance of an organization's processes, whilst saving time and improving productivity.

The BI system allows an organization to:

Gather Data → Store Data → Access Data → Analyze Data → Accelerate Decision Making
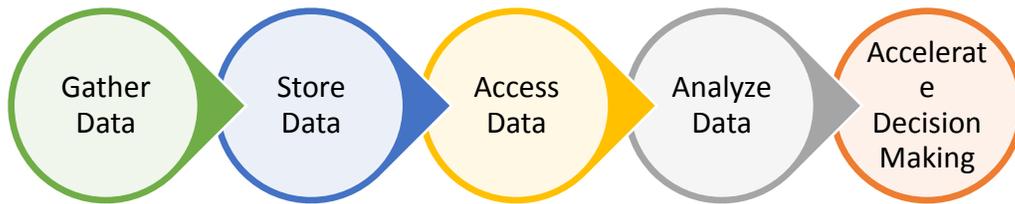
The business intelligence system enables an organization to identify patterns from their business data and allows making crucial connections between different areas of their business thereby improving the ability to plan for a successful future. One of the key reasons why businesses need to invest in an effective business intelligence system is because it can improve their efficiency, productivity, sales and their profitability.

The emerging BI models have the capability to solve many business challenges. They can also make marketing initiatives more profitable, and improve brand's communication strategy. Still, many organizations run their business based on guesswork, it means that they lack the complete business data to develop a dependable structure that enables them make informed decisions. Business intelligence can give accurate data, updates in real time, and help in forecasting, which means businesses can predict "what-if" scenarios thus eliminating the need to guess or estimate. BI users can get quick answers to their business questions and not lose valuable time. Many businesses use BI to gain an insight into what their competitors are doing, also called as Competitive Intelligence.

With a right BI system in place, the management will be able to keep an eye on the business process including financials, production, human resources and customer generated information. There are many business intelligence tools available in the market that can help turn this information into easily understandable reports.

BI tools can help organizations in determining changing market conditions and identifying trends, and provides timely information that allows them respond immediately to these changes and make the most of the opportunities.

BI tools help monitor customers, and even those customers who have been dissatisfied with an organization's products/services. These insights let companies and service providers tailor

their offerings according to their changing demands. A properly implemented BI system can help ensure that all the information generated across the organization is available reliably and consistently.

Successful organizations know the current state that their business is in and also know the steps they need to take to attain their goals. They make their business decisions on facts, not on assumptions. They make sure they have the right information they need to make effective tactical and strategic decisions for the organization. With the right information in front of them, it is easy for them to easily react to any situation. Strategic business intelligence is crucial for effective budgeting, planning, and financial reporting.

BI tools let businesses create business goals, objectives, identify metrics and key performance indicators to measure the success of their planned goals and objectives. BI allows decision makers develop an effective investment strategy, create targeted product launches, reduce inefficiencies, and have better management of cash flows.

Things to consider when selecting a business intelligence tool
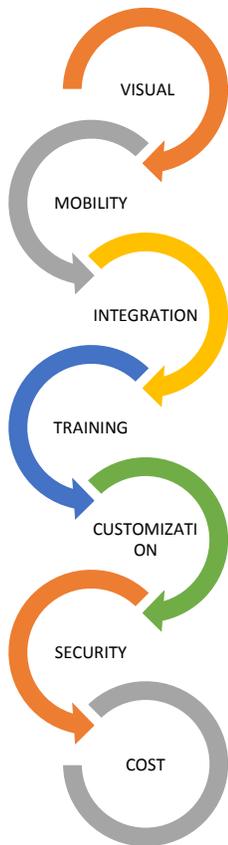
With a countless number of vendors available in the market and everyone seeming to provide similar features and making similar promises, selecting a right business intelligence tool for the organization can be very time-consuming and confusing. Selecting a business intelligence tool involves a process that includes collecting and prioritizing BI requirements, determining use cases, tool categories and styles.

Selecting a business intelligence tool that's the best fit for the organization is critical to the success of the BI project. To simplify the process, organizations can classify the features and functions to consider as must-haves, nice-to-haves and will-not-use.

Below are some of the considerations when vetting and selecting a business intelligence tool for the organization.

Visual

A BI tool should be able to transform data into actionable visual representations. It should present insights in bar, line, pie, area and radar chart types, and mix and match various combinations.

Integration

BI tools available in two types, standalone and integrated. A standalone BI tool can only be accessed and viewed in its own application, but integrated BI tool can be integrated with any pre-existing applications within the organization.

Customization

It is important to ensure that a BI vendor can build a solution that fits an organization's business and data requirements. Many vendors only offer minimal customization abilities, and some don't even offer the ability. Businesses should look for a custom set-up –one that can integrate flawlessly into their operations.

Microsoft, Qlik and Tableau are the leaders in the BI sector, according to the Gartner report, "Magic Quadrant for Business Intelligence and Analytics Platforms 2016".

Mobility

A mobile BI tool helps in everyone connected. The businesses that looking to have off-site workers, board members, or partners connected and informed can approach a mobile BI tool. However, businesses need to ensure that features are necessary for their operation's success.

Training

Businesses need to ensure that the vendor can provide enough training on the tool, so that anyone in the organization can use it to its potential. Businesses need to take some time to train their users on the BI product, else they risk missing out on some of the benefits of BI.

Security

Data security and privacy is a huge concern for almost every organization. Businesses need to ensure that a BI tool has some of the key security factors like data encryption, access control mechanisms, password complexity to avoid any security incidences.

Cost

When selecting a BI tool, need to be ensured that the "total cost of ownership" (TCO) covers detailed implementation costs and on-going maintenance costs.

Top BI Tools

Microsoft Power BI

Microsoft Power BI converts organization's data into very attractive and understandable visuals that help devise effective business strategies. The platform helps users track their business and derive answers fast through robust and comprehensive dashboards that are available on every device. Microsoft Power BI has evolved into a more fully functional product that enabling users identify risks and find opportunities at a glance.

Qlik

Qlik, a visual analytics platform which is easy to install, helps organizations analyze and manage their data more effectively in the highly dynamic business environment. Qlik lets organizations create visualizations, dashboards, and apps that address most important questions of their business. Qlik enables organizations turn data into insights across all aspects of their business.

Tableau

Tableau is extremely fast and intuitive to use, and compatible with Mac and Windows. Tableau lets organizations see and understand data. Tableau allows users quickly connect, visualize, and share data from the PC to the iPad. The users can create and publish dashboards, then share them with associates, without the need for programming skills. With live access to data, the users can evaluate the existing data more quickly and efficiently.

Below are some of the options of Microsoft Power BI, Tableau, and Qlik.

BI Tools	Microsoft Power BI	Tableau	Qlik
Free Trial	Yes	Yes	Yes
Mac Version	No	Yes	No
Mobile Versions	Yes	No	No
Software-as-a-Service (SaaS) Version	Yes	Yes	Yes
Windows Version	Yes	Yes	Yes
Visual Chart Editor	Yes	Yes	Yes

Below are some of the Advantages and Disadvantages of Microsoft Power BI, Tableau, and Qlik.

Tools	Microsoft Power BI	Tableau	Qlik
Advantages	• User-friendly • Lower upfront costs • The dashboard visualizations are best in class	• Easy-to-use drag-and-drop interface • Excellent data visualization capabilities • Integrates well with web pages, CMS and more	• User-friendly drag-and-drop interface • Excellent visualization capability • Automated smart data load feature (no SQL coding skills needed)
Disadvantages	• The integration to Dynamics CRM is limited • Cannot mix imported data with data accessed from real-time connections • Cannot handle large data sources well	• Weak Reporting capabilities • On the pricey side • Needs a lot of data cleansing	• Complex pricing • Need to pay close attention to import data wisely • The fonts are not customizable

The five key stages of BI

Business intelligence is a process that improves competitive advantage of a business by making the most out of available data in decision making.

DATA SOURCING → DATA ANALYSIS → SITUATION AWARENESS → RISK ASSESSMENT → DECISION SUPPORT

Data sourcing

This stage works on extracting information from multiple sources of data. The data can be memos, reports, email messages, images, formatted tables, web pages, URL lists, etc. The key to data sourcing is to gather the correct required data in digital form.

Data analysis

This stage works on synthesizing useful knowledge from collections of data and estimating the data based on the current and future trends. This process of data analysis is also called data mining.

Situation awareness

This stage works on filtering out irrelevant information, and setting the remaining information relevant to the business environment. A mix of different algorithms is used to find the situation awareness.

Risk assessment

This stage works on identifying the current and future risks, including cost benefits. It summarizes what plausible actions might be taken at different times.

Decision support

This stage helps in taking better business decisions for improving staff confidence and customer satisfaction. The process allows optimizing all the factors that go into creating a successful company.

BI can help measure company progress and create company benchmarks. It can help with enterprise reporting that leads to better knowledge management. It eliminates unnecessary steps, take advantage of all the resources, and become more efficient, consequently resulting in increased profits.

Failing to meet user requirements

Many businesses fail to consider specific requirements and skills of their end users when purchasing the product. This can be a crucial factor in determining the success of any BI project, as it can cost a company millions.

BI systems need to be accessible, intuitive and easy to use if businesses intend their end-users to make full use of all the benefits of the tool. Hence, a complete understanding of user skills and requirements should be a pre-requisite for any successful BI implementation.

USER REQUIREMENTS

USER SKILLS
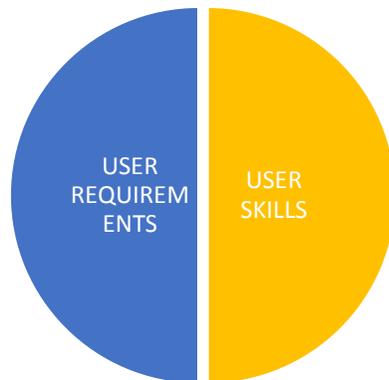
Empowering stakeholders with key business insights

A comprehensive BI system can help retrieve, analyze, transform and report data. The stakeholders of an organization can get actionable insights from their business data, identify opportunities and issues and address business questions. With anytime, anywhere access to key business insights, the stakeholders can make informed business decisions with confidence. Implementing a flexible business intelligence platform will improve responsiveness, reduce IT workload and costs, increase business performance, and drive better decision-making across the organization.

BI that provides auto-refresh reports and updated charts will ensure that everyone is on the same page and improves communication and collaboration. It enables stakeholders track key trends and performance indicators of their business as quickly and frequently as possible.

Improving organizational effectiveness

BI can greatly help increase corporate reporting and overall business performance for the short and long terms. It allows drive collaborative decision-making across multiple departments in an organization and improve effectiveness across the value stream.

Businesses need collaboration at the level where the most transactions are occurring to improve effectiveness. Considering the different uses of BI at various levels an organization will help increase the visibility and enable decision makers to make right decisions. A strategic BI system is built through data warehouse automation can enable users to have a holistic view of the company, hence, helping users take advantage of more accurate reporting and analytics.

Business Intelligence Challenges and Opportunities

Technological growth over the past few years has enabled businesses tap into more accurate data about their customers and their markets than ever before. Access to meaningful data allows organizations run their business areas more intelligently. The right information about customers, products, pricing, competitors, market changes, employee performance can help in managing complex business transformation projects effectively.

Between 70% to 80% of corporate business intelligence projects fail, according to research by analyst firm Gartner.

A poor communication between IT executives and the business executives will not help identify the real needs of the business, resulting in business intelligence project failure.

It is important to think about how the people in an organization are going to use business intelligence and how they intend to present the information. It is also important to think about whether people need historical information or information in real time or what they really need from a BI project. Many

organizations lead BI initiatives from a technical, data-centric perspective. In this approach, the value is not obvious to the business.

Most of the IT executives struggle to optimize a BI strategy for their entire organization, and efficiently expedite the adoption of new BI solutions. Organisations need to set up the Business Intelligence Competency Center (BICC) that comprises a team of highly-skilled executives who specialize in managing all aspects of an organization's BI strategy, projects and systems. Many of the businesses won't use BI applications on questionable data. This leads to a significant impact on BI. Businesses should need to use automated controls to avoid poor quality data from entering the data warehouse or BI platform.

Getting a BI platform from a reputed independent vendor doesn't necessarily deliver the best fit for an organisation's needs. Organisations need to evaluate competitive offerings, and they can consider many third-party BI platforms that can lower the total cost of ownership.

To get the right solution from the vendor, businesses need to evaluate their needs on factors like - "must have", "want to have", "nice to have", "don't want to have".

To get the most out of a BI system, organizations need the right workforce. Businesses should create talent management strategies for relevant workforce to develop the skills needed for success. Many BI projects still require an expert touch. However, there are two different types of technologies, one is business user-led analytics, which is independent from IT, and the other one is IT-managed self-service analytics.

There are many other major challenges such as getting people to change the way they do things, trying to develop a system which focuses on all the things instead of key needs, and spending a lot of money in implementing a BI system and difficulty in demonstrating a clear return on investment (ROI). The management should communicate not just on the metrics, but also adoption and accuracy.

They need to use what-if scenarios to find out the indicators like impact, probability and complexity and set goals. Running a business intelligence initiative in the organization can have challenges, but they can be overcome. The advanced business intelligence systems are offering more access and control to the people who use the data, for an instance, dashboards allow people across the organization to design and run their own report.

Implementation Challenges

The organizations that try to leverage their data, the current state of BI and the future trends, present a significant set of challenges for them. While BI systems can deliver significant benefits, they need pretty-hard effort to implement. The successful BI implementation requires the ability to translate business requirements into technical needs and the usage of right set of tools to meet the needs of the business. Below are some of the implementation challenges and how they might be answered.

Identifying business needs

The organizations that cannot identify business needs and top-priorities, the BI initiatives will result in negative consequences. Identifying the requirements of an organization should be a top priority in order to implement a right BI solution.

Adapting to the Change

The BI system changes operational processes. Getting adapted to it is very critical. The users need to get trained on and acquire familiarity with a new set of tools. Poor usage of the tools will not help implement BI in the given time frame, resulting in loss of time.

Controlling the data

To manage the exploding user base, the increasing different types of data and integration of new data sources effectively, organizations should know how to use their BI solution to make the process easier and simpler.

Program Management

Many organizations find difficulty in controlling the costs, creating business value, guaranteeing target delivery dates, managing the shifts between priorities and business needs. So, the organizations should establish a BI program that can fully manage the whole process to overcome these challenges.

Justifying the Investment

Another challenge organizations face is not being able to justify the cost of developing new dashboards. New investments might create a challenge in identifying ROI. BI's true value cannot be fully measured until it is implemented. Organizations need to create comprehensive and effective dashboards, so the data and visualizations (vibrant colours and charts) that speak for themselves.

Common mistakes in business intelligence strategy

A well-thought-out business intelligence strategy is the key to successful implementation, consequently maximizes the return on IT investment. There are many common mistakes that businesses make when starting a BI initiative that results in adverse consequences.
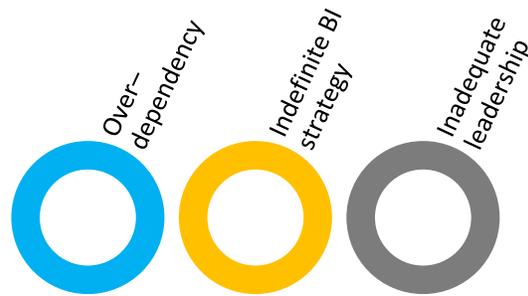
The over–dependence on the vendors

Always looking for some strategic advice from the vendors of the software can increase the expenses as they don't say no to offer unlimited advices for money. Organizations should know the complete use of the software so that they don't need to purchase any extra software and features that are not necessary.

Indefinite BI strategy

Many businesses jump-start BI implementation with minimal or no planning. Lack of explicit alignment between BI strategy and business strategy is one of the most critical mistakes, which will not help fully leverage BI tool. A successful BI implementation plan relies on having a good BI strategy to guide it.

The objectives need to be clear with a thorough implementation plan on how BI will be integrated to the basic business processes and decisions to make sure its continued effectiveness.

Inadequate leadership

Many companies engage in BI implementation without clarity about who is going to head up the project. Internal conflict or differing views between business and IT executives may contribute towards failure of BI implementation. Determining who should manage and supervise the BI implementation is a huge concern for many organizations. The Data is to be treated in a more agile manner, and the project should be handled by the teams that comprise both the IT executives and business executives.

Business intelligence as a key to success

Business intelligence allows companies process requirements quickly, respond to changing conditions; transform business data in effective graphical reports that can be analysed quickly and easily. Simply put, it enables to ***Observe, Understand, Predict, Collaborate, Decide, and Compare.***

Conclusion

Business intelligence (BI) is the ability to transform data into information and information into actionable insights, as it comprises a set of methodologies, applications and technologies that allow an organization improve their process of decision-making. The well-designed BI system can offer businesses the ability to understand the various information assets and make sound business decisions quickly. A right business intelligence system is a determining factor for the success of the business.

About Veritis

Veritis is an Information Technology growth partner that you can depend upon. Founded by technologists with a mission to provide state of the art Information Technology services in cutting edge technologies. For more than 12 years, Veritis has been providing strategic advisory services and building state-of-the-art, reliable and cost effective solutions.

Reference

Http://www.gartner.com/newsroom/id/774912

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