PUNE INSTITUTE OF COMPUTER TECHNOLOGY, DHANKAWADI PUNE-43.

A Report

On

Audit Course: Business Intelligence

SUBMITTED BY

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CERTIFICATE

This is to certify that Mr. Prathamesh Sonawane , Roll No. 41166 a student of B.E. (Computer Engineering Department) Batch 2022-2023, has satisfactorily completed an audit course report
on "**Business Intelligence"** towards the partial fulfillment of the fourth year Computer Engineering Semester VIII of SPPU.

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Pune.

Business Intelligence

1. Introduction

Business intelligence (BI) is the process of transforming data into actionable insights that help an organisation make strategic and tactical choices. To offer users with detailed insight about the state of the business, BI tools access and analyse data sets and show analytical findings in reports, summaries, dashboards, graphs, charts, and maps.

The phrase "business intelligence" is also used to describe a set of technologies that enable quick, easy-to-understand access to data-driven insights about an organization's current status.

The dashboard is likely the archetypal BI tool, and reporting is a major aspect of business intelligence. Dashboards are web-based software tools that automatically compile accessible data into charts and graphs that depict the company's current situation.
Although business intelligence does not instruct people what to do or what will happen if they follow a specific path, it is also more than just reporting. Rather, BI streamlines the labour required to search for, consolidate, and query the data needed to make effective business decisions, allowing individuals to explore data to discern trends and generate insights.
According to Chris Hagans, vice president of operations for WCI Consulting, a BI consultant, a firm that wants to better manage its supply chain needs BI capabilities to discover where delays are occurring and where variances exist within the shipping process. That organisation might also utilise its business intelligence capabilities to figure out which products are the most frequently delayed, as well as which forms of transportation are the most frequently implicated in delays.

2. Business intelligence plan

IT experts were the primary consumers of BI apps in the past. BI tools, on the other hand, have become more intuitive and user-friendly, allowing a wide number of users from various organisational domains to use them.
Howson of Gartner distinguishes two types of BI. The first is traditional or classic BI, in which IT experts build reports using in-house transactional data. Modern BI, on the other hand, involves business people interacting with agile, intuitive technology to evaluate data more quickly.
Howson explains that organizations generally opt for classic BI for certain types of reporting, such as regulatory or financial reports, where accuracy is paramount and the questions and datasets used are standard and predictable. Organizations typically use modern BI tools when business users need insight into quickly changing dynamics, such as marketing events, in which being fast is valued over getting the data 100 percent right.

But while solid business intelligence is essential to making strategic business decisions, many organizations struggle to implement effective BI strategies, thanks to poor data practices, tactical mistakes and more.

3. Business intelligence vs. business analytics

The space and time limitations of a process, such as an algorithm, limit computational ability. While we are simply constrained by space and time in classical computation, quantum computation introduces a new limiting variable: accuracy. Precision is a measure of a computation's precision, and it comes naturally from quantum mechanics' superposition of states. The Heisenberg uncertainty principle, which also governs measurements in quantum mechanics, governs this precision. When accuracy is introduced into quantum computations, it is expected that quantum computers will be able to answer problems in polynomial time, whereas on a conventional computer, these problems will be solved in nondeterministic polynomial time or worse.

4. Applications

A variety of different types of tools fall under the business intelligence umbrella. The software selection service SelectHub breaks down some of the most important categories and features:

a. Dashboards
b. Visualizations
c. Reporting
d. Data mining
e. ETL (extract-transfer-load —tools that import data from one data store into another)
f. OLAP (online analytical processing)

Dashboards and visualisation, according to SelectHub, are by far the most popular of these tools; they provide the quick and easy-to-digest data summaries that are at the heart of BI's value proposition.

In the BI industry, there are a lot of suppliers and solutions, and sorting through them can be difficult. The following are some of the major players:

- **Tableau**, a self-service analytics platform provides data visualization and can integrate with a range of data sources, including Microsoft Azure SQL Data Warehouse and Excel
- **Splunk**, a “guided analytics platform” capable of providing enterprise-grade business intelligence and data analytics
- **Alteryx**, which blends analytics from a range of sources to simplify workflows as well as provide a wealth of BI insights
- **Qlik**, which is grounded in data visualization, BI and analytics, providing an extensive, scalable BI platform

- **Domo**, a cloud-based platform that offers business intelligence tools tailored to various industries (such as financial services, health care, manufacturing and education) and roles (including CEOs, sales, BI professionals and IT workers)
- **Dundas BI**, which is mostly used for creating dashboards and scorecards, but can also do standard and ad-hoc reporting
- **Google Data Studio**, a supercharged version of the familiar Google Analytics offering
- **Einstein Analytics**, Salesforce.com's attempt to improve BI with AI
- **Birst**, a cloud-based service in which multiple instances of the BI software share a common data backend.

5. Business intelligence trends

In addition to BI managers, business intelligence teams generally include a mix of BI architects, BI developers, business analysts and data management professionals. Business users are also often included to represent the business side and make sure its needs are met in the BI development process.

To help with this, a growing number of companies are abandoning traditional waterfall development in favour of Agile BI and data warehousing approaches, which use Agile software development techniques to break down BI projects into small chunks and deliver new functionality to business analysts incrementally and iteratively. Companies can use BI capabilities more quickly as a result of this, and they can improve or amend development plans when business needs change or new requirements emerge that take precedence over older ones.

6. Conclusion

- • Business intelligence (BI) is a combination of processes, architectures, and technology that transform raw data into actionable information.
- • Business intelligence (BI) systems assist companies in identifying market trends and identifying business issues that need to be addressed.
- • Data analysts, IT professionals, business users, and company executives can all benefit from BI technologies.
- • A business intelligence system can assist an organisation increase visibility, productivity, and accountability. The disadvantages of BI are that it is a time-consuming, expensive, and complex procedure.