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1. INTRODUCTION

Business Intelligence BI is a mechanism/approach in which our raw data is processed and take out insights from it. In Business Intelligence all our unorganized or unmanaged data is converted into organized and manageable form. And when the data is used for any business is called business intelligence. We make our business smart.

Features of Business Intelligence include-

1. Better Business Intelligence
2. Decision Making
3. Quick Navigation
4. Instant Answers

2. BUSINESS INTELLIGENCE

2.1 INTRODUCTION

The practical and industrial structure that assembles, protects and examines the data created by any corporation's actions is termed business intelligence. BI organizes all raw data that an organization generates into manageable charts, profit metrics, and trends.

Data warehouses have always helped as the base source of data for BI tools. A data warehouse syndicates data from various foundations into one main database to enable reporting and business analytics (Chaudhari, et al., 2011).

Different tools used in Business Intelligence are SAP Business Objects, Datapine, MicroStrategy, Sas Business Intelligence, Zoho Analytics, Sisense, Microsoft Power BI, Looker, Clear Analytics, Tableau, Oracle BI, , and IBM Cognos Analytics.



Figure 1 Business Intelligence(1)

2.2 BENEFITS OF BUSINESS INTELLIGENCE

2.2.1 Quicker analysis, clear dashboards

BI explanations are completed to do severe data practicing in the cloud or on the servers of our industry. The data is then examined using customer demands, drag-and-drop charts, and dashboards by BI tools after being composed of numerous bases and positioned in a data warehouse.

2.2.2 A rise in organizational effectiveness

BI provides managers the tools to gain access to data, get an ample portrait of their occupation, and parallel their presentation to that of the whole company. Frontrunners may discover openings by captivating an inclusive opinion of the administration.

2.2.3 Decisions made in business using data

Improved professional choices are prepared and thinkable by precise data and rapid reporting competencies.

2.2.4 Upgraded client satisfaction

Client preference and understanding can be openly crushed by business intelligence.

3. MICROSOFT EXCEL VS POWER BI

3.1 ADVANTAGES OF POWER BI OVER EXCEL

As excel was the early bird and in the case of data storage and using shortcuts for processing the data was easy in MS Excel. But with time, it is decreasing its reputation with time as due to the upcoming technologies with more accessible features. For the faster process of the databases based on the tables and to demonstrate the data with more illustration.



Figure 2 Tools and Benefits(2)

As power BI makes the clients and the users understand the files more easily and it is more appealing in comparison with excel. It is something that secures the data and makes it available with more features and demonstrates in form of graphs and charts to improve the capabilities.

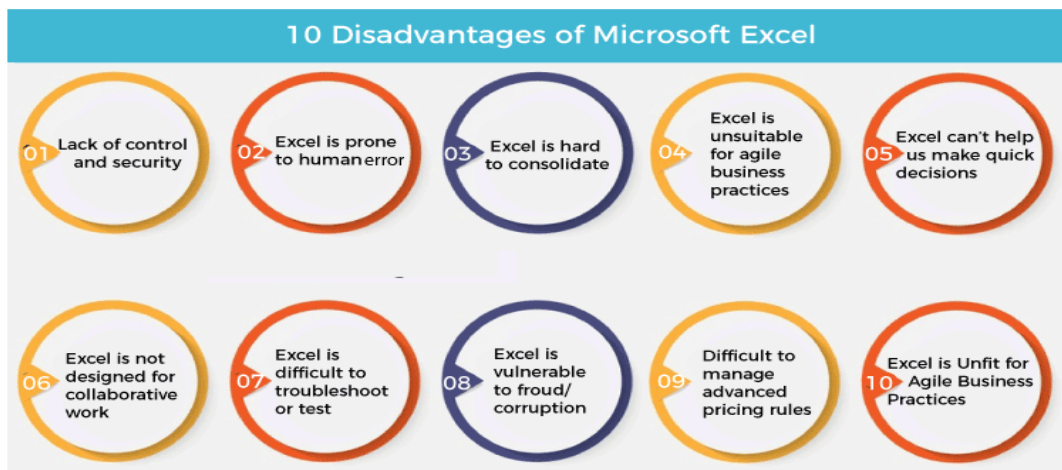


Figure 3 Disadvantages of MS Excel(3)

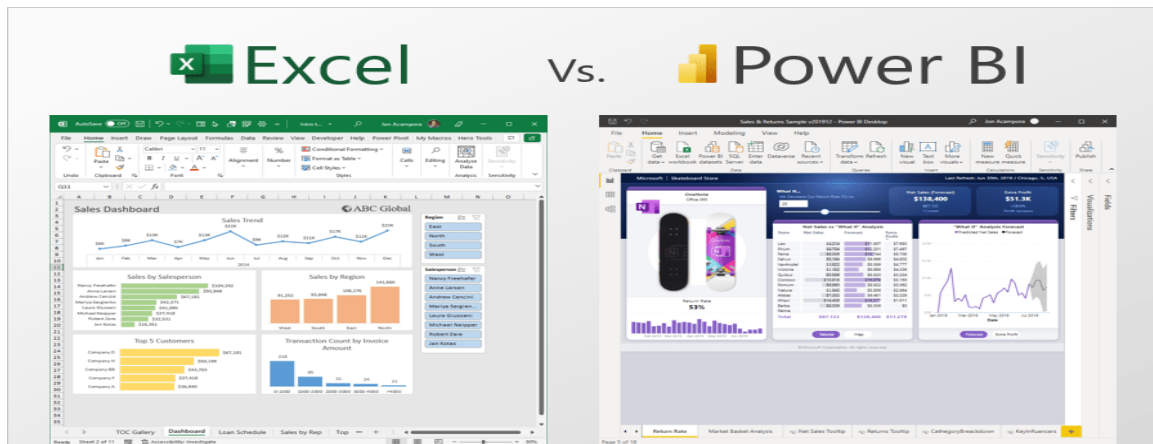


Figure 4 Excel Vs Power BI(4)

Microsoft Excel	Power BI
Excel is mainly used to construct data, alter it, and execute arithmetic operations and computations.	Power is Business Intelligence and data visualization tool for business purposes.
Processing power is slow	Processing power is extremely faster than excel
Excel can handle or process only a limited amount of data	Power BI can store or process huge amounts of data.
Excel dashboards are not that tempting and interactive	Power BI dashboards are more optically tempting in collective, custom-order than Excel.
Example: - Excel cannot work on its own when it is provided with raw data	Example: - Power BI can automate the raw data, process it, analyze it and convert it into fruitful information.

4. CURRENT TRENDS IN BUSINESS INTELLIGENCE

4.1 DATA VISUALIZATION

It is the ability to represent the data visually. For example, when we teach our little ones, we make them learn about everything through pictures embedded in books which are called data visualization.

Data Visualization Tools

1. Tableau
2. Power BI

3. Microsoft Excel

A tableau is a tool that was released in 2013. The main aim behind the development of tableau is to make the database industry connected and global.



Figure 5 Data Visualization (5)

Power BI is a business analytics tool for visualizing and sharing insights. Getting data from 100s of sources with Power Query. It models your data with Power Pivot. Power BI creates compelling, interactive reports and dashboards. It collaborates and shares reports inside and outside our organization and refreshes automatically on the cloud.

Comparing power-bi and different tools of business intelligence, all have various types of features and the capabilities to perform tasks and to capture the data, for storing, processing, analyzing, and visualizing which is based on the requirement of businesses (Khilari, et al., 2022).

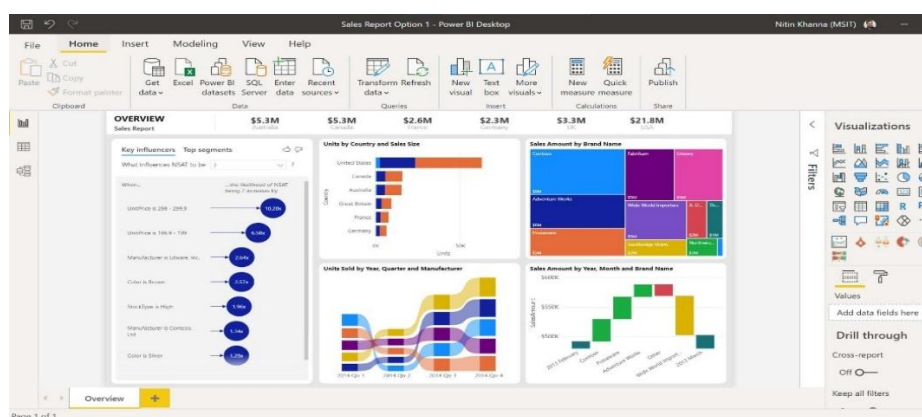


Figure 6 Power BI-Report tab(6)

Table: Orders (51,290 rows)

Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Region
3209 / CA-2013-AB10150140-41361	28 March 2013	02 April 2013	Standard Class	AB-101501404	Alan Barnes	Consumer	Los Angeles	California	United States	Western U
36338 / CA-2014-AI10855140-41351	11 November 2014	24 November 2014	Second Class	AI-108551401	Andrew Roberts	Consumer	Los Angeles	California	United States	Western U
36342 / CA-2014-AI10855140-41354	11 November 2014	24 November 2014	Second Class	AI-108551401	Arianne Irving	Consumer	Los Angeles	California	United States	Western U
32440 / CA-2012-AP10615140-41180	28 September 2012	02 October 2012	Standard Class	AP-106151404	Arthur Prichap	Consumer	Los Angeles	California	United States	Western U
40184 / CA-2014-BD11320140-41867	16 August 2014	23 August 2014	Standard Class	BD-113201404	Bill Doraselli	Consumer	Los Angeles	California	United States	Western U
35475 / CA-2014-BD11320140-41867	17 June 2014	19 June 2014	Second Class	BD-113201404	Bill Doraselli	Consumer	Los Angeles	California	United States	Western U
31460 / CA-2013-CS12130140-41175	04 August 2013	08 August 2013	Standard Class	CS-121301404	Chad Stewart	Consumer	Los Angeles	California	United States	Western U
31468 / CA-2013-CS12130140-41125	04 August 2013	08 August 2013	Standard Class	CS-121301404	Chad Stewart	Consumer	Los Angeles	California	United States	Western U
39455 / CA-2014-CL12220140-41121	29 March 2014	01 April 2014	Second Class	CL-122201404	Chris Cortes	Consumer	Los Angeles	California	United States	Western U
35281 / CA-2014-CC12370140-41828	08 July 2014	10 July 2014	Second Class	CC-123701401	Christopher Conant	Consumer	Los Angeles	California	United States	Western U
36300 / CA-2014-CC12370140-41820	08 October 2014	23 October 2014	Standard Class	CC-123701401	Cindy Chapman	Consumer	Los Angeles	California	United States	Western U
34853 / CA-2015-CL12565140-41788	02 December 2015	06 December 2015	Standard Class	CL-125651404	Clay Cheatham	Consumer	Los Angeles	California	United States	Western U
34718 / CA-2014-CL12565140-41788	28 May 2014	04 June 2014	Standard Class	CL-125651404	Clay Ludlow	Consumer	Los Angeles	California	United States	Western U
37305 / CA-2013-CL12565140-41668	30 December 2013	03 January 2014	Standard Class	CL-125651404	Clay Ludlow	Consumer	Los Angeles	California	United States	Western U
38129 / CA-2015-CK12565140-42059	24 February 2015	02 March 2015	Standard Class	CK-125651404	Clytie Kirby	Consumer	Los Angeles	California	United States	Western U
32793 / CA-2013-CL12670140-42174	19 June 2013	24 June 2013	Standard Class	CL-126701404	Craig Carreira	Consumer	Los Angeles	California	United States	Western U
38044 / CA-2013-CP1300140-41042	24 November 2013	28 November 2013	Standard Class	CP-13001404	Darren Powers	Consumer	Los Angeles	California	United States	Western U
36341 / CA-2014-DO13438140-41778	17 May 2014	22 May 2014	Second Class	DO-134381404	Deany Ordway	Consumer	Los Angeles	California	United States	Western U
32885 / US-2015-DV13465140-42167	12 June 2015	22 June 2015	Same Day	DV-134651404	Dianna Vitorini	Consumer	Los Angeles	California	United States	Western U

Figure 7 Power BI-Data Table (7)

4.2 DATA MINING

Data mining means companies/industries use to convert rough data into fruitful output. They employ this software to look for patterns in a broad amount of data so they can gain more information about the clients.

Data mining is such an algorithm that outputs the suitable information structure and work based on strategic marketing. Data mining algorithms can be embedded into actions related to the prototype system (Massaro, et al., 2019).



Figure 8 Data Mining(8)

4.3 DATA MANIPULATION

Business Intelligence implements various processes which can be considered as modeling, manipulation of data, cleaning data, modeling of the data, and managing reports for the data (Kisielnicki & Misiak, 2017). In BI, the oldest methods are not preferably used with the advanced growth in the manipulation of the data.



Figure 9 Data Manipulation(9)

4.4 DATA WAREHOUSING

Data Warehousing in business intelligence is used to characterize the operation of putting up all the organization's data in domestic and extraneous databases from multiple resources with the target of investigation and breeding prosecutable insights with the help of online BI tools. The main purpose of data warehousing is to provide help to the systems and businesses for making better decisions. It results in a decision maker and the methodologies for storing data (Pavkov, et al., 2016).

A data warehouse is the protected computerized repository of data by an enterprise or other industry. A data warehouse aims to build aggregation of ancient data that can be reborn and considered to administer fruitful insight into the organization's operations.

4.5 SAAS AND CLOUD ADOPTION

Organizations are rapidly going to cloud-based tools, such as Customer Relationship Management (CRM) applications (Salesforce), online file combinations, and repositories (Dropbox, Box). The combination of Saas and business intelligence will help the industries to

solve the problems based on cost-effectiveness and the recent software which pressurizes the resources and reduces the competition (Thompson & Van der Walt, 2010).

Cloud BI applications, like other cloud applications, are easy to use. Their deployment speed is very simple as they didn't require any hardware and software installations. Cloud applications are growing rapidly with the increase in several users in a business.

5. CONCLUSION

Overall, it can be concluded that Business Intelligence is such a technology that helps in visualizing the data and interpreting them more understandably.

It is an approach where raw data is analyzed and organized in a managed way to make the business smart. There are various benefits for the BI are easy decision-making process, upgrading of client satisfaction, and many more. Also, the power BI tool is preferred to MS Excel. There are various trends in business intelligence that are discussed in various points which are the techniques for managing the data and a secured way of storing it.

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FIGURE TABLE

Figure 1 Business Intelligence(1)

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Figure 2 Tools and Benefits(2) <https://www.nsktglobal.com/why-business-intelligence-bi-tools-will-revolutionize-modern-reporting-in-smes> (Accessed on 28th August 2022)

Figure 3 Disadvantages of MS Excel(3) <https://www.javatpoint.com/10-disadvantages-of-microsoft-excel> (Accessed on 29th August 2022)

Figure 4 Excel Vs Power BI(4) <https://www.excelcampus.com/power-tools/excel-vs-power-bi/> (Accessed on 29th August 2022)

Figure 5 Data Visualization(5) <https://boostlabs.com/blog/10-types-of-data-visualization-tools/> (Accessed on 31st August 2022)

Figure 6 Power BI-Report tab[6] <https://powerbi.microsoft.com/en-us/> (Accessed on 31st August 2022)

Figure 7 Power BI-Data Table (7) <https://www.amurta.com/blogs/the-art-of-data-mining-for-turning-data-into-insights/> (Accessed on 31st August 2022)

Figure 9 Power BI- Model Tab <https://xmind.app/m/d42D/> (Accessed: 1st September 2022)

Figure 8 Data Mining(8) <https://corporatefinanceinstitute.com/resources/knowledge/other/data-warehousing/> (Accessed on 1st September 2022)

Figure 9 Data Manipulation(9) <https://www.openpr.com/news/2585693/cloud-computing-market-2022-rising-best-technology-trends> (Accessed on 1st September 2022)