

University of Wales Trinity Saint David

5 BI TRENDS, HOW AND WHY?

Data Handling and Business Intelligence
LCBB5000

Lecture: Xavier Matieni

Student name: Daniela Georgieva

Student ID: 1915925

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Introduction

In an era where the retail landscape is rapidly evolving, the adage 'knowledge is power' has never been more relevant. The fulcrum of competitive advantage has shifted towards those who can adeptly interpret and act on information. This is where Business Intelligence (BI) enters as an indispensable ally for businesses striving to not only survive but thrive in a data-centric world.

BI encapsulates the tools and systems that play a vital role in the strategic planning process of the corporation. It acts as a conduit, transforming raw data into meaningful and useful information for business analysis purposes. The art of decision-making, once hinged on instinct and conjecture, is now underpinned by data-driven insights that allow for tactical and intelligent business decisions. This progression from gut-feel strategy to informed analysis is a fundamental shift in how businesses operate and succeed.

As a modern retail business, the torrent of data available to us is both an opportunity and a challenge. The operational terrain of our sector is dotted with multifarious touchpoints that capture data in real-time, presenting a tapestry of consumer behaviour, inventory levels, supply chain logistics, and competitive dynamics. The potential of this data remains inert unless leveraged through BI to guide our day-to-day and strategic decisions.

It is against this backdrop that the role of an operational manager transcends traditional boundaries. The expectation now is not only to manage and oversee but to innovate and predict. The insights offered by BI form the bedrock of such anticipatory management, allowing for a proactive rather than reactive approach to market shifts and consumer demands.

The intention of this report is to examine not merely the utility of modern BI trends, tools, and applications but to critically evaluate their transformative impact on our business operations. It will articulate why these resources are indispensable in sharpening our competitive edge and how they empower us, as decision-makers, to act with precision and foresight. In the following sections, we will justify the adoption of five modern BI trends, supported by real examples and data, to underscore their value proposition for our esteemed retail enterprise.

Why BI Trends, Tools, and Applications Are the Future for Business: A Critical Evaluation

The Forecasting Frontier: Predictive Analytics and AI

One of the most significant BI trends shaping the future of business is the integration of Predictive Analytics and Artificial Intelligence (AI). The predictive prowess of these tools can lead to a renaissance in inventory management, demand forecasting, and

customer experience. For instance, Amazon's anticipatory shipping model, powered by Predictive Analytics, has set a precedent in the retail industry. It enables the e-commerce giant to reduce shipping times by predicting what buyers are likely to purchase. While this has led to unparalleled efficiency and customer satisfaction, it also raises concerns over privacy and increases the risk of overstocking if predictions are not accurate.

Real-Time Decision-Making: The Edge of Agility

The velocity at which businesses can make decisions is drastically enhanced by Real-Time BI tools. These tools provide immediate insights, allowing companies to act swiftly in response to consumer behaviour and market trends. Retail chains like Target and Walmart leverage real-time data to adjust pricing, promotions, and stock levels on the fly. The agility gained here is a double-edged sword, however; it requires robust infrastructure and can lead to snap decisions without adequate deliberation, potentially alienating customers if perceived as too opportunistic.

The Integration Imperative: Comprehensive Data Platforms

Businesses are increasingly moving towards integrated BI platforms that provide a holistic view of the enterprise. These platforms, like Microsoft Power BI or Tableau, offer a comprehensive data analysis suite that consolidates disparate data sources. They facilitate better strategic planning and foster data democratization, where insights are accessible across the organization. The risk lies in implementation complexity and the assumption that access to data equates to understanding, which can overwhelm decision-makers without proper training.

Self-Service BI: Democratization of Data

The democratization of data through Self-Service BI tools empowers employees at all levels to engage with data analytics. This trend cultivates a data-centric culture and encourages informed decision-making throughout the organization. However, it poses a threat of data misinterpretation due to a lack of expertise and could lead to inconsistent data practices without proper governance.

Cloud Computing: Scalability and Accessibility

Cloud-based BI tools offer scalability and flexibility, allowing businesses to adjust resources based on demand. They reduce the need for substantial upfront capital investments in infrastructure, as seen with services like AWS or Google Cloud Platform. However, this reliance on third-party providers raises issues of data security and can lead to complacency in data management practices.

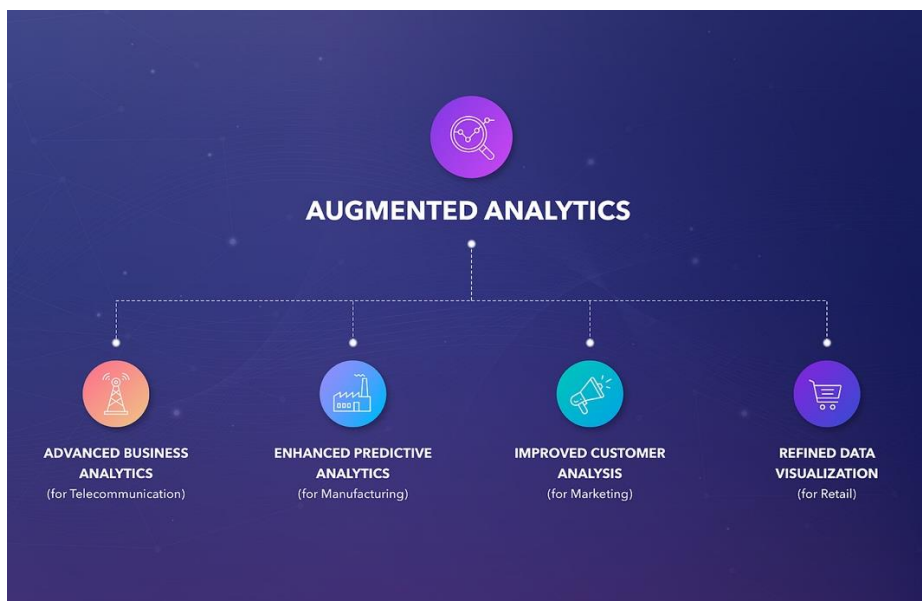
How BI trends (5 BI trends) can help to make timely and effective decisions



Data Visualization and Interactive Dashboards

Justification: Data visualization tools significantly reduce the time needed to analyse complex data, enabling quicker decision-making (Few, 2009). According to a study by Aberdeen Group, managers who utilize visual data discovery tools are 28% more likely to find timely information than those who rely solely on managed reporting and dashboards (Aberdeen Group, 2012).

Example: Tools like Tableau have been noted for their impact on business decision-making speed and accuracy (Chen, Chiang, & Storey, 2012).



Augmented Analytics

Justification: Gartner predicts that by 2023, over 33% of large organizations will have analysts practicing decision intelligence, including decision modeling (Gartner, 2020). This indicates a trend towards embracing AI to enhance analytical capabilities for better decision-making.

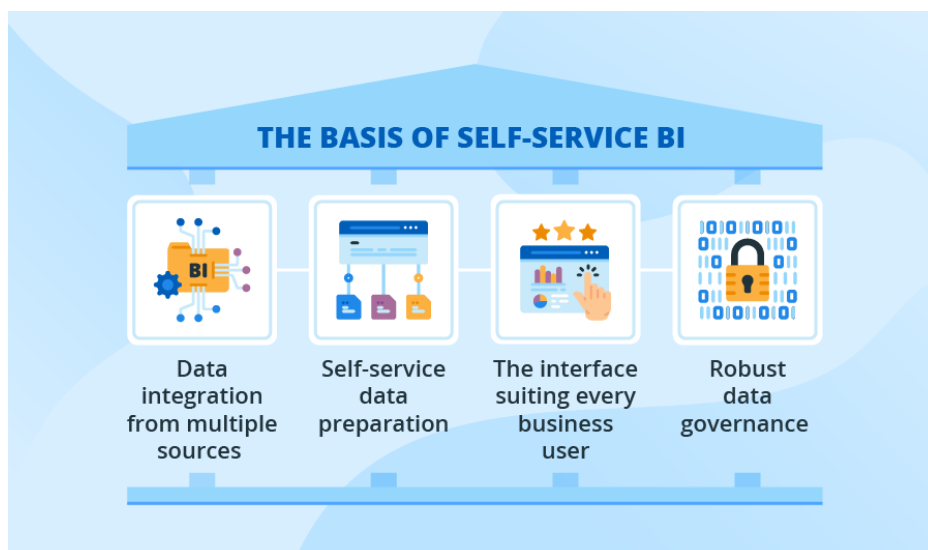
Example: Salesforce's use of AI for customer relationship management reflects a growing academic consensus on the benefits of augmented analytics (Davenport, Harris, & Morison, 2010).



Mobile BI

Justification: The capability to make decisions from any location via mobile BI is identified as a key factor in operational efficiency (Yeoh & Popović, 2016). Mobile BI can improve the responsiveness of decision-makers, which is crucial in dynamic market conditions.

Example: The evolution and adoption of mobile BI are supported by its positive impact on business agility (Pirttimäki, 2007).



Self-Service BI

Justification: Self-service BI tools are transforming the way non-technical users interact with data, leading to a more informed decision-making process across all levels of an organization (Imhoff & White, 2011).

Example: The growth of self-service analytics is documented in academic research, highlighting its role in empowering end-users (Kosara & Mackinlay, 2013).



Collaborative BI

Justification: Collaboration in BI is recognized for its ability to integrate collective knowledge in decision-making, leading to more comprehensive and accurate business strategies (Lau & Watson, 2011).

Example: Collaborative features in modern BI tools have been emphasized in the literature for improving decision-making efficiency (Shollo & Kautz, 2010).

Conclusion

In essence, Business Intelligence is not just an enabler but a driver of success in modern retail. By harnessing BI trends such as data visualization, augmented analytics, mobile accessibility, self-service, and collaboration, businesses can make smarter, swifter decisions in a dynamic market. The prudent adoption of BI is therefore not optional; it's essential for businesses seeking to maintain a competitive edge and make decisions that are both timely and effective. As we continue to navigate a data-driven world, BI's role in shaping strategic business decisions only grows more pronounced.

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