

Data-Driven Decision Making: Its Role in Modern Business

Data-driven decision making can be defined as the collection, analysis, and interpretation of data to make strategic decision making of an organization (Gade, 2021).

With the introduction of big data, the data driven decision making gives businesses the possibility of improving the decision-making process, optimizing the process, and allowing employers to find new approaches to succeed. Using big data and data-driven decision-making, the organization can predict client behaviour through behaviour analysis or take faster decisions because one of the most interesting aspects of the data-driven decision-making is its speed (Hadi, 2025).

Considering the speed enabled by the data-driven decision making, one important usage is in terms of predictive maintenance.

The predictive maintenance based on decision-making allows the creation of real-time predictions based on data that produce proactive recommendations for maintenance and a plan to adapt to delay or reduce the impact of a predicted failure (Bousdekis et al., 2021).

Data-driven decision-making presents advantages such as improving the strategic alignment of a business, promoting innovation, making a business more competitive, and producing real growth. The business can also face some disadvantages, such as fragmented data systems, poor data quality, and cultural resistance to analytics adoption (Morales-Arevalo and Rodriguez, 2025).

In conclusion, data-driven decision making with the integration of big data can be used in different sectors and is a good tool for businesses because it allows them to improve enterprise performance, make faster decisions, and reduce costs. In addition, it allows

for obtaining more precise predictions and predicting future events, increasing the quality of the strategic decision. However, the organization needs to invest in modern infrastructure and promote a data culture among its employees. It is necessary to highlight that in the future, data-driven decision-making will be more central in business strategies and will improve innovation capability.

Reference list

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