

UNDERSTANDING BUSINESS DATA ANALYTICS

INTRODUCTORY PAPER

In the data-driven economy, providing value means, being able to translate data rapidly into value-add information.



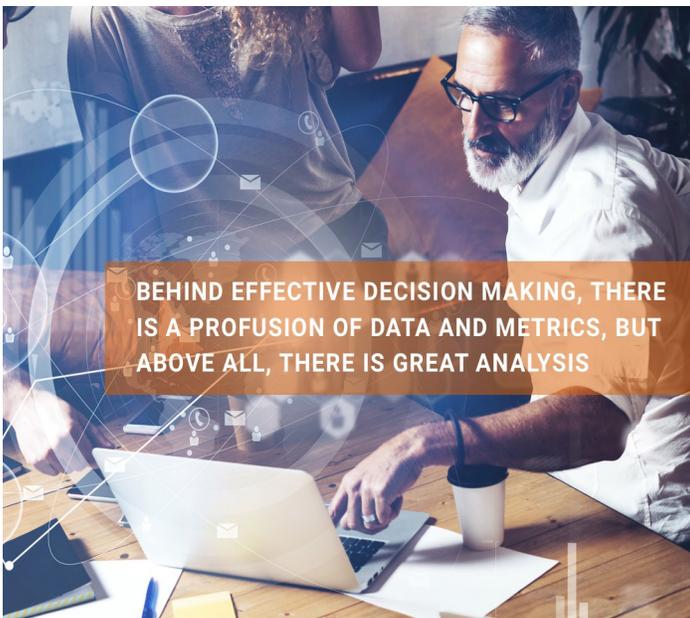


UNDERSTANDING BUSINESS DATA ANALYTICS

SHEDDING LIGHT ON THE FUNDAMENTALS



THE BRIEF



This paper introduces business data analytics concepts and how they relate to the practice of business analysis.

Business data analytics has become an area of great interest for organizations, as it has been recognized as a means by which organizations can obtain valuable insights from data; supporting more informed business decision making.

As a result, more organizations are investing in business data analytics as a means to deliver on their strategic imperatives, innovate, and obtain competitive advantages in their marketplace.

Such investments are driving the demand for more skilled professionals with business data analytics knowledge and experience.

WHAT IS BUSINESS DATA ANALYTICS ?

Business data analytics is a practice by which a specific set of **techniques, competencies** and **procedures** are applied to perform the **continuous exploration, iteration, and investigation** of past and current business data, for the purposes of obtaining insights about a business that can lead to improved decision making.

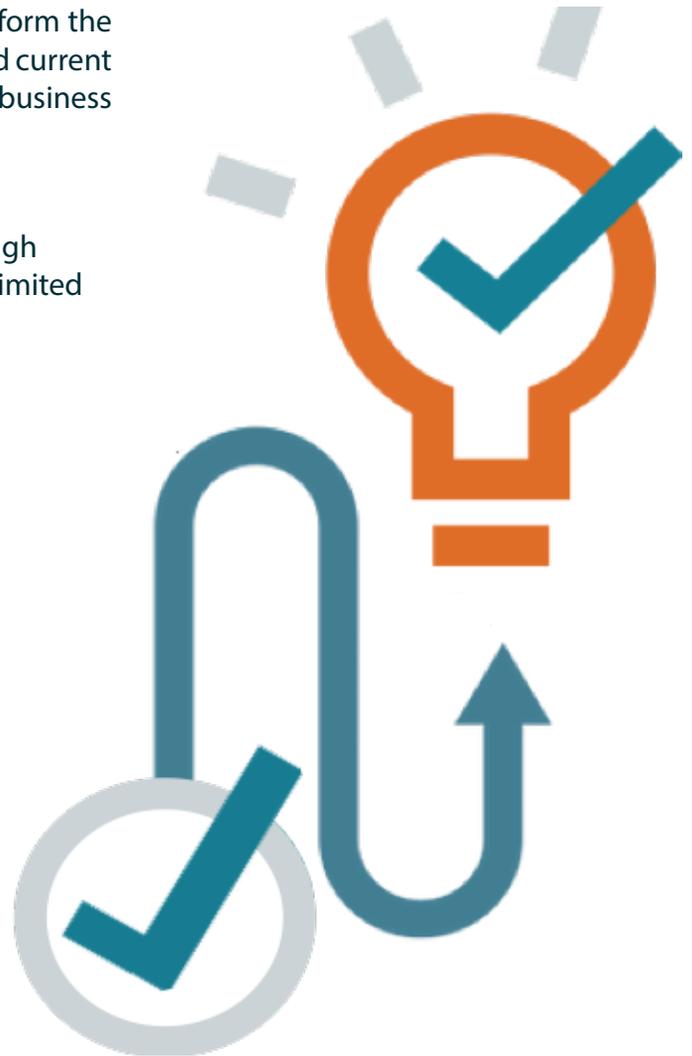
Business data analytics can be defined more specifically through several perspectives. These perspectives include, but are not limited to business data:

- movement,
- capability,
- data-centric activity set,
- decision making paradigm, and
- set of practices and technologies.

Business Data Analytics as a Movement

Business data analytics as a movement involves a management philosophy or business culture of evidence-based problem identification and problem-solving.

Evidence through data is the driver of business decisions and improvement. Evidence is not chosen to support a preconception or point of view; instead, all available applicable evidence is used to make informed business decisions.



Business Data Analytics as a Capability

As a capability, business data analytics includes the competencies possessed by the organization and its employees. Business data analytics competency is not solely limited to the ability of an organization to complete analytical activities.

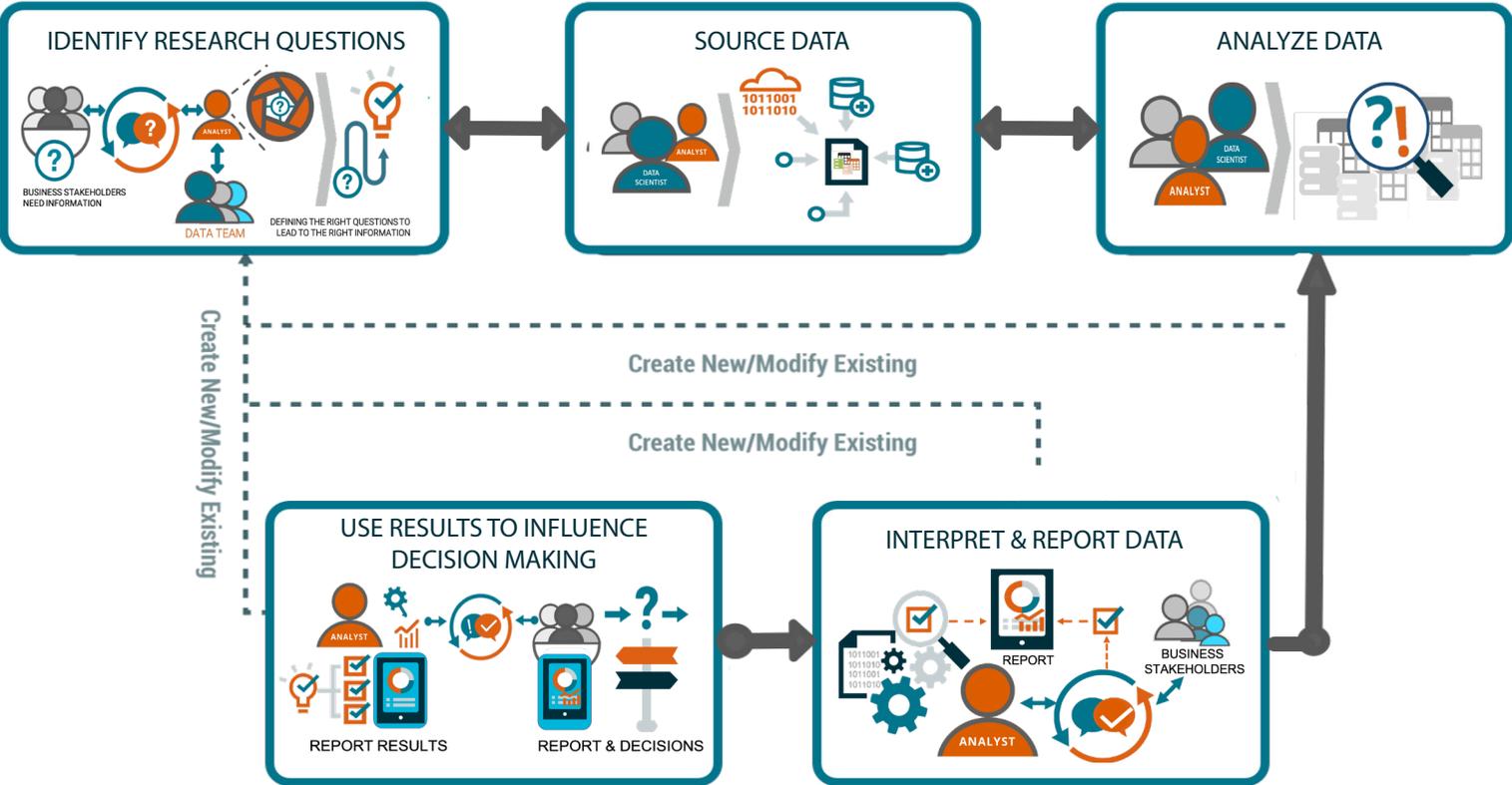
It also includes capabilities such as innovation, culture creation, and process design.



Business Data Analytics as a Set of Practices and Technologies

Business data analytics is also considered a set of practices and technologies required to perform the analytics work itself. These practices can be discussed in the context of five business data analytics domains:

BUSINESS DATA ANALYTICS DOMAINS RELATIONSHIP



Business Data Analytics as a Data-Centric Activity Set

As an activity set, business data analytics includes the actions required for an organization to use evidence-based problem identification and problem-solving. Business data analytics involves six core data-centric activities:

- accessing,
- examining,
- aggregating,
- analyzing,
- interpreting, and
- presenting results.



Business Data Analytics as a Decision-making Paradigm

As a decision-making paradigm, business data analytics is a means for informed decision making. Through this lens, business data analytics is considered the tool of making decisions through the use of evidence-based problem identification and problem-solving.

Business Data Analytics Objectives

Organizational leaders frequently make business decisions based on personal expertise and instinct.

Business data analytics removes cognitive and personal biases from the decision making process by using data as the primary input for decision making. When performed well, business data analytics can create a competitive advantage for the organization.

For example, algorithms based on weather, soil, and other conditions have been found to be more accurate in predicting the price and quality of red wine after it has been aged compared to the wine experts who influence the decision making based on their own cognitive biases as to what they enjoy and do not enjoy in a wine.

The objective of business data analytics is to explore and investigate business problems or opportunities through a course of scientific inquiry. The specific objectives of business data analytics are dependent on the type of analysis that is being performed.

A LinkedIn Report conducted in 2018 ranked Business Analysis amongst the Most In-Demand Hard Skills of 2019 along with Analytical Reasoning*

* <https://business.linkedin.com/talent-solutions/blog/trends-and-research/2018/the-most-in-demand-hard-and-soft-skills-of-2018>

TIME /QUESTION TYPE	WHAT	WHY
PAST	DESCRIPTIVE What happened?	DIAGNOSTIC Why did it happen?
PAST /FUTURE	PREDICTIVE What is likely to happen based on past trends?	
FUTURE	PRESCRIPTIVE What should happen if we take a certain path? What is the best outcome given the uncertainty?	

There are four types of analytics methods

- DESCRIPTIVE** Provides insight into the past by describing or summarizing data.
- DIAGNOSTIC** Explores why an outcome occurred.
- PREDICTIVE** Analyzes past trends in data to provide future insights.
- PRESCRIPTIVE** Utilizes the findings from different forms of analytics to quantify the anticipated effects and outcomes of decisions under consideration.

Business Analysis and Business Data Analytics

The terms business data analytics and business analysis are frequently used interchangeably. However, there are significant differences between the two terms. Business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders. Comparatively, business data analytics is focused on the process of data analysis.

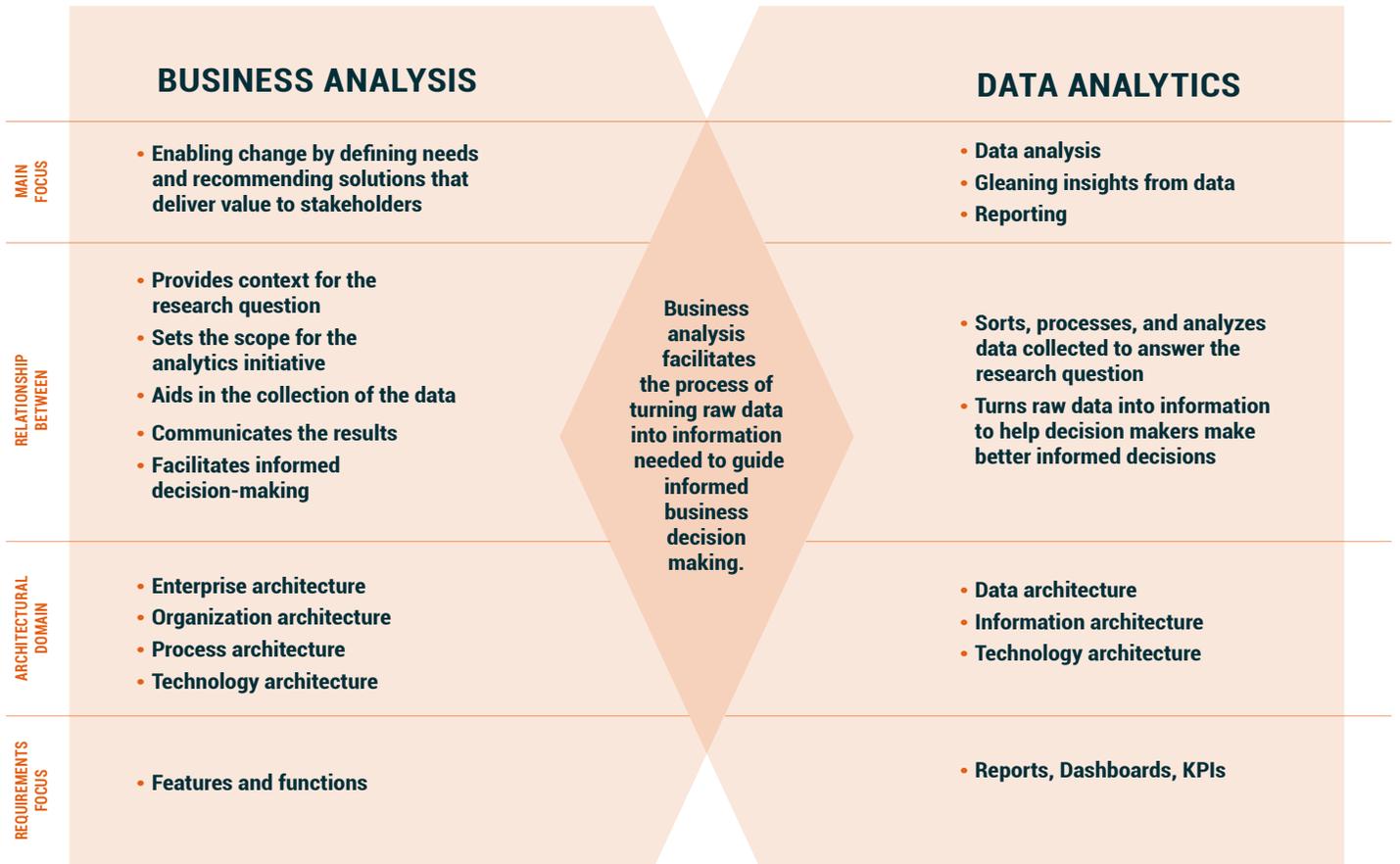
Business analysis provides the business context for business data analytics. Business analysis defines the focus for the research questions being asked and sets the scope before data is collected. Business analysis also aids in the collection of data and the implementation of the data collection processes.

Business data analytics is used to sort, process, and analyze the data once assembled.

Once the analysis of the collected data is complete, business analysis activities are performed to interpret the results obtained from analytics; transforming information into business decisions.

Business analysis activities are performed to communicate the results of business data analytics and facilitate the implementation of informed business decisions made as a result of what is learned from analyzing the data collected.

How Business Analysis and Business Data Analytics Intersect



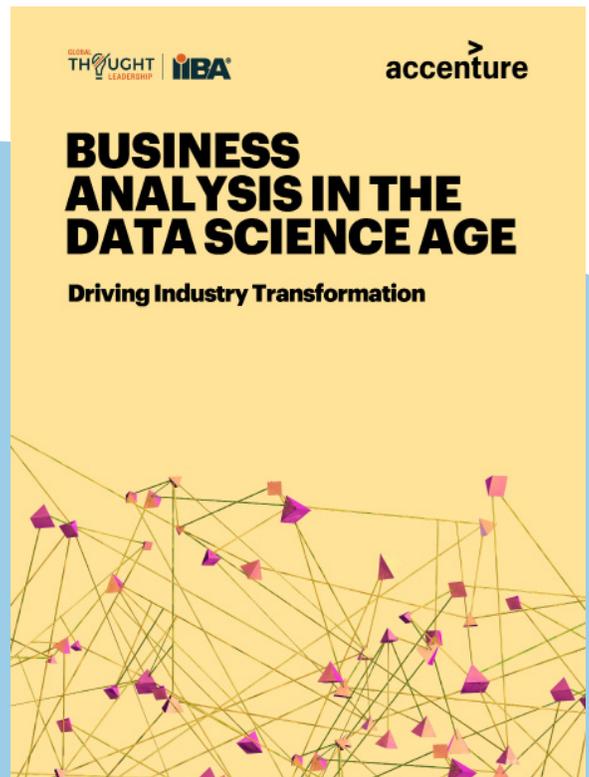
BUSINESS ANALYSIS IN THE DATA SCIENCE AGE

Driving Industry Transformation

The first paper of the series focuses on how with the advent of data science, several unexplored avenues could be experimented with, to fuel drug discovery, prevent hospital readmission rates, and drive better patient outcomes.

To support this, BA professionals need a paradigm shift in the way they approach requirements management and view almost everything with a “data” angle.

They should know the possibilities offered by technology; be able to evaluate its utility, applicability, and the benefits in specific business situations; and elicit and communicate requirements in a very creative manner to implement a solution for a business problem.



BUSINESS DATA ANALYTICS

Get Better Insights

Guide Better-informed Decision Making



In the data-driven economy, providing value means, being able to translate data rapidly into valuable insights, and to communicate this information effectively, and with relevance.

DO YOU HAVE WHAT IT TAKES?

To learn more, visit: iiba.org/bda



WANT TO READ MORE ABOUT IT?

We have selected our top 5 and most relevant publications on the subject:

- Harvard Business Review. HBR Guide to Data Analytics Basics for Managers. Harvard Review Press. 2019. Provost, Foster and Tome Fawcett.
- Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking. O'Reilly. 2013. Holsapple, C., A. Lee-Post, and R. Pakath.
- A unified foundation for business analytics. Decision Support Systems Volume 64 Issue C. 2014. 130-141. Hubbard, D.W.
- How to Measure Anything: Finding the Value of Intangibles in Business. Wiley. 2014. Davenport, T. H., Harris, J. G., and R. Morison.
- Analytics at Work: Smarter decisions, better results. Harvard Business Press. 2010.

THERE'S SOMETHING exciting happening!

In the data-driven economy, organizations are looking to drive greater value from the immense data they have access to individuals who have the skills and knowledge to source, interpret and translate data into valuable insights can support more effective decision making.

To learn more about Business Data Analytics, visit iiba.org/bda

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