



HOW THE EMERGING ROLE OF **BUSINESS DATA ANALYST** UNLOCKS MORE VALUE FROM AN ORGANIZATION'S DATA

For most organizations, data, now more plentiful, available, and current than ever, fuels decision-making. Data analytics inform the development and selection of strategies and tactics covering every aspect of business from product design, to logistics, to salesforce deployment, to advertising placement. All industry segments – manufacturing, healthcare, utilities, professional services, hospitality, etc. have realized the value of their investments in analytics and are looking for ways to increase the scope of its adoption and use.

Several market research studies examining the growth rate of the adoption of data analytics by businesses ranging in size from global enterprises to SMB's forecast the business analytics market to grow at annual compound rates at least in the low double-digits, with some much higher. These growth rates are reflected in the demand for people with data analysis skills. In its job outlook covering 2019 to 2029, the U.S. Bureau of Labor Statistics (BLS) forecasts growth in Data Analyst jobs at 25%. BLS stats indicate 11.5 million Data Science job openings will be created by 2026. The demand for data-related jobs is growing at eight times the rate than the average for other occupations.

This widespread commitment to exploring methods to apply data analysis techniques to improve business outcomes is behind the emergence of a new position — the **Business Data Analyst**.

BUSINESS ANALYST + DATA ANALYST = BUSINESS DATA ANALYST

This new role, the Business Data Analyst, can be thought of as the merger of the Business Analyst's skillsets with those of the traditional Data Analyst. Without getting too deep into the weeds regarding job descriptions, educational requirements, and/or specific software skills of the Business Analyst compared to the Data Analyst, it's useful to understand some of the more significant differences between the two.

The Business Analyst is more often assigned to a functional unit within the business and not generally tied closely with the I.T. department. Their analytical focus is often on identifying, characterizing, and validating the organization's customers or end-users' business needs. They help convert customer requirements and preferences into product/service features and functionality. Although this role is not "hands-on" with the organization's data – the Business Analyst applies their analytical skills to identify evidence from existing summary data to spot trends or other indicators that suggest new or modified tactics and strategies. They are usually not statisticians, nor do they have programming skills but possess strong analytical, mathematical, and presentation/communication skills. Their degree is generally in some business discipline.

As the title implies, the Data Analyst usually has a more technical orientation than the Business Analyst and is typically a member of the I.T. team. Traditionally, their role is to perform the analyses and hand-off their results to the organization's non-IT or functional units. The focus of their analyses might touch on supporting customers and end-users, but it might also be on improving internal processes, supply chain logistics, financial parameters, etc. They usually possess statistical skills, have database development (SQL) experience, know software development, and are familiar with the most current data mining and presentation tools. Their degree is often in computer science, statistics, economics, or business – usually a field that requires strong mathematical and analytical aptitudes.





Many businesses have concluded that by merging these two separate roles into one, they would eliminate any disconnect between the data analyzed and the needs of the organization and streamline the process of transforming massive and growing amounts of data into evidence-supported and targeted business activities. This underlies the creation of the role of a Business Data Analyst.

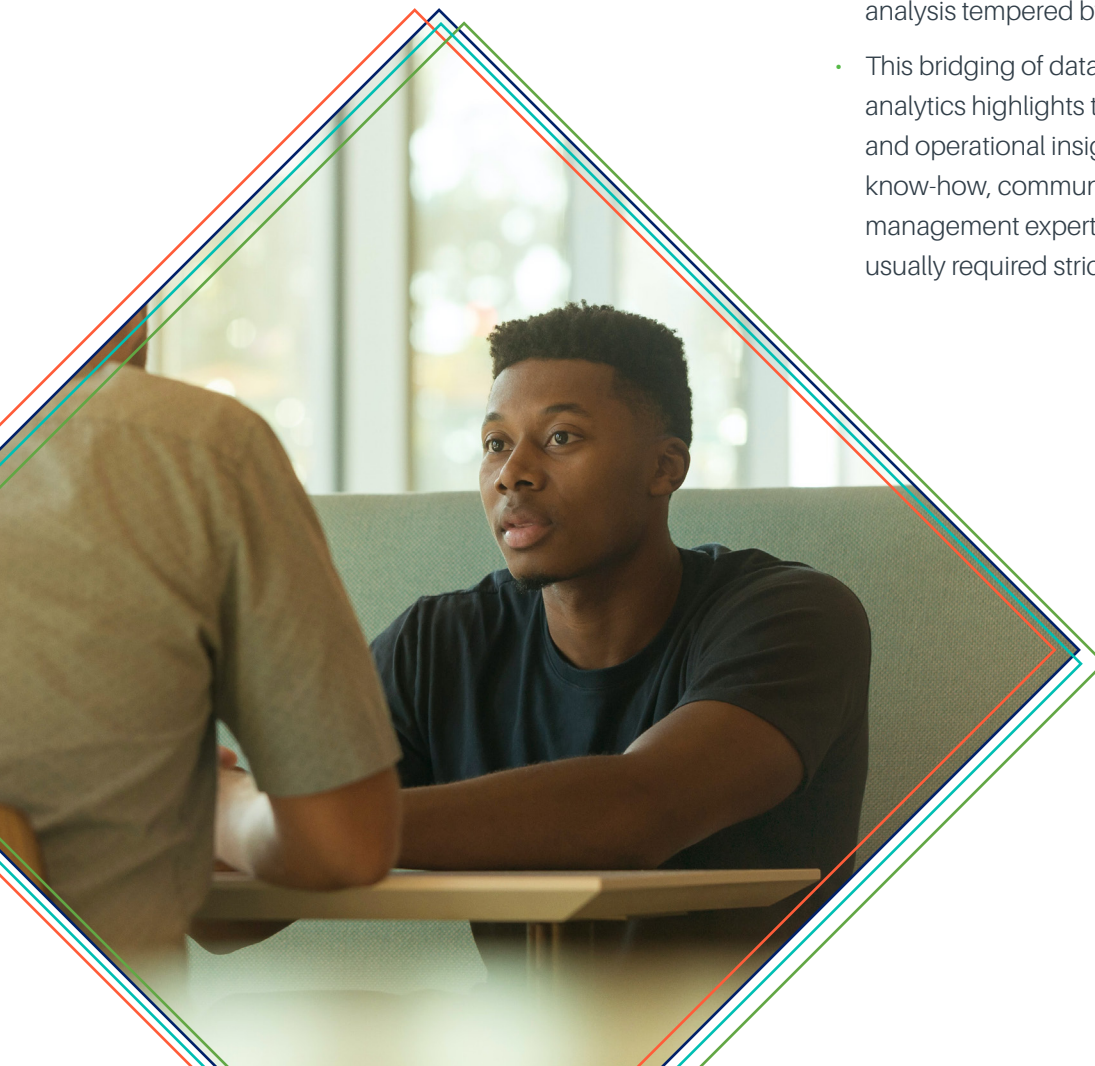
The Business Data Analyst connects the organization's data and related technology to the business domain. Wearing their "*data hat*," this individual performs those activities associated with gathering, storing, and analyzing the organization's data – selecting the software and other data-related resources, identifying the information to be obtained from the data, and conducting the analyses. Then, wearing their "*Business Analyst hat*," they apply the data analysis results in concert with their knowledge of the organization's market, operations, customers, etc., to recommend detailed business strategies and actions. Another way to think of this role is that the Business Data Analyst identifies a business problem or situation and can dig into the data (similar to a Data Analyst) to understand the situation/problem better.

With the merged responsibilities of the two roles, the person who fills the role of Business Data Analyst must have some of the statistical/mathematical/coding skills of the Data Analyst and the business acumen of the Business Analyst. Although given the current shortage of both Data Analysts and Business Analysts, finding a Business Data Analyst might rival the hunt for a unicorn, the growth in the demand for such a role will help drive the increase in supply.

WHY THIS ROLE COMBINATION NOW?

Additional factors are underlying the fusing of these two roles in addition to the benefits of aligning analysis to the organization's business needs:

- The data analysis tools, which not long-ago required skills in both coding and high-level statistical analysis, are now low-code or no-code tools requiring only configuration, not coding, making them more accessible.
- These tools provide a starting point from which to extract information that, when coupled with knowledge of the specific business and environment, can be used to align I.T. initiatives to business outcomes. A misalignment that until now has frustrated many organizations.
- Augmented analysis technologies further enhance and empower the Business Data Analyst. These enabling technologies include A.I. and machine learning techniques that facilitate data preparation and insight generation/explanation. They augment the work of the analyst by automating many facets of data analysis and management.
- The tendency to use teams of technology specialists integrated with product owners to lead new product/service development, product enhancement, supply chain logistics activities, marketing/sales strategies, etc., necessitates the need for data-driven analysis tempered by business knowledge.
- This bridging of data and business analytics highlights the need for context and operational insights requiring business know-how, communication skills, project management expertise, - talents above those usually required strictly by the Data Analyst.



According to a Tech Pro Research study, 70% of companies either have a digital transformation strategy or are working on one. Digital transformation is fueling the need for organizations to fully use the wealth of data they now capture. Competitive pressures, the need for speed and agility, the drive to stay ahead of the technology curve, and the ability to identify and adapt to changing business conditions – all require new thinking and approaches about how to get the most value from their data. Organizations able to apply their data to take advantage of new and emerging technologies such as blockchain, virtual banking, A.I., RPA, no-code/low code software development – will realize improved efficiencies, increased revenues, enhanced market standing, and reduced costs – in addition to other benefits. Forrester Research estimates that by 2021 data-driven businesses will take as much as \$1.8 trillion per year from competitors that have fallen behind.

The magnitude of the data and the inevitable growth in the quantity of data ensure that the need for data analysis tools and skills will continue to grow. More than 2.5 exabytes of data are created every day (an exabyte is a 1 followed by 18 zeros). 1.7MB of data is created every second by every person during 2020. By 2025, it's estimated that 463 exabytes of data will be created each day globally – that's the equivalent of 212,765,957 DVDs per day. Where is all this data coming from? Here are a few eye-catching stats:

Organizations drowning in data need people with the skills and business insights to figure out how to capture, store, and use this data to provide real value.



Nearly 4 billion people now use the internet.



Google processes more than 40,000 searches every second.



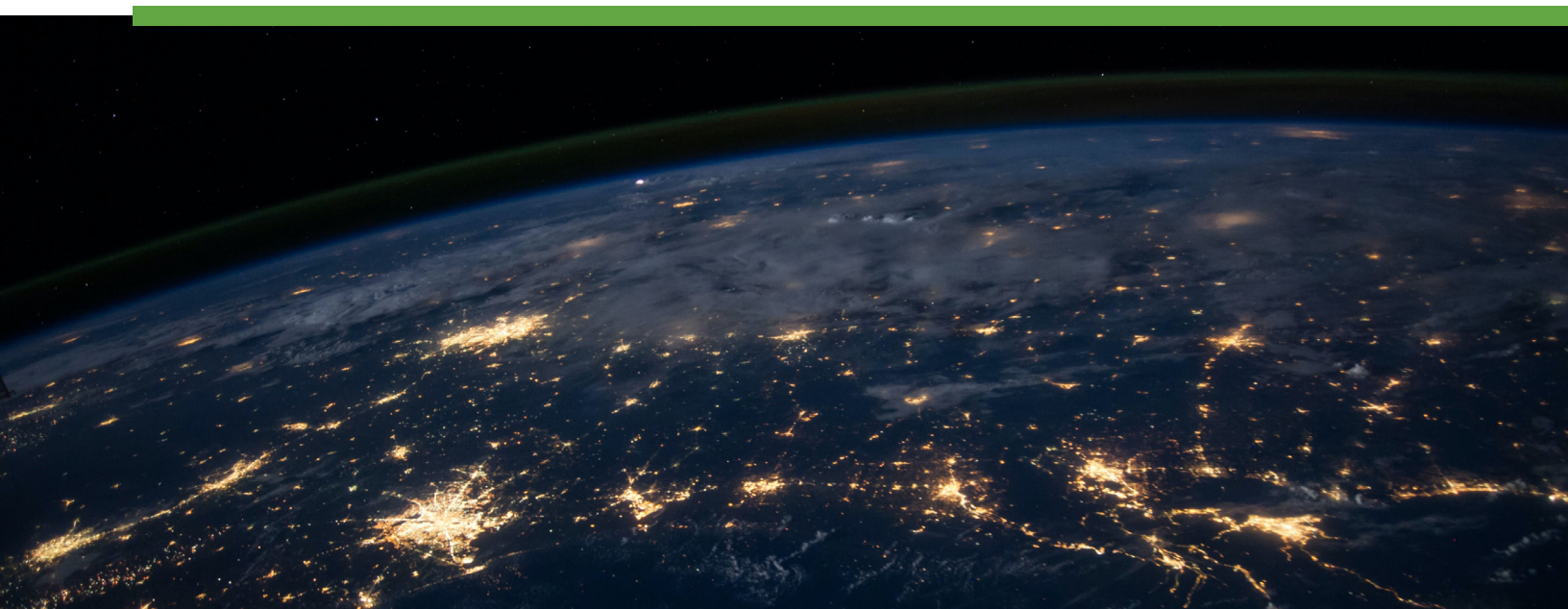
1.5 billion people are active on Facebook every day.



Every minute 16 million text messages are sent.



Every second—127 new IoT devices are connected to the web. By 2025, it is estimated that there will be more than 21 billion IoT devices.

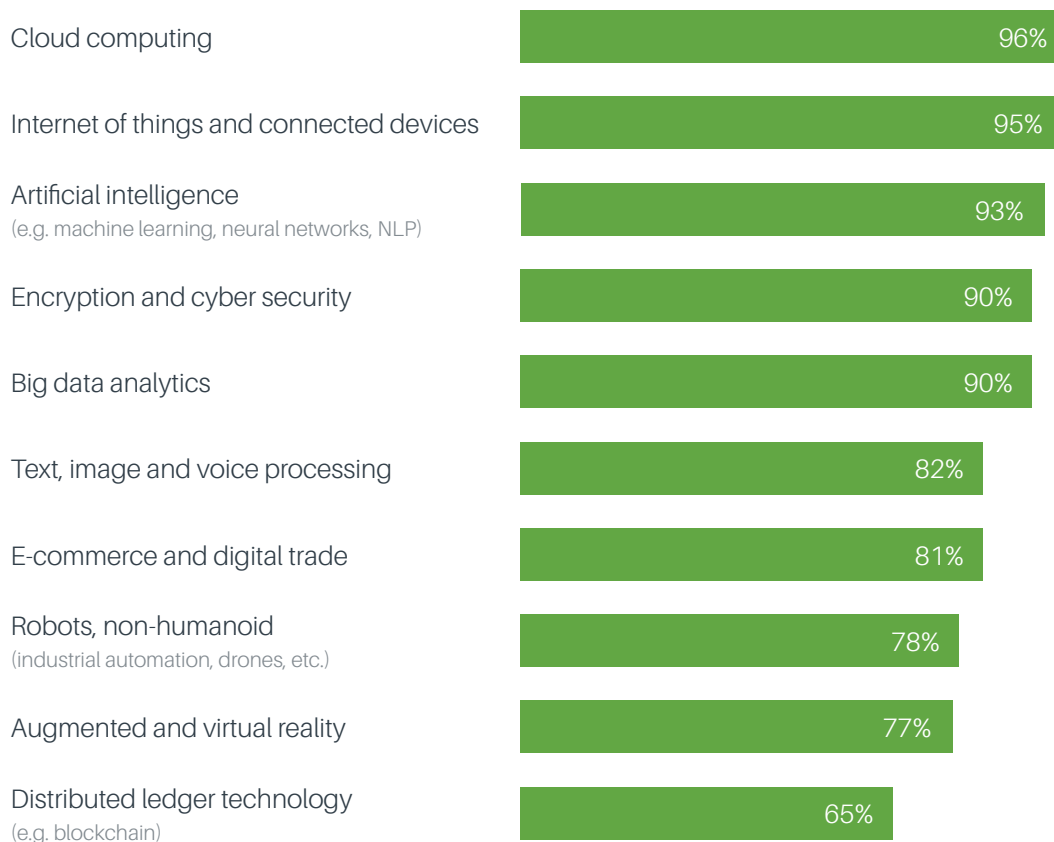


THE GROWING DEMAND FOR DATA/BUSINESS TALENTS AND INSIGHT?

As anyone who has recently hired a Business or Data Analyst can attest, the demand for such talents significantly outstrips supply. The chart below taken from the World Economic Forum Future of Jobs Report 2020 offers insights into the adoption of technology by U.S. companies and the growing importance of technologies associated with data analytics. By 2025, nine out of ten U.S. companies will either “likely” or “very likely” have adopted big data analytics technology.

Technology adoption

Share of companies surveyed



A glance at the following chart, which lists in order of magnitude the top 20 job roles in increasing demand globally through 2025, indicates that the competition for talent with analytical skills is only going to grow.

Increasing Demand

01 Data Analysts and Scientists	11 Project Managers
02 AI and Machine Learning Specialists	12 Business Services and Administration Managers
03 Big Data Specialists	13 Database and Network Professionals
04 Digital Marketing and Strategy Specialists	14 Robotics Engineers
05 Process Automation Specialists	15 Strategic Advisors
06 Business Development Specialists	16 Management and Organization Analysts
07 Digital Transformation Specialists	17 Fintech Engineers
08 Information Security Analysts	18 Mechanics and Machinery Repairers
09 Software and Applications Developers	19 Organizational Development Specialists
10 Internet of Things Specialists	20 Risk Management Specialists

Source: Future of Jobs Survey 2020, World Economic Forum

If one looks at the top 15 skills of 2025, again, those skills related to data analytics and the creative use of analytics will be highly sought after:

Top 15 skills for 2021

01 Analytical thinking and innovation	09 Resilience, stress tolerance and flexibility
02 Active learning and learning strategies	10 Reasoning, problem-solving and ideation
03 Complex problem-solving	11 Emotional intelligence
04 Critical thinking and analysis	12 Troubleshooting and user experience
05 Creativity, originality and initiative	13 Service orientation
06 Leadership and social influence	14 Systems analysis and evaluation
07 Technology use, monitoring and control	15 Persuasion and negotiation
08 Technology design and programming	

Source: Future of Jobs Survey 2020, World Economic Forum

Given that the Business Data Analyst's role is now emerging and requires both the data skills of the Data Analyst and the creative insights of the Business Analyst, finding people with this combination of talents is going to be difficult, especially over the short-term. A recent survey conducted by Analytics Insight estimates that worldwide by 2021, there will be more than 3 million new job openings in data science/analytics. Fulfilling the demand for Business Data Analysts is going to be challenging even for large enterprises. The SMB market will have to get creative to acquire the analytics skills they need and/or maintain a competitive advantage.

A Real-World Example – How a Business Data Analyst Uncovered New Revenue Sources

A fintech company wanted to explore the possibility of generating additional revenue by offering value-added services to a particular segment of its clients. These clients use one or more of the fintech company's SaaS products, and the idea hinged on analyzing the existing data from these solutions to provide insights into their customers' behaviors and preferences. Additionally, by leveraging advanced analytics, the fintech company would attain insights into how they might offer additional value and differentiate themselves from their competition.

The fintech company turned to their Business Data Analysts for this two-part endeavor:

Part One — Data Discovery consisted of validating the assumption that the Product Solutions data offer actual value and determine how to deliver metrics/insights to the client in a usable fashion. This would entail assessing future architecture options, conceptual design/mock-up of data dashboards, creating advanced analytics use cases, and recommended next steps.

Part Two — Reporting Design & Dashboard Prototyping entailed designing dimensional models that support clients' reporting and analysis, specifying the source data from Product Solutions and mapping to the database tables/fields, developing future state architecture recommendations, and creating working prototype dashboards.

Because of this work, the clients now have access to valuable knowledge gleaned from their existing Product Solutions that offer insights into their customers' preferences. This has led the clients to better understand their own performance metrics and gain further understanding of their customers. The fintech company's Business Data Analysts applied their data analytics skills along with their business-based insights to help assess and create a new revenue stream and a differentiated competitive advantage for their employer.

OVERCOMING THE BUSINESS DATA ANALYST TALENT SHORTAGE

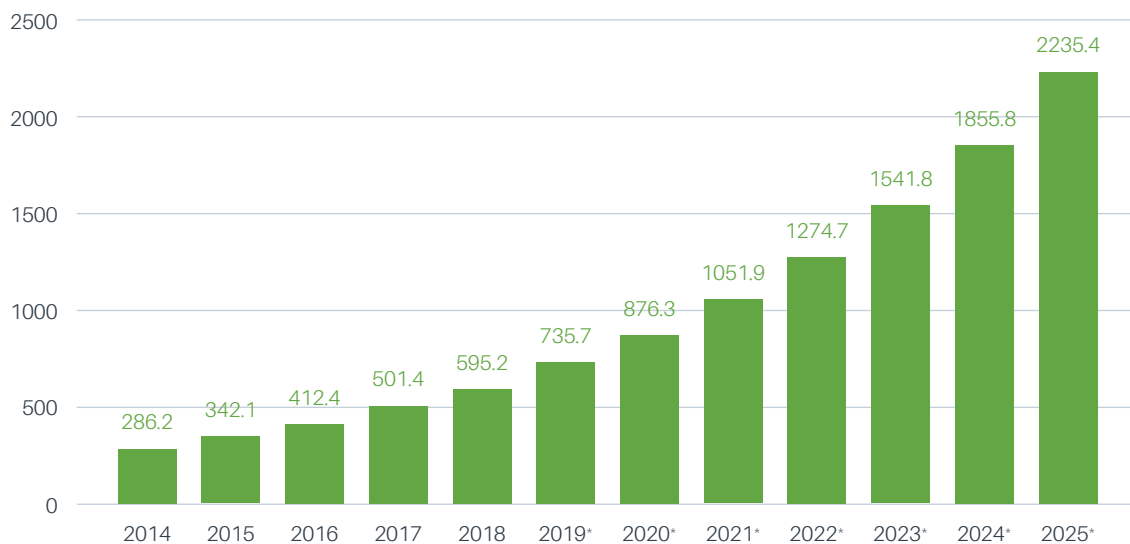
There is no single path to becoming a Business Data Analyst. From an educational standpoint, one approach would be for an individual to have a bachelor's degree in statistics, math, or computer science then to attain an MBA in a program structured to build business-focused, data-driven analytical skills. It does appear that more business schools are offering curriculum tailored to fill the growing demand for these skills.

Outsourcing

The graph below illustrates the growing use of outsourcing to meet data analytics needs. The data from this study from Statista indicates strong continued growth in analytics outsourcing at least until 2025. It's understandable why organizations wrestling with the challenges of hiring Business Data Analysts might be tempted to outsource this functionality, but doing so can pose long-term problems. Not only does outsourcing this function preclude the organization's building internal expertise in mining their data for business insights, but it assumes the outsourcing organization has deeper knowledge of the organization's business than their own staff. Additionally, most organizations would have some trepidation in giving access to their most sensitive proprietary data to an outside organization.

Data analytics outsourcing market revenue in the United States from 2014 to 2025

(in million U.S. dollars)



Source: Statista, 2020

Use of staffing firms to find talent to hire

Organizations frustrated in their efforts to find and hire Business Data Analysts would do well to consider partnering with a staffing firm with recruiting specialists knowledgeable in data and analytics and the related technologies. Not only will they be able to apply their extensive national networks to source candidates, but their insight into analytics will also allow them to assess whether or not a candidate has the skills and/or aptitudes fitted to the job requirements. A staffing firm can also help develop staff retention plans to reduce the turnover of highly sought-after talent.

Training/Reskilling existing staff

The current imbalance in supply and demand for talent in several tech fields drives more organizations to upskill or reskill their existing workforce. The before mentioned study by the World Economic Forum found that in the U.S., 94% of business leaders expect their employees to pick up new skills on the job and that 95% of employers plan on retraining existing employees.

Response to shifting skill needs

Share of companies surveyed



Many organizations might be fortunate enough to already employ a technically savvy person with the interests and aptitudes who, with training, would make a highly qualified Business Data Analyst.

A NEW ROLE OF GROWING IMPORTANCE

It's clear that as the amount and sources of business data continue to grow along with the risk from competitors' finding ways to create competitive advantage(s) from their data, the Business Data Analyst skillset will be highly sought after. Those organizations open to new thinking about sourcing, recruiting, retaining, and reskilling/upskilling programs will increase their probability of acquiring the skills they need to transform their raw data into practical business strategies and tactics.

