

INNOVATION IN THE USE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR BUSINESS INTELLIGENCE

EMA Top 3 Report and Decision Guide for Analytics Leaders



ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) REPORT
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IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

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Executive Summary

Leaders who are guiding their organizations on a journey toward the insight-driven enterprise struggle to keep up with the speed of technology innovation. The success of analytics in the last decade has fueled a hunger for more. The use of artificial intelligence (AI) and machine learning (ML) in data and analytics platforms is a game-changer. Organizations constrained by limitations of time, cost, and resources will see a breakthrough with new capabilities across the entire information supply chain.

Why You Should Read This Research Report

CIOs, CDOs, CAOs, business intelligence leaders, analytics leaders, business analysts, and line of business leaders should read this research report to gain key insights into the following areas:

- Understand the importance of using AI and ML in business intelligence platforms
- Identify the priority and potential value created by the use of AI and ML in business intelligence
- Characterize the Top 3 vendors and additional leaders in the use of AI and ML for business intelligence

How to Use This Research Report

It is important to recognize that every organization is different, with a unique set of analytics and business requirements. As such, EMA strongly recommends that each organization conduct its own market evaluation to identify solutions that will best match its business needs. This guide will assist with this process by providing information on key considerations to review during the selection process, as well as a “short list” of vendors that offer solutions to meet specific requirements.

For each category identified, EMA provides the following insight:

- **Priorities** – EMA research identifies priorities for technology capabilities in a given set of products, around a specific innovation. It is important to understand what matters to the market in general, and more important to understand your own priorities.
- **Adoption** – EMA research identifies trends in adoption for each of the categories represented, as well as adoption for a set of capabilities in each category. Adoption trends can serve as a benchmark for your organization’s maturity and as a guide for your technology capability roadmap.
- **Drivers** – EMA research identifies the overall drivers for broad innovation areas, like AI, as well as drivers specific to each of the categories covered in this innovation area.

- **Value** – EMA research identifies estimates on the value being created by the broad innovation area. Value is measured in terms of money savings, time savings, resources savings, risk avoidance, and rate of innovation increase.
- **Top 3 and Leading Solution Providers** – Top 3 vendors are selected for their comprehensive coverage of the different capabilities covered in this research. Leading solution providers are selected for their extensive coverage of the different capabilities covered in this research. Leaders did make it into the top three, but they stand out significantly compared to other vendors in this area. It is highly recommended that organizations seeking to adopt solutions addressing a particular innovation area investigate each of the corresponding Top 3 vendors and leaders to determine which ones best meet their unique requirements.

Introduction to Artificial Intelligence and Machine Learning

The terms “artificial intelligence” and “machine learning” are highly overused; however, they are loaded with potential for enterprises pursuing the full value of digital transformation. To cut through the hype, it is important to understand their meaning and use in the world of data and analytics.

Artificial intelligence is the ability of machines to think like humans. It stems from the idea that given enough data and compute power, machines will be able to think and learn using mathematical simulation of the human brain. Thinking like humans includes concepts like self-learning, reasoning, deciding, correcting, communicating, and—most importantly—increasing in overall intelligence.

According to the Harvard University SITN blog, in an article titled “[The History of Artificial Intelligence](#),” by Rockwell Anyoha, artificial intelligence was first documented by “...Alan Turing, a young British polymath who explored the mathematical possibility of artificial intelligence. Turing suggested that humans use available information as well as reason in order to solve problems and make decisions, so why can’t machines do the same thing? This was the logical framework of his 1950 paper, ‘Computing Machinery and Intelligence,’ in which he discussed how to build intelligent machines and how to test their intelligence.”

EMA TOP 3

EMA PRESENTS ITS TOP 3 AWARDS TO VENDORS
THAT ARE BEST ALIGNED WITH TODAY’S
CUSTOMER PRIORITIES AND PAIN POINTS



AI was conceptualized in the 1950s. It was attempted in the 1960s, 70s, and 80s, but failed to make it to general markets due to insufficient funding and compute power. AI research flourished in the private sector during the 1990s and early 2000s as compute power continued to expand exponentially. The explosion of big data in the early 2010s led to the resurgence of AI around 2015.

In 2019, as people are bombarded by the term “artificial intelligence,” most of the technology labeled as AI is actually “machine learning.” Machine learning is the data-driven use of advanced algorithms to simulate small parts of human thinking and decision-making processes. Artificial intelligence should, theoretically, be able to increase in intelligence on its own. Most of the smart technology in the market today learns based on the input of more, diverse data and the fine-tuning of advanced mathematical algorithms.

There is still great potential for the use of advanced machine learning to automate decision-making, communicate, and complete tasks normally undertaken by humans. For the purpose of this research, EMA will use both AI and ML to refer to the combined use of both data-driven and self-learning technology.

The Use of AI and ML in Analytics and Data Management

The next major shift in the analytics, business intelligence, and data management markets is coming from the use of AI and ML across the entire information supply chain.

Along with using machine learning to find the next-best offer, companies can now point algorithms at modern data platforms to find links between data sets, automate data preparation, or find breaches in data governance. Technology also exists to automate the heavy lifting of analytic exploration and explanation. All of this is possible by way of a revolution in machine learning, powerful processing, and the availability of enhanced technical, semantic, and operational metadata within data landscapes.

Vendors that excel in the use of AI and ML in their analytics, business intelligence, and data management platforms will create significant differentiation and barriers to entry that will change the face of all industries. Companies that invest in these platforms will also experience an acceleration of insight-driven decisions and gain a competitive advantage.

In this research, EMA provides insight into how the use of AI and ML is already influencing the analytics market and how it is impacting the companies already using these advanced tools. Based on the research, EMA is identifying the Top 3 vendors and additional leaders in each of five categories:

1. Data preparation and integration
2. Data warehousing and big data
3. Business intelligence
4. Analytics and data science
5. Data cataloging, master data management, and data governance

This research report focuses on the business intelligence sector.

Resource and Time Savings Drive Overall Usage of AI-Enabled Analytics

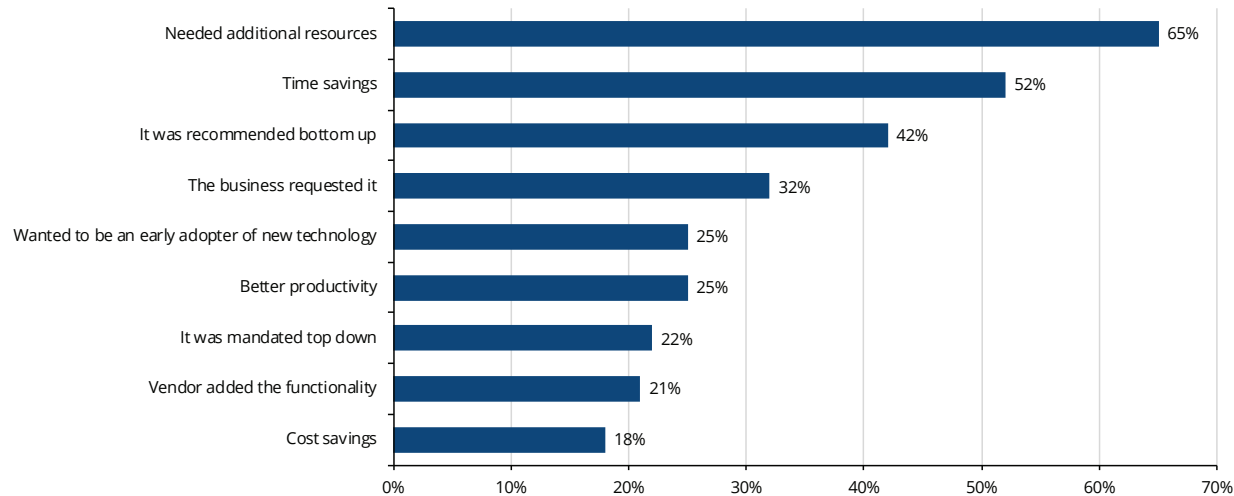
As the use of data and analytics continues to penetrate deeper into employee, customer, and partner organizations, the number of users grows exponentially. As a result, most IT organizations are unable to keep up with demand. Both data and business analysts are constantly being asked to do more with less. Resource constraint is the number-one driver for the use of AI and ML across the entire information supply chain. AI-enabled analytics promises to scale up data and analytics programs to impact more business decisions with fewer resources.

The number-two driver for the use of AI-enabled analytics and data management tools is time savings. Time savings is well aligned with the proliferation of digital transformation and the need for a smart response to real-time engagement. The digital world produces more data and requires more insight to be delivered within minutes or seconds of when that data is produced. Everything is moving faster.

65% OF RESPONDENTS INDICATED THAT THE NEED FOR ADDITIONAL RESOURCES IS THE MAIN DRIVER BEHIND THE USE OF AI-ENABLED ANALYTICS.

52% OF RESPONDENTS INDICATED THAT THE NEED TO SAVE TIME IS A MAIN DRIVER BEHIND THE USE OF AI-ENABLED ANALYTICS.

What are the drivers behind your decision to use tools with built-in AI and machine learning?



Sample Size = 155, Valid Cases = 155, Total Mentions = 465

Value Creation is the Primary Outcome for the Use of AI-Enabled Analytics

Value created using AI and ML in analytics and data management platforms can be accurately calculated in individual business cases, or estimated by users closely involved in both business and IT. This EMA research focuses on estimations from both business and technical resources intimately involved in the use of AI-enabled analytics.

#1

THE OPPORTUNITY FOR INNOVATION IS THE #1 VALUE BEING CREATED USING AI IN ANALYTICS AND DATA PLATFORMS.

Greatest Value Creation: Innovation and Time Beat Cost, Resources, and Risk Avoidance

EMA asked participants to rank five areas in which the use of AI in business intelligence and data management was creating value for their organizations. Innovation opportunity was the number-one answer for both business and technical respondents. The use of AI-enabled analytics frees IT resources for more innovative projects. On the business side, executives and line of business managers continue to recognize the importance of innovation as core to their success.

1. Innovation opportunity
2. Time savings
3. Money savings
4. Resource savings
5. Risk avoidance

Rate of innovation increasing everywhere

Eighty-eight percent of participants are seeing an increase in the rate of innovation as a result of AI-enabled analytics and data.

Time savings up to 60,000 person hours annually

More than half of respondents indicated that they are saving 5 to 12 hours per person weekly by using AI-enabled data and analytics. In addition, the average participant had between 50 and 100 people in their organization using AI-enabled data and analytics. Using a 50-week work year, that is an annual time savings of 12,500 to 60,000 people hours.

Cost savings up to \$5,000,000 annually

EMA asked participants to estimate the value generated using AI in analytics and data platforms. An average of 14% of the participants indicated that they did not know the amount of value created. The remainder, 86% of respondents, provided the following insight on the rate of innovation, time savings, cost savings, resource savings, and revenue generation.

Resource savings up to 50 headcount annually

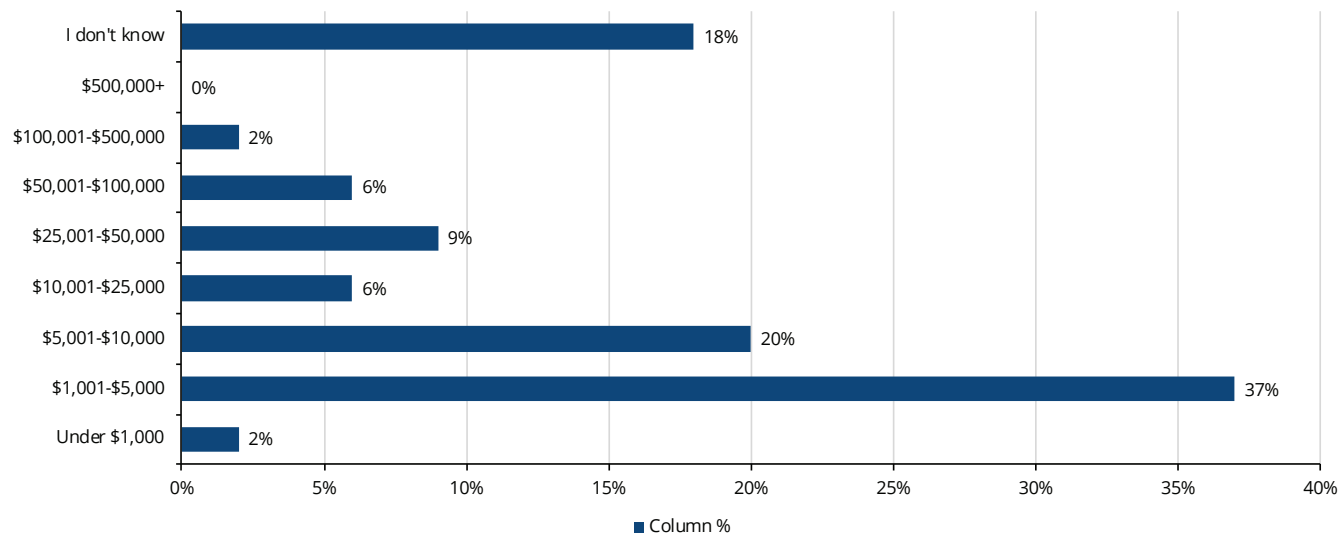
Forty-two percent of participants are freeing up 2-10 headcount as a result of AI-enabled analytics and data. Twenty-five percent of participants are freeing up 11-50 headcount as a result of AI-enabled analytics and data.

Using a conservative figure of \$100,000 per headcount for the average data and analytics professional, resources savings have a cost savings equivalent of \$200,000-\$5,000,000 per year.

Revenue generation up to \$120,000 annually

Monthly revenue generation remains an opportunity area for the use of AI-enabled analytics and data. Revenue generation is more difficult to calculate, since much of it recovered from previously missed opportunities or new opportunities unearthed using AI and ML in data and analytics. For this reason, 59% of participants took a very conservative view, estimating monthly revenue increases under \$10,000 monthly, or under \$120,000 annually.

What is the total amount of revenue increased monthly by using AI in your data and analytics tools?



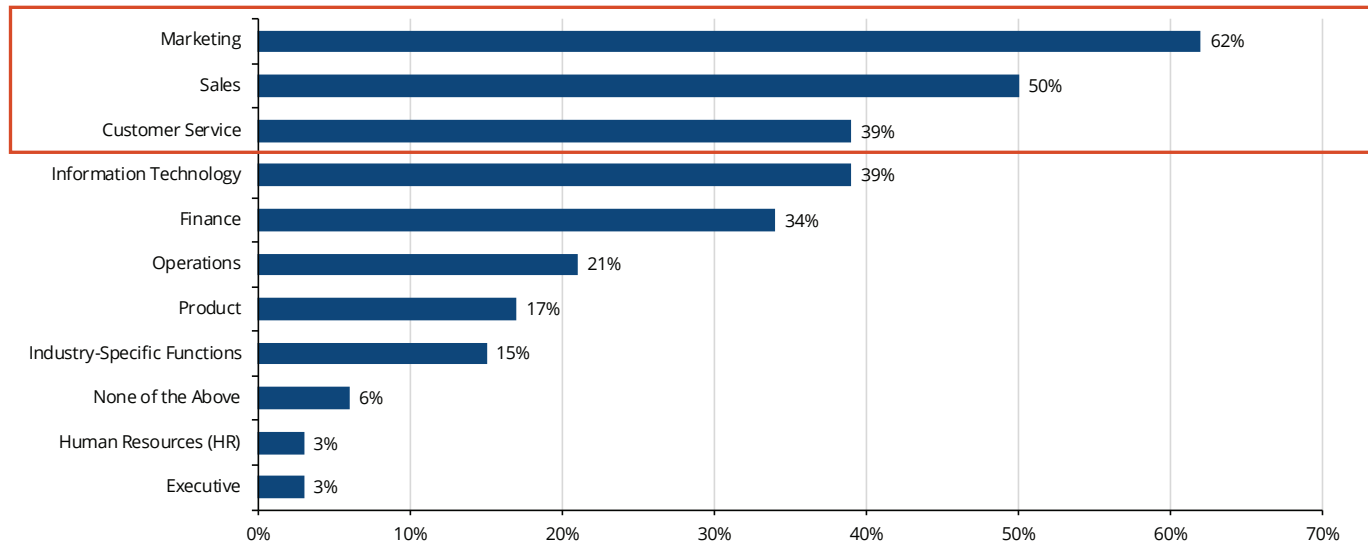
39% OF ORGANIZATIONS ARE SAVING \$25,001 TO \$50,000 USING AI-ENABLED DATA AND ANALYTICS (CALCULATED BASED ON SAVED TIME).

23% OF ORGANIZATIONS ARE SAVING OVER \$50,000 (CALCULATED BASED ON SAVED TIME).

Customer is the #1 Business Area Impacted by the Use of AI-Enabled Analytics

There are no surprises in the priority of business areas currently benefiting most from the use of AI in analytics and data management. The customer domain has been the top priority since the early days of data warehousing back in the mid-90s. Topping the list for the business impact of AI-enabled data management is marketing at 62%, sales at 50%, and customer service at 39%. It is reasonably understood that the customer matters most.

Which business areas are currently benefiting the most from the use of AI in analytics and data management?



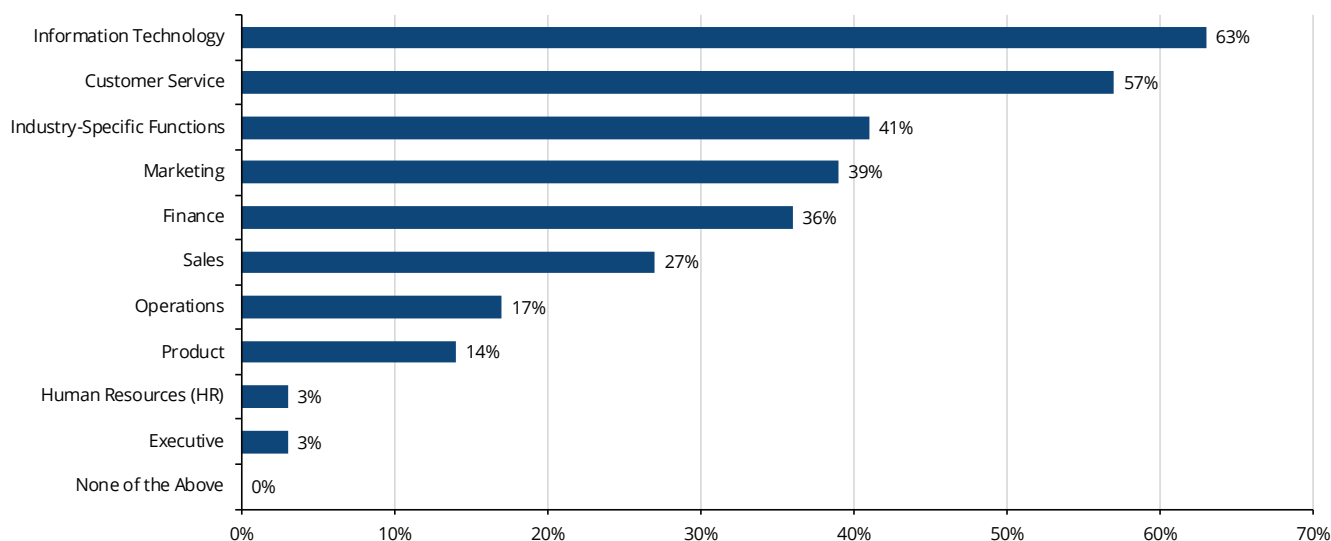
Sample Size = 155, Valid Cases = 155, Total Mentions = 445

Information technology and industry-specific functions are the up and coming candidates for the business impact of AI-enabled analytics and data management. Information technology teams will benefit from AI enablement because of their ability to do more with less and to increase their impact on the business by scaling their analytics programs. Industry-specific functions make sense as a future beneficiary of AI

enablement because of the maturity of digital transformation. Most industries now have significant investments in the Internet of Things (IoT), mobile apps, social engagement, and internet presence. All of these digital expansion areas will benefit from greater speed and efficiency in analytics.

#1 THE CUSTOMER-FACING BUSINESS AREA IS THE #1 BENEFICIARY OF AI-ENABLED ANALYTICS AND DATA MANAGEMENT.

Which business areas are most likely to benefit in the future from the use of AI or machine learning in analytics and data management?



Sample Size = 155, Valid Cases = 155, Total Mentions = 465

The Use of AI and ML in Business Intelligence

EMA sees AI as a game-changer for the fragmented business intelligence market. From the days of online analytical processing, through the invention of the dashboard, and on to the explosion of data visualization, the barrier to entry for business intelligence has been low. A low barrier to entry is precisely why there are almost 100 different business intelligence vendors today.

Several market leaders emerged in the early days of business intelligence. Then, there was a shift in the market with new visualization entrants surpassing the market share of some traditional vendors. New leaders and contenders have emerged from both big data and in-memory technology trends. However, the overall barrier to entry in the business intelligence market has remained low for the past 15 years. AI is the technology that will provide a significant barrier of entry and determine the big winners in the coming years.

#1

THE #1 PRIORITY FOR THE USE OF
AI AND ML IN DATA MANAGEMENT IS
BUSINESS INTELLIGENCE.

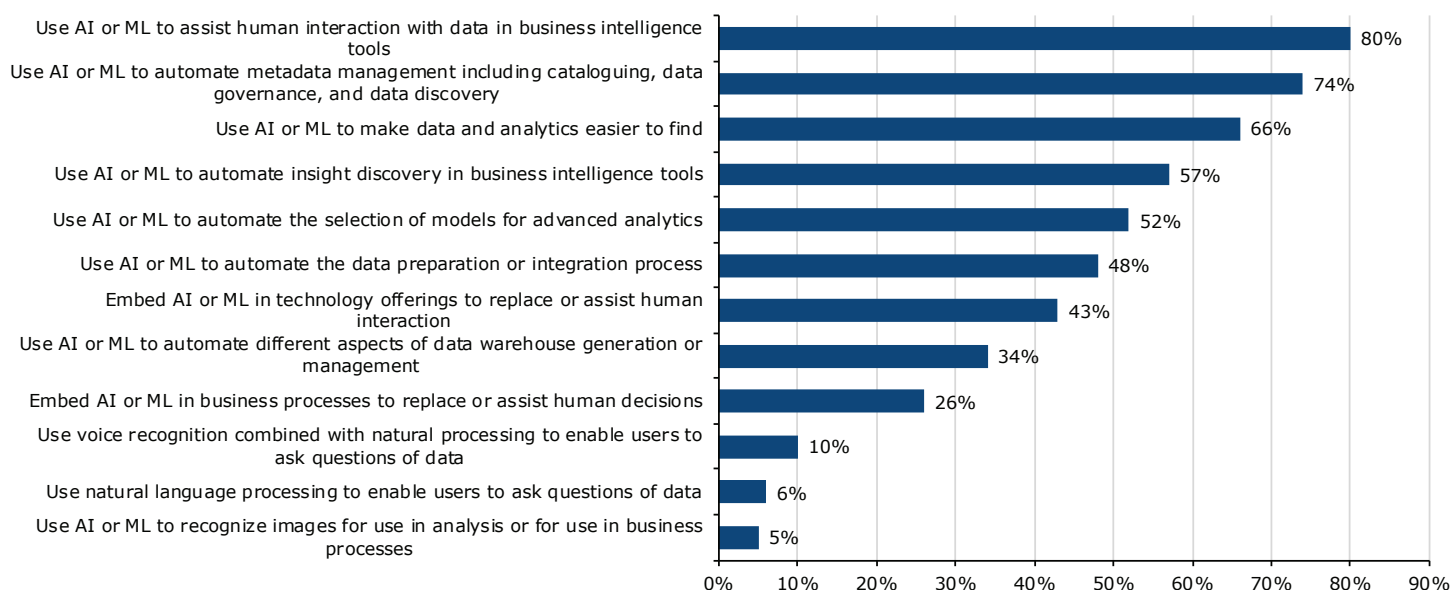
Business Intelligence is the #1 Priority for the Use of AI and ML in Analytics and Data Management

When asked, "Which of the following uses of AI or ML for analytics and data management are most important to your organization?" 80% of participants answered, "Use AI or ML to assist human interaction with data in business intelligence tools." This was the number-one answer, placing the use of AI and ML in business intelligence as the top priority for 2019.

The third and fourth priorities also focus on automated capabilities in business intelligence. Sixty-six percent answered, "Use AI or ML to make data and analytics easier to find," and 57% answered, "Use AI or ML to automate insight discovery in business intelligence tools."

Because of their direct impact on business decisions and results, AI-enabled business intelligence tools should be a priority for analytics leaders at all levels. AI enablement provides organizations with the ability to overcome the constraints of legacy or less-automated BI implementations. Organizations that are first to implement in their industries can expect an advantage over their competitors.

Which of the following uses of AI or machine learning for analytics and data management are most important to your organization?



Sample Size = 155, Valid Cases = 155, Total Mentions = 775

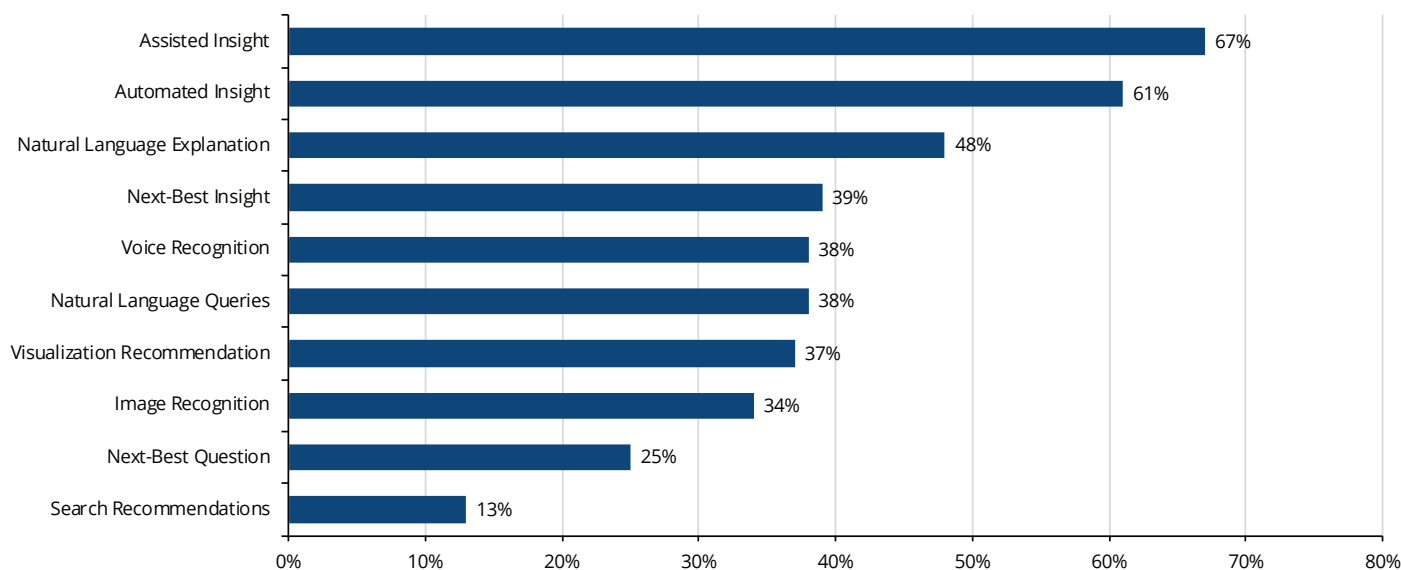
Capability Priorities for the Use of AI and ML in Business Intelligence

When asked, “Which AI capabilities in your business intelligence tools are most important to you?” the top two answers were assisted and automated insight. For both of these prioritized capabilities, business intelligence vendors are now using ML to recommend insight for both data and business analysts. In a typical, modern BI scenario, algorithms find new insight and display the recommended dataset in an optimal visualization with a natural language explanation. These capabilities save time and resources for the delivery of valuable information to all decision-makers in the organization.

67% OF PARTICIPANTS CHOSE “ASSISTED INSIGHT” AS A MOST IMPORTANT CAPABILITY FOR AI-ENABLED BUSINESS INTELLIGENCE.

61% OF PARTICIPANTS CHOSE “AUTOMATED INSIGHT” AS A MOST IMPORTANT CAPABILITY FOR AI-ENABLED BUSINESS INTELLIGENCE.

Which AI capabilities in your business intelligence tools are most important to you?



Sample Size = 155, Valid Cases = 155, Total Mentions = 620

The following are the definitions of the capabilities given in the EMA research:

Assisted Insight – The ability to trigger machine learning algorithms to gain insight from within the context of the business intelligence tool.

Automated Insight – Insight that is provided automatically to business intelligence users from machine learning algorithms that run at all times without user triggers.

Natural Language Explanation – The explanation of assisted or automated insight in plain language.

Next-Best Insight – Automated recommendation of the next-best insight for the user, based on the context of the business intelligence tool.

Natural Language Queries – The ability to type in or speak in questions in plain language in order to run a query and return results.

Voice Recognition – The ability of business intelligence tools to understand spoken commands to operate the system or run queries. This ability is often combined with natural language queries.

Visualization Recommendation – Automated recommendation of the best visualizations for each particular dataset or a query that is returned.

Image Recognition – The ability to recognize images using machine learning.

Next-Best Question – Automated recommendation of the next-best question to be asked by the user, based on the context of the business intelligence tool.

Search Recommendations – automated recommendations or auto-fill recommendations within the search capability of the business intelligence tool.

Capability Adoption for the Use of AI and ML in Business Intelligence

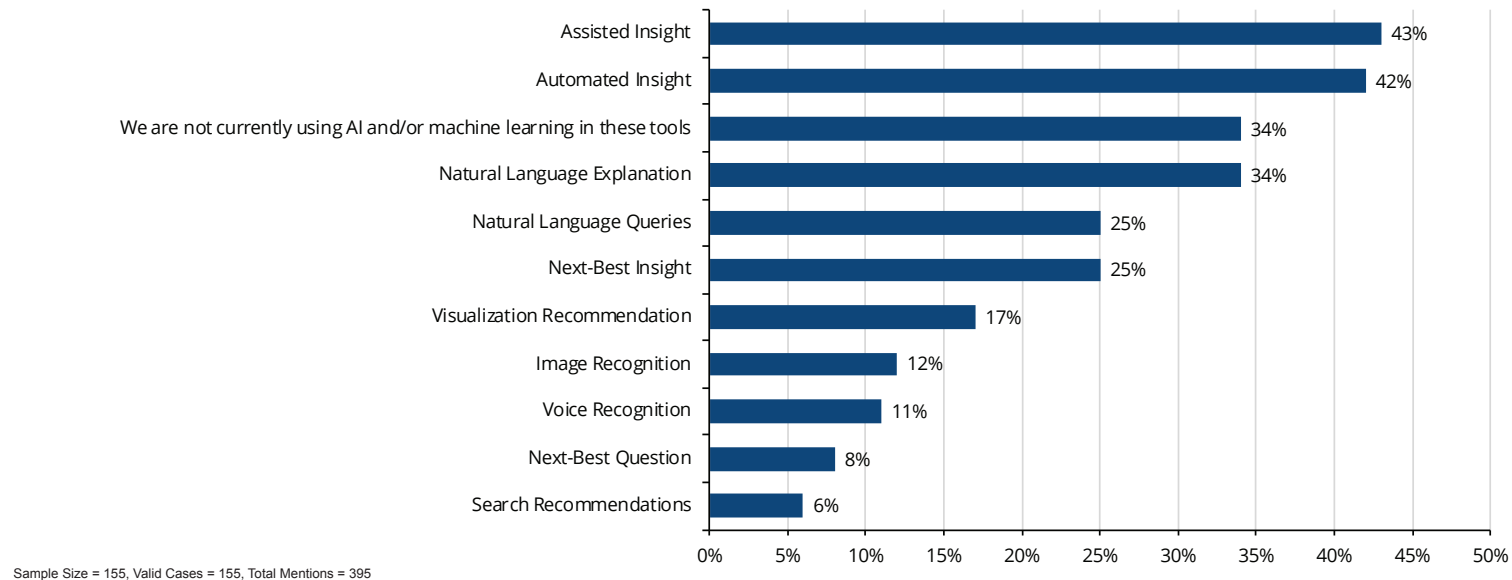
Along with the importance of AI-enabled business intelligence, adoption in this category is further along than all other areas of analytics and data management. Forty-three percent of participants are already using assisted insight, and 42% are already using automated insight.

Business intelligence also far outpaces other categories of data management for their adoption of AI and ML. For every other category in this research, the number-one answer was, “We are not currently using AI and/or machine learning in these tools.”

Across all other categories, an average of 50% of respondents are not currently using AI enablement. For business intelligence only 34%, or one-third, indicated that they are not using AI enablement.

Based on direct involvement with AI enabled business intelligence vendors and end-user organizations, EMA believes that the number of organizations using assisted and automated intelligence is much lower than what these survey results show. It is possible that respondents consider other capabilities, like visualization recommendation, as a type of assistance or automation.

Which AI capabilities are you currently using in your business intelligence tools

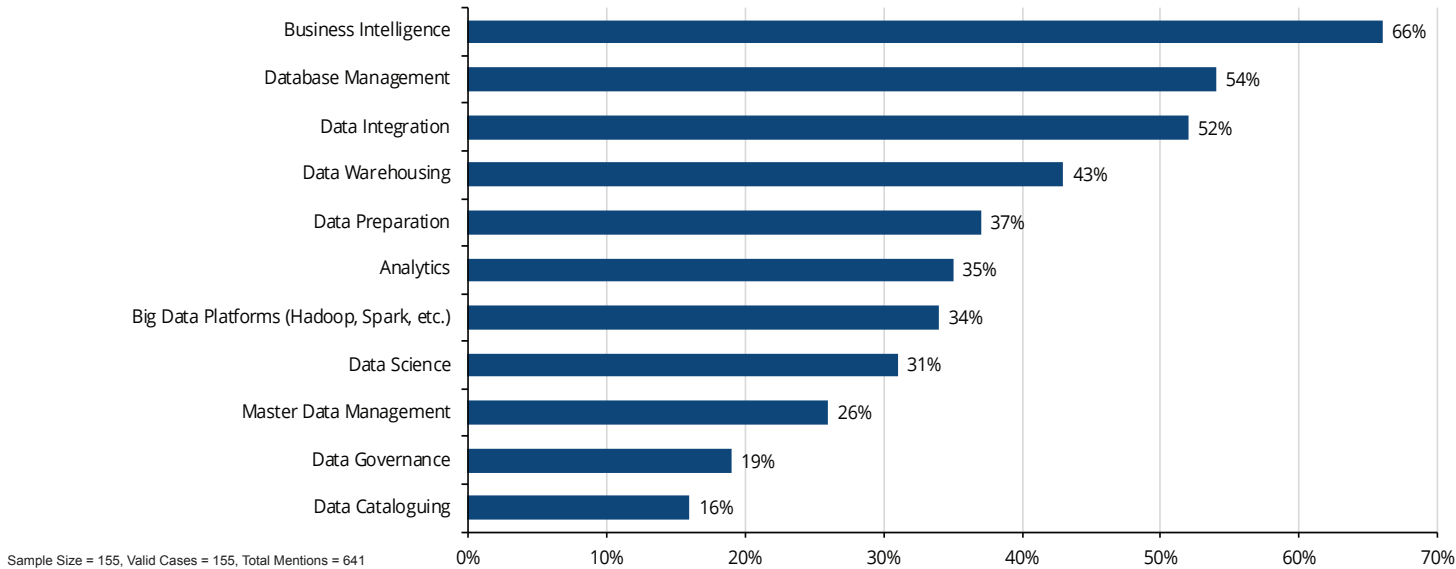


Current and Planned Adoption for the Use of AI and ML in Business Intelligence

Just as business intelligence leads the way in priority, it also leads as the #1 selection for current and planned adoption. Sixty-six percent of all participants said they are currently using AI or ML in their business intelligence tools. Since the use of AI and ML in BI is fairly new, EMA believes that some of the respondents were referring to the use of AI and ML algorithms via support for platforms like Tensor Flow and R. However, business intelligence is certainly the furthest along in terms of adoption of AI-enabled capabilities.

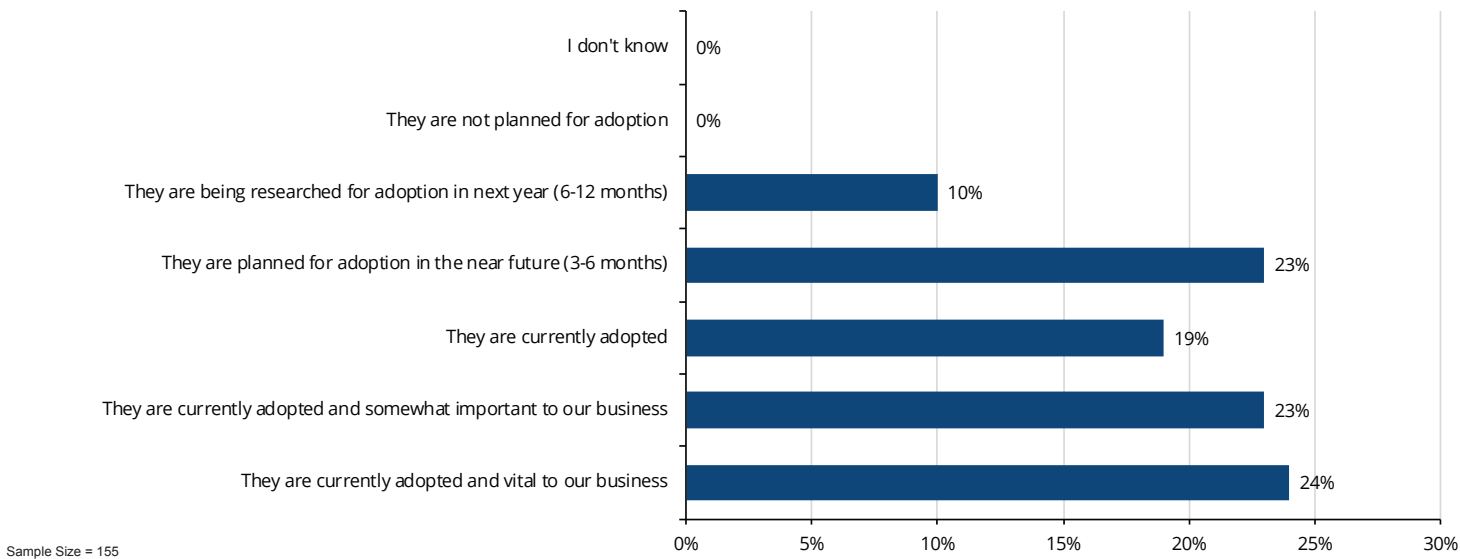
61% OF RESPONDENTS ARE BUYING AND USING AI-ENABLED BI TO DEMONSTRATE THEIR THOUGHT LEADERSHIP.

For which of the following analytics and data management tools are you currently using AI or machine learning?



Compared to other analytics and data management platforms, business intelligence is furthest along in both adoption and business impact.

Where are you in the adoption of AI and/or machine learning in your business intelligence tools?



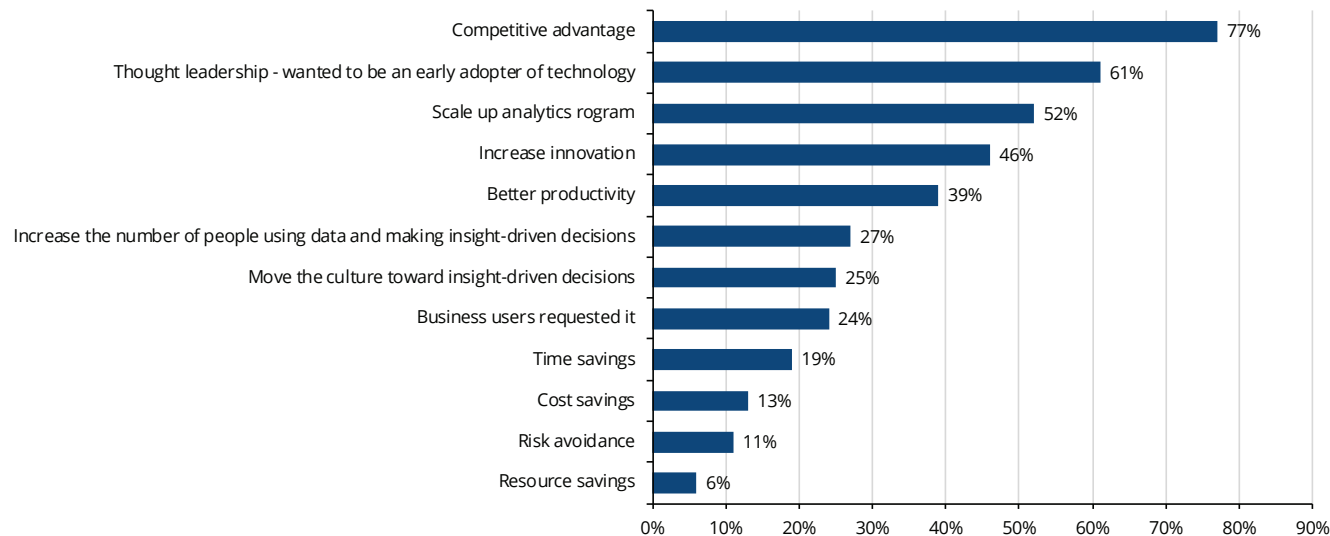
Market Drivers for the Purchase and Adoption of AI and ML in Business Intelligence

EMA research sought to discover what was driving the purchase and adoption of AI-enabled business intelligence platforms, so they asked, “What are the primary drivers for your use of AI or ML in your business intelligence tools?” The #1 answer was “competitive advantage.” Given the onset of digital disruption and the speed at which innovation is happening, it is not surprising that a full 77% of participants see

AI-enabled business intelligence as a key factor in their competitive pursuits.

The #2 driver behind AI-enabled business intelligence was thought leadership. Sixty-one percent of respondents want to be perceived as early adopters of technology in this area. Given that analytics can increase corporate valuation, there is an increasing number of companies that are making public statements about their use of analytics. AI-enabled business intelligence signals to the market that a company is advanced in their analytic pursuits.

What are the primary drivers for your use of AI or machine learning in your business intelligence tools?



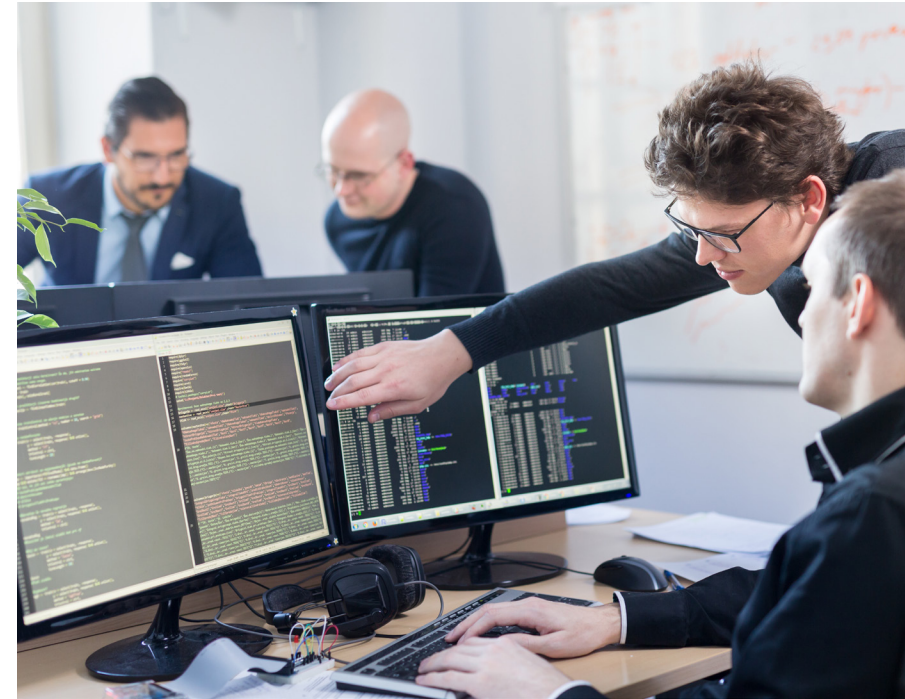
Sample Size = 155, Valid Cases = 155, Total Mentions = 620

77% OF PARTICIPANTS INDICATED THAT COMPETITIVE ADVANTAGE IS A KEY DRIVER FOR THE PURCHASE AND USE OF AI-ENABLED BI.

Innovators in the Use of AI and ML in BI

EMA built a scoring model based on the priority set by 155 randomly selected participants in the use of AI and ML in business intelligence platforms. The following companies were scored based on features in their currently released product. The Top 3 vendors were selected for their comprehensive coverage of the different AI-enabled capabilities. All Top 3 vendors had the same score, and all had 9 out of the 10 AI-enabled capabilities in their products.

EMA also identified additional leaders for the use of AI enablement in their business intelligence platforms. Out of 400 possible points, there was only a difference of 38 points between the highest-scoring Top 3 vendor and the lowest score of the leaders. All the leaders had 8 out of the 10 AI-enabled capabilities in their products.



THE TOP 3 VENDORS WERE SELECTED FOR THEIR COMPREHENSIVE COVERAGE OF THE DIFFERENT AI-ENABLED CAPABILITIES.

Yellowfin BI Suite: Leader in the Use of AI Enablement for Business Intelligence

Company

Yellowfin is a global business intelligence and analytics software vendor with a suite of world-class products powered by automation. Yellowfin is continually recognized as an innovator and is number-one in Embedded BI by BARC. More than 27,000 organizations and more than three million end users across 75 countries use Yellowfin every day. For more information, visit www.yellowfinbi.com

Product

Yellowfin delivers the only analytics suite that offers industry-first automated analysis and cross-vendor storytelling, as well as industry-leading collaboration. Each product can be bought individually or all together as an integrated suite, so you can choose the products you need to fill in the gaps in your current dashboard environment.

AI-ENABLED CAPABILITIES		
ASSISTED INSIGHT	The ability to trigger machine learning algorithms to gain insight from within the context of the business intelligence tool	<p>The Assisted Insights feature supports this by enabling users to ask a question on the Dashboard, or when exploring data in new analysis. Depending on the question, this triggers specific ML algorithms that provide insights that are statistically significant and ranked in terms of contribution.</p> <p><u>Assisted Insights</u></p>
AUTOMATED INSIGHT	Insight that is provided automatically to business intelligence users from machine learning algorithms that run at all times without user triggers	<p>Yellowfin Signals does exactly this. Once set up, the Signals Engine runs a myriad of ML algorithms continuously on data and automatically surfaces critical changes in data as they happen. The engine will inherently know the data and content to which you have access and will only serve up Signals based on your data permissions. It will also become more personalized the more the user interacts with it. Yellowfin stores the Signals that a user watches, rates, or ignores and refines its recommendation engine so it knows what matters to the individual and can serve more relevant Signals in the future.</p> <p><u>Signals</u></p>
NATURAL LANGUAGE EXPLANATION	The explanation of assisted or automated insight in plain language	<p>Yellowfin has its own NLG engine that automatically produces natural language explanations to auto-generated insight and visualizations in both Signals and Assisted Insights.</p> <p><u>NLG in Signals</u> <u>NLG in Assisted Insights</u></p>
NEXT-BEST INSIGHT	Automated recommendation of the next-best insight for the user, based on the context of the business intelligence tool	<p>With Yellowfin Signals, Correlations does exactly this. With each Signal (automated insight), the Signal Engine scans all other datasets for similar patterns to the original Signal within overlapping time periods, runs correlation analysis, and provides a ranked correlation list to provide the user the next-best insight.</p> <p><u>Correlations</u></p>
NATURAL LANGUAGE QUERIES	The ability to type or speak in questions in plain language in order to run a query and return results	<p>Assisted Insights allows users to ask the question by clicking through a dynamic menu to form the sentence. This converts the question into SQL and returns the results.</p> <p><u>Assisted Insights</u></p>

VOICE RECOGNITION	The ability of business intelligence tools to understand spoken commands to operate the system or run queries. This ability is often combined with natural language queries	This is not currently supported, but is on the roadmap for Q3/Q4 2019.
VISUALIZATION RECOMMENDATION	Automated recommendation of the best visualizations for each particular dataset or a query that is returned	<p>This is supported on two fronts:</p> <ol style="list-style-type: none"> 1. The auto-generated visualizations for Insights go through an internal best practice visualization according to the dataset. Rather than recommend, this is <u>automatically performed</u>. 2. During exploration in a new analysis, the Auto Chart Builder automatically recommends/shows the best chart according to the data/query chosen. <p><u>Auto Chart Builder</u></p>
IMAGE RECOGNITION	The ability to recognize images using machine learning	This is not currently natively supported and relies on external ML models brought into Yellowfin.
NEXT-BEST QUESTION	Automated recommendation of the next-best question to be asked by the user, based on the context of the business intelligence tool	Yellowfin Signals aims to provide answers to common questions, for example, "What's related to this? What's correlated? What are the key drivers?" It does not currently support a freeform next-best question for users.
SEARCH RECOMMENDATIONS	Automated recommendations or autofill recommendations within the search capability of the business intelligence tool	Search within Yellowfin contains autofill via real-time updates to filtered results as the search is typed out. Example: <u>Autofill in Export Search</u>

Research Methodology and Demographics

Methodology

All research results in this report are based on EMA's survey of 155 randomly selected North American enterprise and midmarket data and analytics professionals. EMA research identified trends, adoption, drivers, and priorities for the use of AI and ML in five categories: 1) data preparation and integration, 2) data warehousing and big data platforms, 3) business intelligence, 4) analytics and data science, and 5) data catalog, master data management, and data governance. For each of the five categories, EMA identified 10-12 key AI or ML capabilities. The research provided input regarding the capabilities that were most important to the participants.

Vendors EMA determined to be early implementers of AI and ML in each category were approached and asked to provide detailed information on their solution capabilities. In the vendor questionnaire, each capability was listed and defined. The vendors indicated whether each capability was present in their current product release. For those capabilities in their current product, they also explained exactly how each capability is provided to their customers. All capabilities were required to be in a currently released product.

For recognition as an EMA Top 3 in the Use of Artificial Intelligence and Machine Learning for Business Intelligence solution, all evaluated features and capabilities were required to conform to the following rules:

- Reported features must be generally available on or before May 31, 2019. Features that are in beta testing or are scheduled for inclusion in later releases do not qualify.
- Reported features must be self-contained within the included package sets. Any features not natively included in the evaluated package sets, but available separately from the same vendor or a third-party vendor, do not qualify (except where explicitly noted as points of integration).

- Reported features must be clearly documented in publicly available resources (such as user manuals or technical papers) to confirm their existence and ensure they are officially supported.

Selection of leading solutions followed a careful examination of how well each solution met the established AI and ML capabilities, and each vendor was scored based on a weighted scale that reflects the priority of respondents. For example, if 80% of respondents indicated that the use of AI and ML to automate insight was important to them, then vendors who provide that capability received 80 points. The result is the selection of the Top 3 vendors and leaders for the use of AI and ML in each of the five categories.

What are the EMA Top 3 Reports?

EMA Top 3 reports identify priorities organizations operationalize when overcoming challenges or achieving an unfair advantage in analytics or IT management focus areas. The intent of this report is to inform and inspire influencers and decision makers in their portfolio planning and vendor selection process.

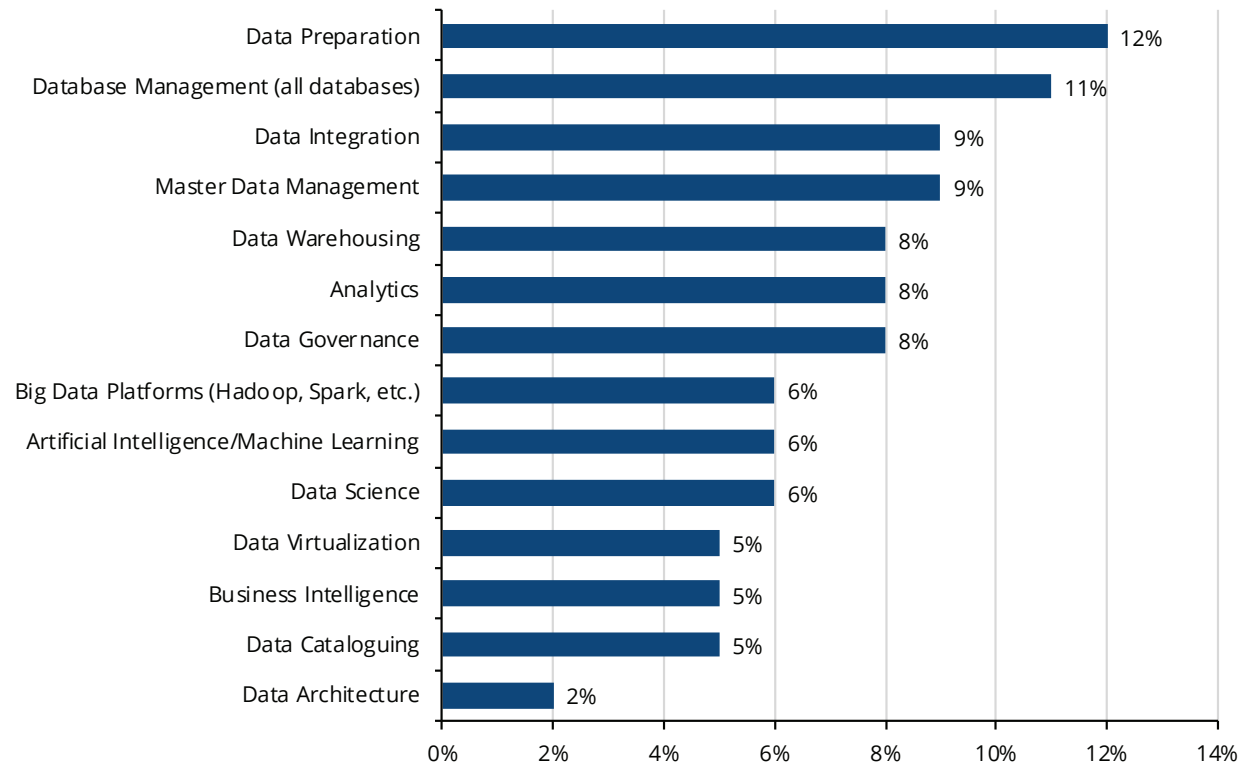
While EMA internally conducted a detailed analysis of solutions that help support the identified analytics or IT management priorities, this report is not designed to provide a feature-by-feature comparison for the entire product category. Additionally, some popularly adopted approaches may not be represented in this report because EMA's analysis did not indicate they are fully addressing emerging market requirements. This guide was developed as a resource for organizations to gain insights from EMA's extensive experience conducting thousands of product briefings, case studies, and demonstrations.

Solution Qualifications

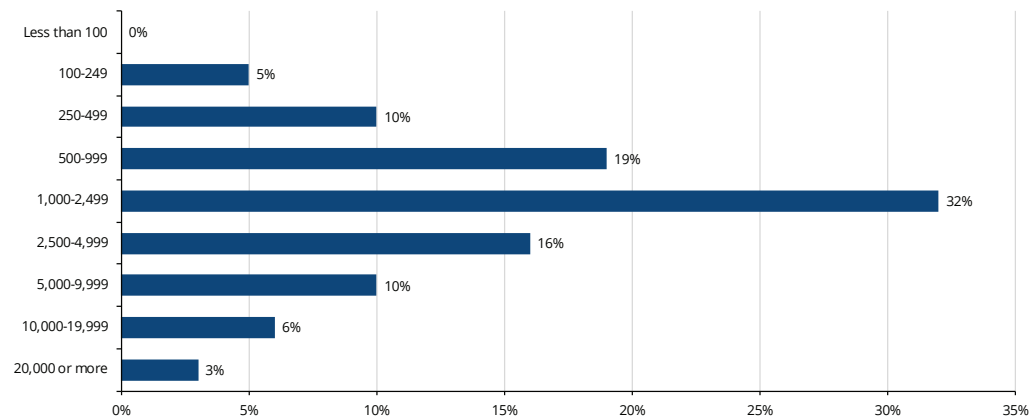
Demographics

The following is a demographic overview of 155 randomly selected data, analytics, and business professionals. The first question was used as primary qualification. If the survey candidate did not indicate awareness or involvement in any of the data and analytics activities in that question, they were not included in the survey results.

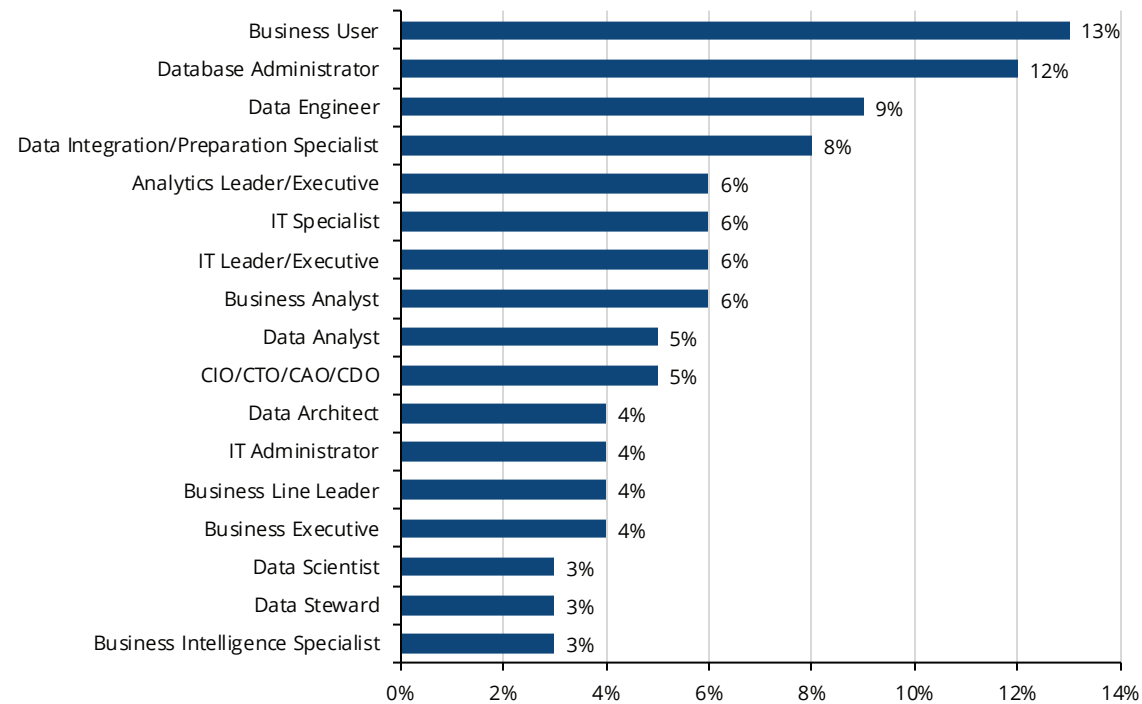
1. Which of the following data and analytics activities are you aware of or involved in within your organization?



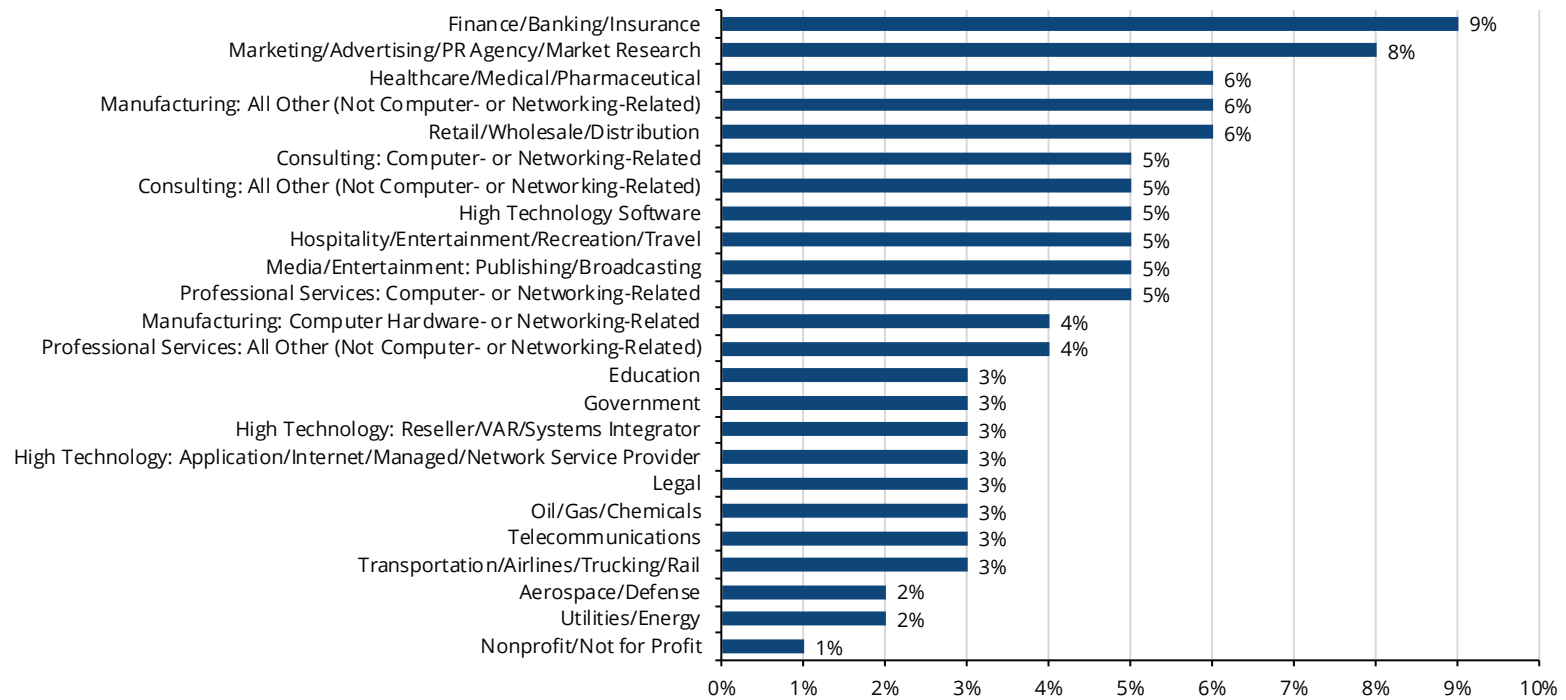
2. How many employees are in your company worldwide?



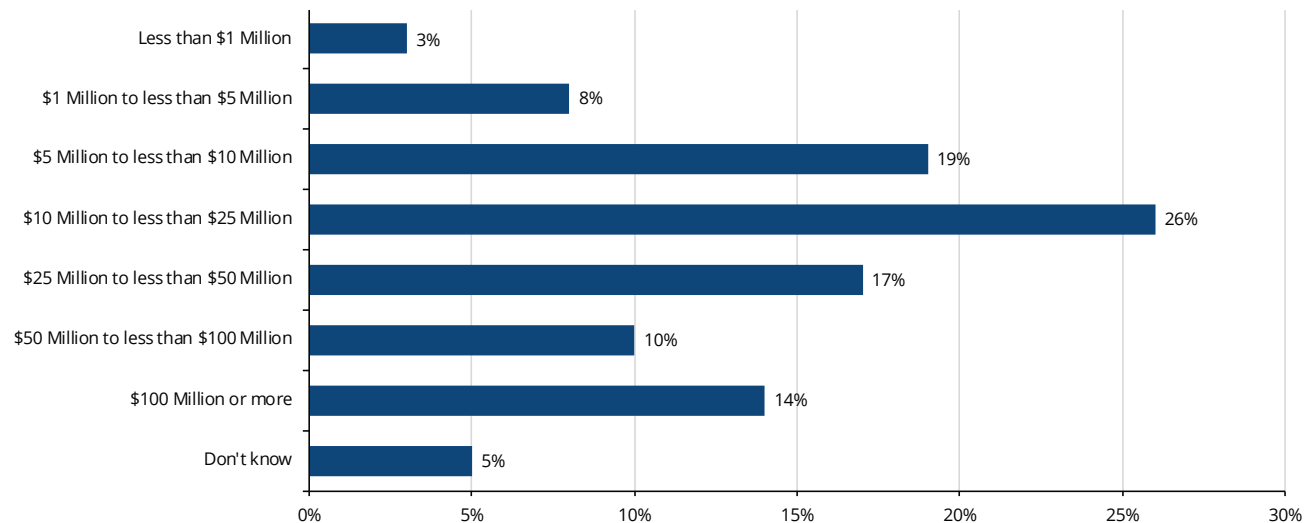
3. Which of the following best describe(s) your function in the organization?



4. Which of the following best describes your company's primary industry?



5. What is your organization's annual IT budget?



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