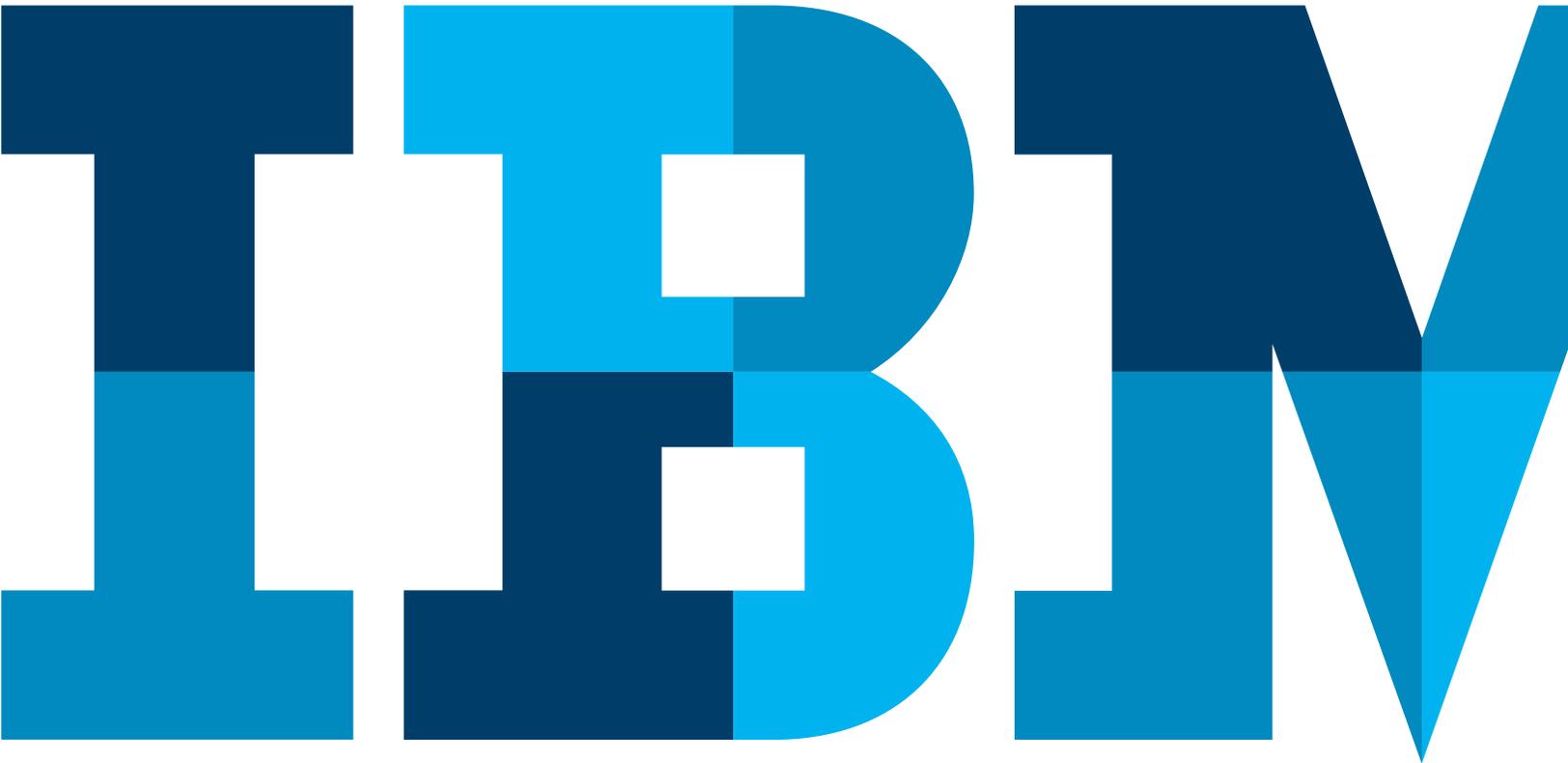


# Open the Door to True Data Exploration with Next-Generation, AI-Infused Business Analytics



Artificial intelligence and related cognitive capabilities are changing the rules in business analytics and data exploration. For the first time, users of all types—from experienced data scientists to nontechnical business decision-makers—can leverage AI-infused business intelligence (BI) tools that make it simple to quickly gain sophisticated insights that would otherwise be nearly impossible to achieve.

With the right solution, users can leverage machine learning and natural language capabilities to discover underlying patterns and drivers in data and use them to go beyond reporting what happened to achieve a deeper understanding of **why** it happened. These technologies also empower predictive analytics so users can uncover what is most likely to happen next and plan accordingly.

This paper discusses how cognitive approaches such as artificial intelligence, machine learning and natural language are making it faster and easier for users of all types to gain much more sophisticated insights into their data and thus their businesses. We also explore what to look for in modern AI-infused business intelligence tools to ensure that your organization can take advantage of all the data at its disposal.

## Understanding AI-infused analytics

Older approaches to data exploration and analytics won't cut it in today's environment. Data is too important as a competitive differentiator and disruptor for any organization, department or individual to rely simply on spreadsheets or data discovery tools to get real insight into what is happening with the business and what is likely to happen.

Simply put, a company that isn't data-driven will not be able to compete against companies that are.



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Advances in technologies, specifically around artificial intelligence and other cognitive models, are making it much easier for organizations to become data-driven. In today's environment, users can quickly and easily deploy inexpensive AI-infused BI tools that provide actionable insights that go beyond simple analytics, enabling users to explore previously unconsidered possibilities.

These modern tools enable any user to take advantage of advanced analytics capabilities without having to be a data expert or rely on one. Users can achieve better, faster, deeper and more accurate insights through a number of advances, including:

- Natural language dialogue, which allows users to ask questions of their data and receive answers in natural language.
- AI-assisted exploration that can begin with a question in natural language (for example, what drives sales in the Northeast) and results in recommended visualizations and exploration paths.

- Automated formatting and design tools enabling users to quickly and intuitively create compelling dashboards, reports and animated presentations.
- Machine learning, which adjusts to the specific preferences of each user as it learns over time.
- Software that can detect the types of data being examined and analysis desired and intelligently suggest the best visualizations to use.
- The ability to recognize geospatial data and present that data in customizable map format.

## Business benefits of AI-infused analytics

Analysts and business decision-makers benefit tremendously if they can spend more time actually doing analytics and less time searching for and preparing data. Research by IDC shows that data analysts spend just 27% of their time on actual analysis and the rest searching for and preparing data. The same research shows that analysts waste 30% of their time because they can't find, protect or prepare data.<sup>1</sup>

With AI-infused analytics, they can work much faster and more effectively, while also gaining insights they would never have been able to achieve otherwise. For example, AI makes it faster and easier for business users to cleanse, refine and combine different types of data so they end up with exactly what they need to uncover new insights and create meaningful, accurate presentations.

The right AI-infused tool can provide the following:

- The ability to search using natural language across the entire range of available data sources to quickly find relevant content.

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*Analysts can also use the technology to explore their data much more effectively, leveraging natural language dialogue, guided analytics and smart visualizations.*

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- The ability for users to join multiple data sets from different enterprise systems and supplement them with their own spreadsheets. This can be done simply and easily, without the need to know the right database commands or seek help from a data engineer.
- AI tools that can automatically identify any problems in the data and then suggest ways to combine different data sources, allowing users to adapt and customize data sets and dashboards as needed.

Analysts can also use the technology to explore their data much more effectively, leveraging natural language dialogue, guided analytics and smart visualizations. They can receive detailed information about their visualizations through statistics and insights delivered in natural language, uncovering trends and drivers they might not have thought to look for. This gives everyone in the organization greater confidence in the intelligence that is driving their decisions.

The entire organization benefits from this new model. Business intelligence is spread throughout the organization, giving users a self-sufficiency they haven't had in the past and enabling them to gain insights and create presentations that previously would have been the purview of the IT department, if at all. Actionable

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1 "Data Professionals Waste Half Their Time on Futile Activities and Repeated Efforts," BetaNews, 2018



insights are created using trusted data, eliminating the siloed models of the past. And the IT department benefits because users can gain these insights and create compelling presentations without having to rely on people and resources provided by IT.

### **What to look for in a solution**

In evaluating solutions that can integrate intelligent data effectively for data analysts and other users, it is critical that your tools have AI and other cognitive approaches embedded in them as part of their core feature sets. Given the massive amounts of data available in all organizations, analysts must deploy intelligence that makes it easy to explore and discover insights that are meaningful, accurate and actionable.

As part of the AI tool set, look for features that incorporate machine learning, natural language dialogue, guided analytics and smart visualizations. Also make sure that the solution has the ability to access live data sources, so you can be sure you're always referencing the most up-to-date information.

Finally, it is important that the solution is intuitive and easy to use, so virtually any user can perform sophisticated analytics and create relevant, eye-catching visualizations without having to rely on IT. This will help to create a data-centric culture within your organization and empower collaboration built on a foundation of intelligence and insight.

When it comes to delivering all of the features and capabilities described in this paper, Cognos Analytics from IBM stands apart from the competition in truly maximizing the power of artificial intelligence. With Cognos Analytics, users throughout the organization can leverage their particular knowledge of the business to explore data and search for unique insights to drive the business forward.

IBM has long been a pioneer in artificial intelligence, and Cognos Analytics extends that leadership into the area of business intelligence. With IBM Cognos, users can leverage AI to:

- Uncover insights and patterns that would otherwise have remained hidden or siloed.
- Engage with data in new ways to achieve new discoveries.
- Draw upon those new insights to make better decisions for managing performance.
- Dig deeper, ask better questions and explore previously unconsidered possibilities.

## Conclusion

We are in an era when the volume, variety and velocity of data are growing at an astounding rate. IDC predicts that the “Global Datasphere” will expand from 33 zettabytes in 2018 to 175 ZB by 2025.<sup>2</sup> Its report describes digital transformation as “the integration of intelligent data into everything that we do.”<sup>3</sup>

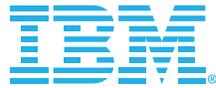
Organizations now have the ability to integrate intelligent data everywhere it is needed in ways that were never before possible. Any user can now use tools embedded with artificial intelligence to make their explorations smarter and more meaningful. They can gain and share insights using data that has been vetted for trust and accuracy. They can ask questions and receive answers in natural language. They can use software that will guide them to ask questions and seek insights they would never have considered on their own.

Are you ready to open the door to true data exploration? It’s time to look at what Cognos Analytics can do for you and your organization. For more information, please visit IBM at <https://www.ibm.com/products/cognos-analytics>.

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<sup>2</sup> “Data Age 2025: The Digitization of the World from Edge to Core,” an IDC white paper sponsored by Seagate, November 2018

<sup>3</sup> Ibid.



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Produced in the United States of America  
March 2019

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