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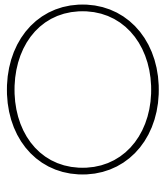
# The Secret to **Doing More with Data**

**Upskill Your Analysts**  
to Unblock Your Data Strategy

CIO

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**rganizations across industries see the potential of data.**

Data and analytics can help companies identify and predict trends, detect business opportunities, quickly respond to market changes, and pursue innovations. But the growth and complexity of today's data have outpaced today's tools. It's time for data and analytics to enter a new era. Most organizations "think" they're looking at the right data to make good decisions, when in reality they're just scratching the surface. Lying below is the information that will unlock their potential.

Most of today's organizations lack the deep analytic capabilities to discover insights that can make a real difference. In particular, a shortage of data science skills among analysts is inhibiting deep data exploration. Today's business analysts need to understand data, discover patterns, and find insights beyond the obvious pivot tables, especially given how much more complex and volatile the business landscape is, the variety in the data being collected, and how

quickly organizations need to respond to change.

The problem with many current business intelligence (BI) tools is that they aren't designed to explore the complexities of the data that's currently being collected, to visualize that complex data effectively, or to show analysts where they should be looking for insight. Dashboards, for example, are designed to provide superficial information – not to explore complex problems and unearth the deep insights organizations critically need.

Instead, to get more out of data and be successful, enterprises need to better support their business analysts so they can explore complex data and identify solutions to pressing business issues. The best way to do that is with more powerful, capable technology. Upskilling data analysts

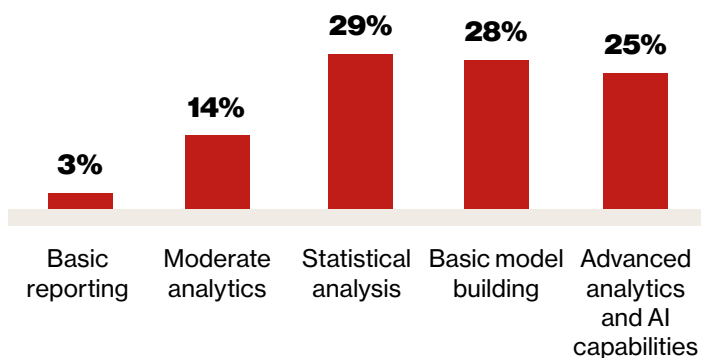


Now, **[AI is] top of mind in every investor**

**call and board meeting.** It's front and center, and business analysts are **absolutely critical in understanding the benefits to the business.** They need the tools and the tech to do that.

– Bryan Katis, Head of Product, Virtualitics

**Figure 1** |  
**Average analytic capability of business analysts interacting with data science team**



SOURCE: FOUNDRY

A recent MarketPulse survey by Foundry set out to understand what has been inhibiting data exploration among data analysts and challenges slowing data-based strategies such as AI. The survey also investigated the potential benefits of improving data exploration capabilities, including the value of both upskilling analysts to contribute within their own sphere and also their ability to better partner with data science teams. Respondents included executives employed in a data science role or who manage a data science team across sectors, including healthcare, IT, legal, and finance.

### The current state of data exploration

More than half of those surveyed said they're not getting value out of many of their current advanced analytic initiatives. The lack of timeliness, lack of identification of feasible use cases, and lack of involvement of business analysts are all factors at play.

**85%**  
**of organizations are not using tools designed to explore complex data.**



helps them do more valuable analysis and find actionable insights that move the business forward. Meanwhile, data scientists' time is freed up (if they had any to spare). Another value-add of upskilling analysts? They're in a perfect position to find artificial intelligence (AI) opportunities that make sense for the business.

"AI has become not just something nice to have or defensive," says Bryan Katis, head of product at Virtualitics. "Now, it's top of mind in every investor call and board meeting. It's front and center, and business analysts are absolutely critical in understanding the potential benefits to the business. They need the tools and the tech to do that."

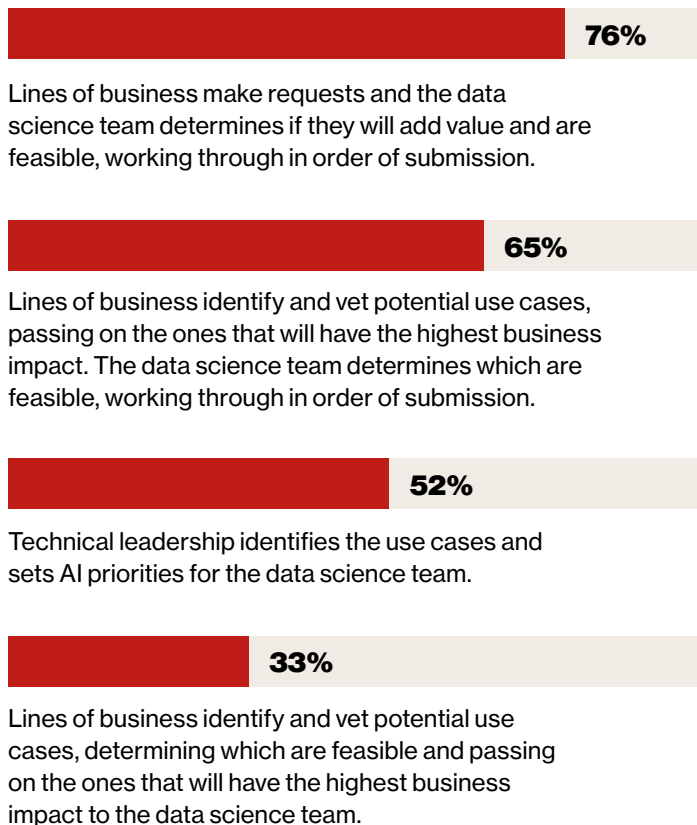
Although more than three-quarters (76%) of those surveyed reported that it's common for the lines of business to choose AI use cases and turn to the data science team to vet business value and feasibility, just 33% reported that lines of business vet the business impact and feasibility of AI projects before they get to the data science team.

Furthermore, although data and analytic complexity has indeed

advanced, the tools have not. A majority of organizations (some 85%) are using inadequate tools to understand complex data. The most common means of exploring complex data sets is to use a BI dashboard; 69% reported this as the primary method. The others are spreadsheets and graphs (16%), custom solutions (10%), and coding or processes developed in-house (5%).

Organizations that use custom solutions or code to analyze data constituted a very small percentage of the respondents. The remaining organizations use BI tools and spreadsheets that can't leverage data science techniques that enable multiple attributes to be analyzed concurrently. Without the data science skills, business analysts can't do advanced exploration that will add value, not just to their organization but also to the overall data science initiatives at the organization.

**Figure 2 | Methods for selecting AI use cases**



SOURCE: FOUNDRY

## The challenges

For many organizations, advanced data science skills continue to be limited, and that ultimately inhibits data exploration. Business analysts who do have advanced analytics abilities are rare, and they're more prevalent in organizations with high

AI maturity (56% of those at organizations where AI is scaled across the organization and/or fully integrated, compared to 6% of all others).

At the same time, significant amounts of data are being collected but large amounts of data are sitting unused. Organizations have plenty of unexplored areas of opportunity and undiscovered risk, according to the survey. More than half of the respondents, 55%, said that it's currently difficult for them to determine the value of data being collected, and 60% agreed that their data is not being used to its full potential. Unfortunately, having mass amounts of untapped data can prompt people to default to their opinions and biases.

Part of the problem lies in business analysts' abilities. A shortage of

“

The mode of **communication for storytelling now is more immersive than ever**, and being able to **provide a similar experience for analytics is important.**

– Aakash Indurkha, Co-head of AI, Virtualitics

# 64%

**of organizations said** a shortage of data science skills is **holding back data exploration.**

data science skills is holding back data exploration, according to 64% of those surveyed. Survey responses clearly indicated that most companies don't have the skills they need:

- **Just 25% have business analysts with advanced analytics capabilities.**
- **Only 29% reported that lines of business have statistical analysis capabilities.**
- **Just 14% of organizations have business analysts with moderate analytics capabilities.**

Other inhibitors for businesses:

- **Inability to explore more than a limited number of data points (52%)**

- **Difficulty defining use cases or problems needing to be solved (46%)**
- **Large volumes of data to sift through (43%)**

These challenges are having a significant impact on enterprises. More than half (53%) reported a lack of actionable results from past AI/ analytics projects. Project delays (48%) and inaccurate results (48%) are also all too common.

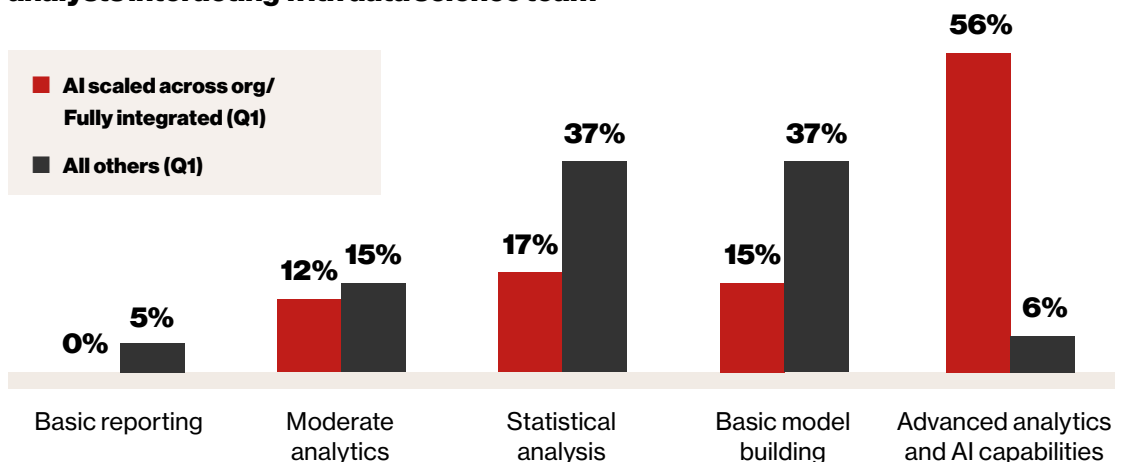
“Business analysts are lacking these technical skills,” says Aakash Indurkha, co-head of AI at Virtualitics. “But we can add AI to their [analytic] tool set, and then they can be more proactive. They don’t have to go to a data scientist every time.”

# 77%

**of the respondents agreed** that it’s a priority to empower business analysts with **more advanced analytics capacity.**

Finding a complex insight is the first step; then sharing it with the business in a way that makes it clear is the next critical step. Doing this successfully means that the business has better buy-in to the data-based strategies at the organization, creating a bridge between the business’s realm and the data science team’s realm.

**Figure 3 | Average analytic capability of business analysts interacting with data science team**



SOURCE: FOUNDRY

The best tool, Indurkha says, is one that works for leadership and executives, too. “They need to be able to consume the story,” he says. “The mode of communication for storytelling now is more immersive than ever, and being able to provide a similar experience for analytics is important.”

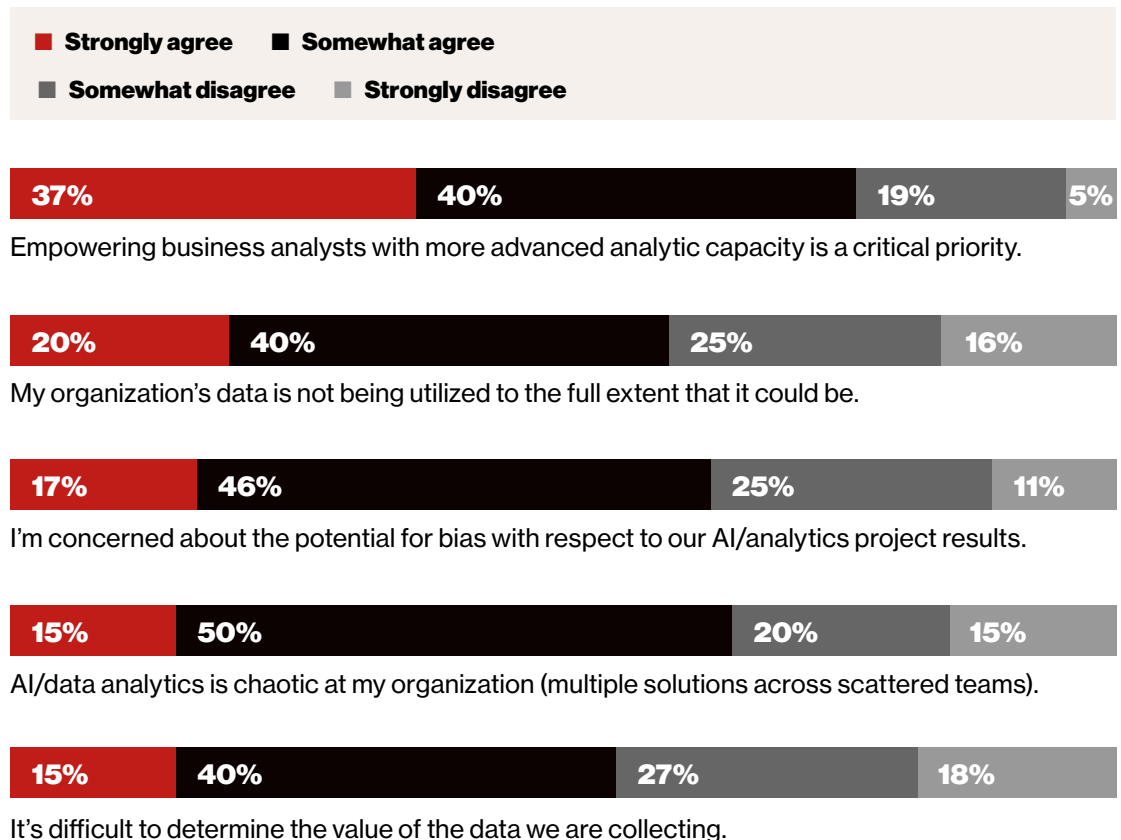
### The solution

Organizations have more information than they can explore. They’re missing out on potential insights

that will keep them competitive. At the same time, there aren’t enough data scientists or people with data science skills in the labor market to close that gap, even if companies had the head count to hire them. The solution: empower data analysts with data science capabilities so they can do the deep exploration necessary to understand and take aim at business challenges.

A majority (77%) agreed that it’s a priority to empower business

**Figure 4 | Agreement statements regarding use of data**



SOURCE: FOUNDRY

analysts with more advanced analytics capacity. Nearly one-third (32%) ranked “enabling a better understanding of AI/data models” as the most important factor to ensure that AI apps will have a measurable business impact. This means that analysts need to be more involved in the early stages of exploration and in validating models.

“More business buy-in/ownership in the development process” was ranked as second (20% ranked it as No. 1 and 33% as No. 2). With the business analysts involved from the start, they can bridge the gap with business stakeholders and help socialize proposed projects.

There are several benefits to improving data exploration capabilities:

- **Improving decision-making capabilities with more comprehensive analysis (57%)**
- **Increasing the value of external data from customers, partners, and suppliers (56%)**
- **Getting more value from existing BI, data capture, and data storage investments (54%)**

Besides these benefits, survey respondents anticipate several additional positive outcomes. These include data science teams’ having access to greater domain expertise (63%) and focusing on higher-value projects (53%); better communication between business stakeholders and analysts to get informed direction/buy-in (51%); and more time overall for data science teams to deliver projects (44%).

Getting maximum use of data is critical to business success. To do that, enterprises need to get more from their data analysts with a solution that embeds no-code AI to support advanced data exploration.

## **Intelligent Exploration redefines advanced analytics**

Virtualitics offers a more comprehensive way to explore data that’s a level above and beyond traditional tools with which insight is limited to the person using the tool.

Virtualitics’ Intelligent Exploration, a new category of advanced analytics that pairs embedded AI and data science techniques with rich 3D visualizations, empowers analysts



to get to a new depth of insight. Its patented technology enables businesses to better discover relationships between data and gain crucial business insights.

The Virtualitics AI platform:

- **Uses embedded out-of-the-box AI and machine language (ML) models to analyze rich multidimensional data**
- **Automatically finds insights in data and ensures that nothing gets overlooked**
- **Makes use of natural-language query, smart mapping, and automated insights; enables users to experience data in true 3D**

“**... doing exploration** in a very visual way can really help you **peel back layers and drill deeper.**”

– Aakash Indurkha, Co-head of AI, Virtualitics

“At Virtualitics we put a lot of attention on different forms of exploration,” says Indurkha. For example,

the patented network extractor and explainable AI features can be especially helpful in supply chain logistics and manufacturing in discovering root causes behind an efficiency decline. “That’s not usually something that’s clear-cut,” he adds, “and doing exploration in a very visual way can really help you peel back layers and drill deeper.”

Virtualitics’ solutions can find those patterns, correlations, and causality with ease, adds Katis, and then guide the analyst on next steps. After that, it’s simple to communicate insights with other stakeholders through data storytelling, he says.

One large financial services company successfully uses Virtualitics’ network analysis and smart mapping to look at insider threats. It now knows exactly where to focus on additional controls and education, benefiting the business. Other financial clients find that Virtualitics helps them discover transaction patterns and identify potential fraud.

When businesses tap into AI for data exploration, they can untangle more complex knots. Business is complicated, times are changing, and it’s imperative to move beyond dashboards and simplistic analyses

to get to a deep understanding that can change how business is done, in a meaningful way. “What businesses then learn may lead to a single insight,” says Indurkhya, “or it may well mean uncovering the opportunity to automate actions or decisions with a new AI model.”

Having empowered data analysts who can do deep data exploration is the key to moving your data strategy – and your business – forward. ♦

## Top 3 benefits to improving the data exploration capabilities of analysts

**57%**

**say it will improve decision-making capabilities** with more comprehensive analysis.

**56%**

**say that it will increase the value of external data,** such as customer, partner, or supplier data.

**54%**

**say that it will allow them to get more value** from current investments in data infrastructure.

To learn more about **Intelligent Exploration**, visit **Virtualitics [here](#)**.