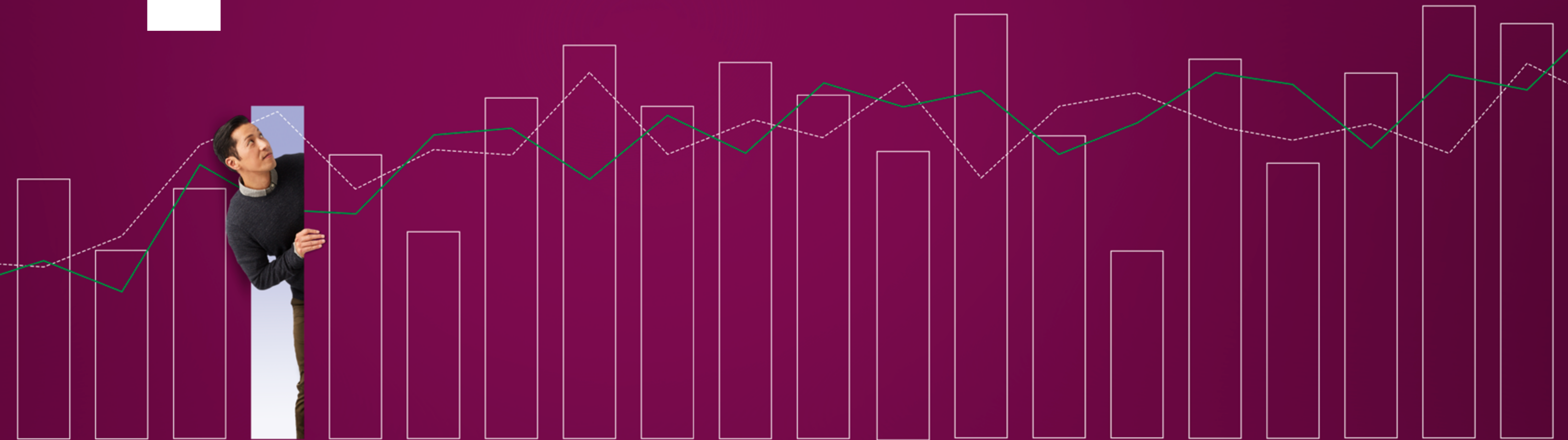


Fueling Digital Transformation with Data:



4

# Approaches That Get You There Faster



# Your transformation roadmap begins with data.

The digital world has revolutionized the way we live, work, play, and shop, and every business is facing the mandate to transform. If you want to compete, you have to find ways to reinvent every aspect of your business.

How do you know what to transform – and when? Data. And not just data, but an analytics strategy that gives everyone in your workforce the power to make the discoveries that lead to change. Everyone in your organization should be able to use data to drive outcomes, including reinventing business processes, more deeply understanding customers, uncovering new sources of revenue, and better balancing risk with reward.

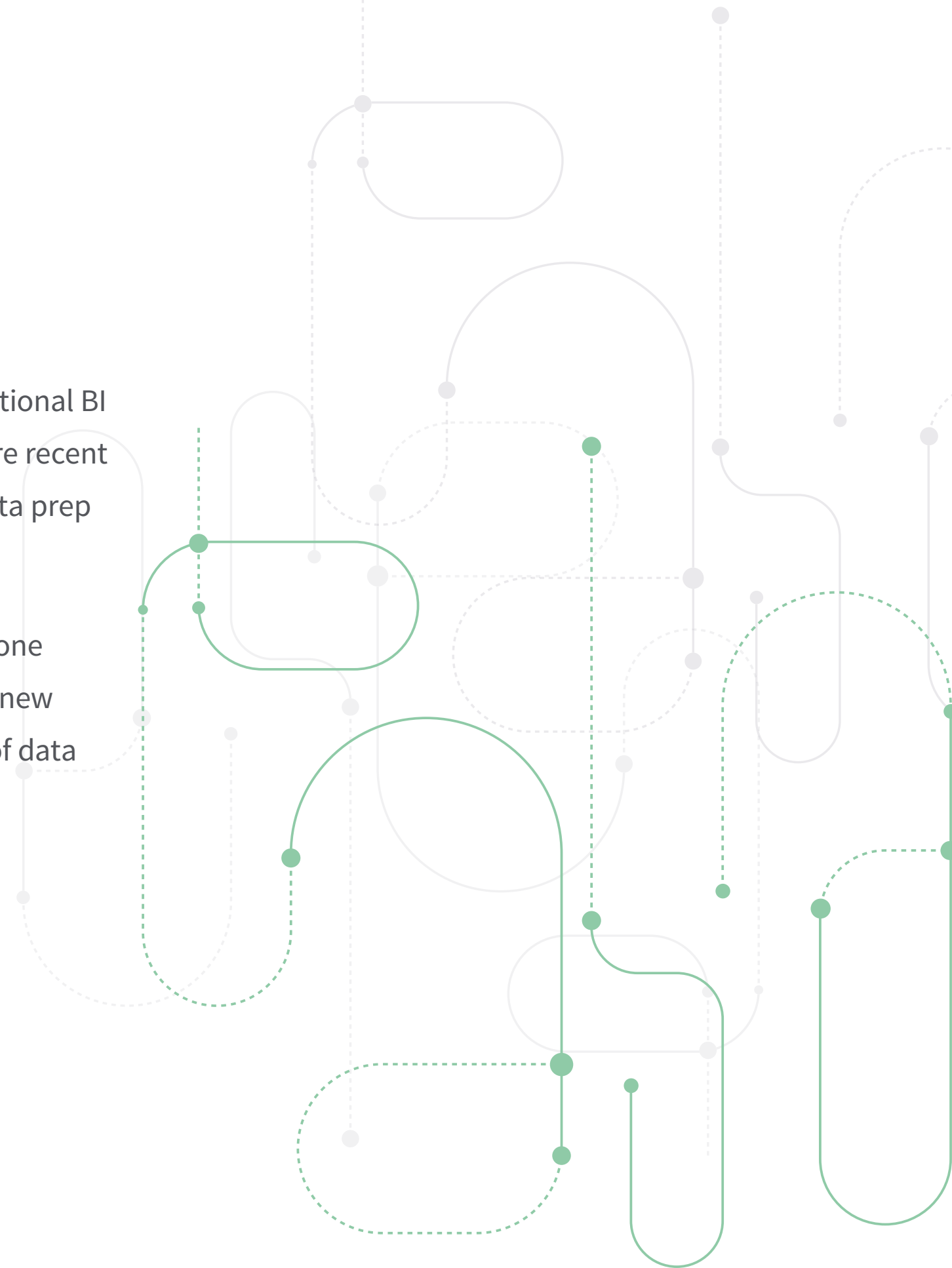
**“The power of analysis is transforming organizations and industries. Subjective decisions such as employee recruitment or product branding are increasingly data-driven, and objective decisions such as logistics planning or customer risk analysis are being made using more sophisticated analysis on more complex data than was previously available.”**

GARTNER<sup>1</sup>

# Beware of speed bumps.

Empowering your entire workforce to drive transformation is nearly impossible with traditional BI tools, which are complex, rigid, and focused on reports instead of analytics. Even the more recent self-service visualization tools are limited – and not just because they require complex data prep and lack enterprise governance.

Most self-service tools are query-based, requiring you to pose just one question (and get one answer) at a time. They don't allow free-form exploration of data, where you can pivot to new sections of data whenever you spot something interesting. And they analyze only a slice of data in response to each query.



# Four ways to accelerate transformation.

You don't have to settle for limitations. There's a new generation of modern analytics that can finally unlock the value in all your data. Here are the four ways you can use modern analytics to drive faster, broader, and deeper Digital Transformation:

1

**Take advantage of AI and machine learning**

2

**Embed analytics at the edge**

3

**Let everyone explore without boundaries**

4

**Empower your people with data literacy**

# 1 Take advantage of AI and machine learning.

Advances in AI and machine learning are revolutionizing the way businesses interact with their data. Machine learning – a method of computer learning underlying most AI – automates analytical model-building and learns from the data, identifying patterns and trends. In other words, machine learning analyzes your data for you, suggesting insights you might never have seen.

When you pair machine learning with human knowledge and intuition, you get augmented analytics – a collaborative approach that multiplies brainpower and improves the data literacy of every user.

AI and machine learning are already in use in real-world applications:



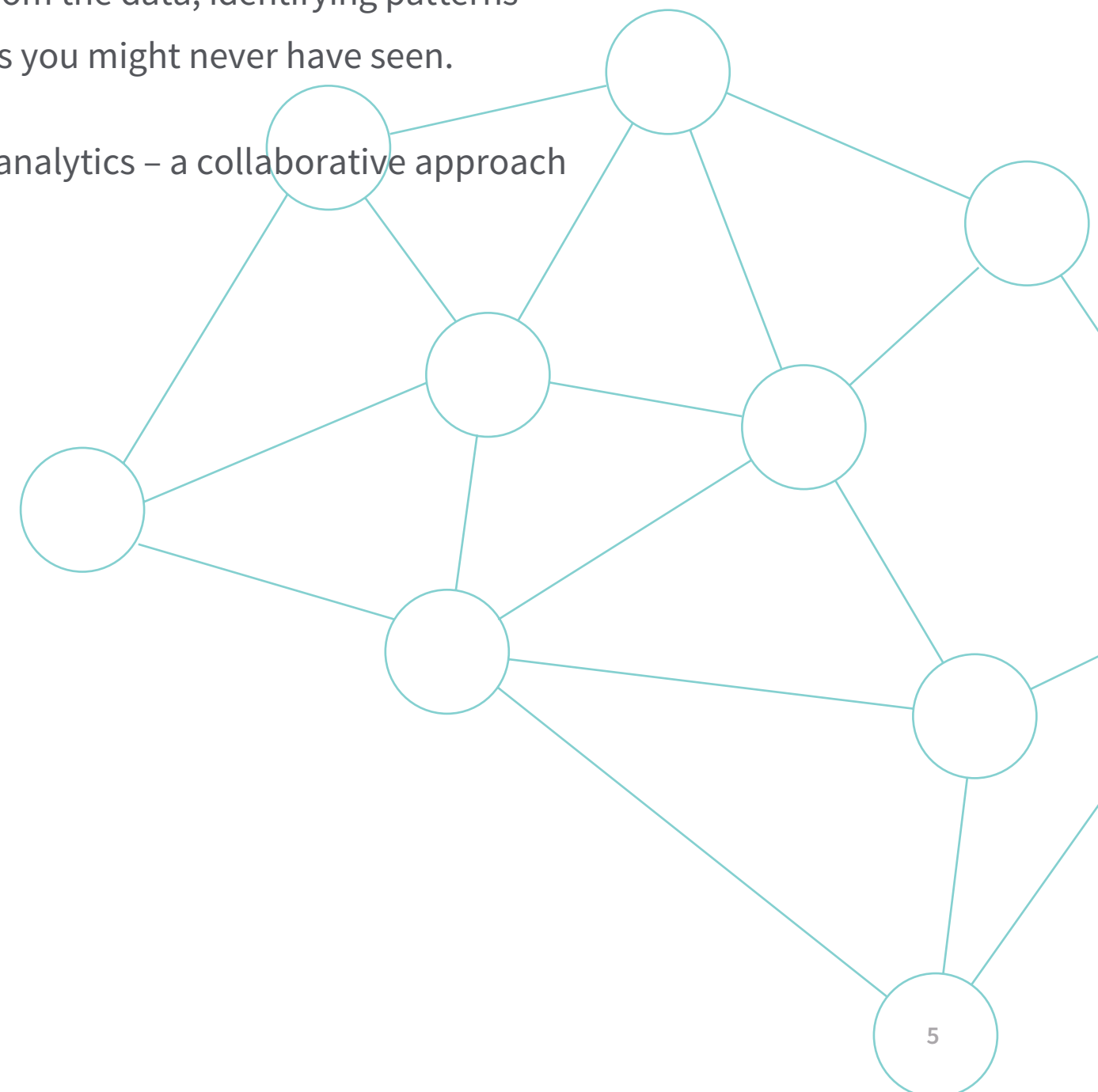
In retail, websites are increasing sales by recommending items based on customers' previous purchases.



In manufacturing, computers are analyzing data from equipment sensors to identify efficiencies and flag anomalies.



And for business users, machine learning is offering recommendations and insights within business apps for sales, marketing, HR, finance, and more.



## 2 Embed analytics at the edge.

When you're trying to digitally transform, it doesn't make sense to reserve analytics for a select group of people. Instead, you'll want to extend the power of discovery to as many users as possible and embed it wherever people work, including in remote locations and on mobile devices. That's analytics at the edge.

Instead of sending raw data back to the data warehouse to be cleaned and analyzed, edge analytics allows users to analyze data as it comes in, right where it's collected. That saves time, reduces bandwidth costs, and keeps data relevant.

The number of use cases for edge analytics is growing – fast. Currently, the list includes IoT, offline mobile, and immersive analytics. Here are just a few examples:



Retailers are analyzing point-of-sale data as it's captured to enable cross-selling or up-selling on the fly.



Manufacturers are using edge analytics to monitor equipment, detecting early signs of deteriorating performance and risk of failure.



Security firms are using edge analytics in video cameras, which analyze footage as it comes in and send alarms when changes are detected.



By 2020, 40% of IT operations teams will have driver, implementer, or operator responsibility over their organizations' IoT initiatives, which is an increase from 5% in 2018.<sup>2</sup>

By 2022, more than 50% of enterprise-generated data will be created and processed outside the data center or cloud.<sup>2</sup>

**“As more information is produced at the periphery, pushed by the combined influence of the Internet of Things (IoT) and mobile computing, a new computing platform paradigm is emerging. That platform will opportunistically connect devices without, or with minimal, intervention of a cloud capability and make extensive use of smart and autonomous software agents. That intelligence at the edge will minimize the amount of data transfer, bring contextual situational awareness for local processes and allow localized interactions to adapt faster to local situations.”**

GARTNER<sup>1</sup>

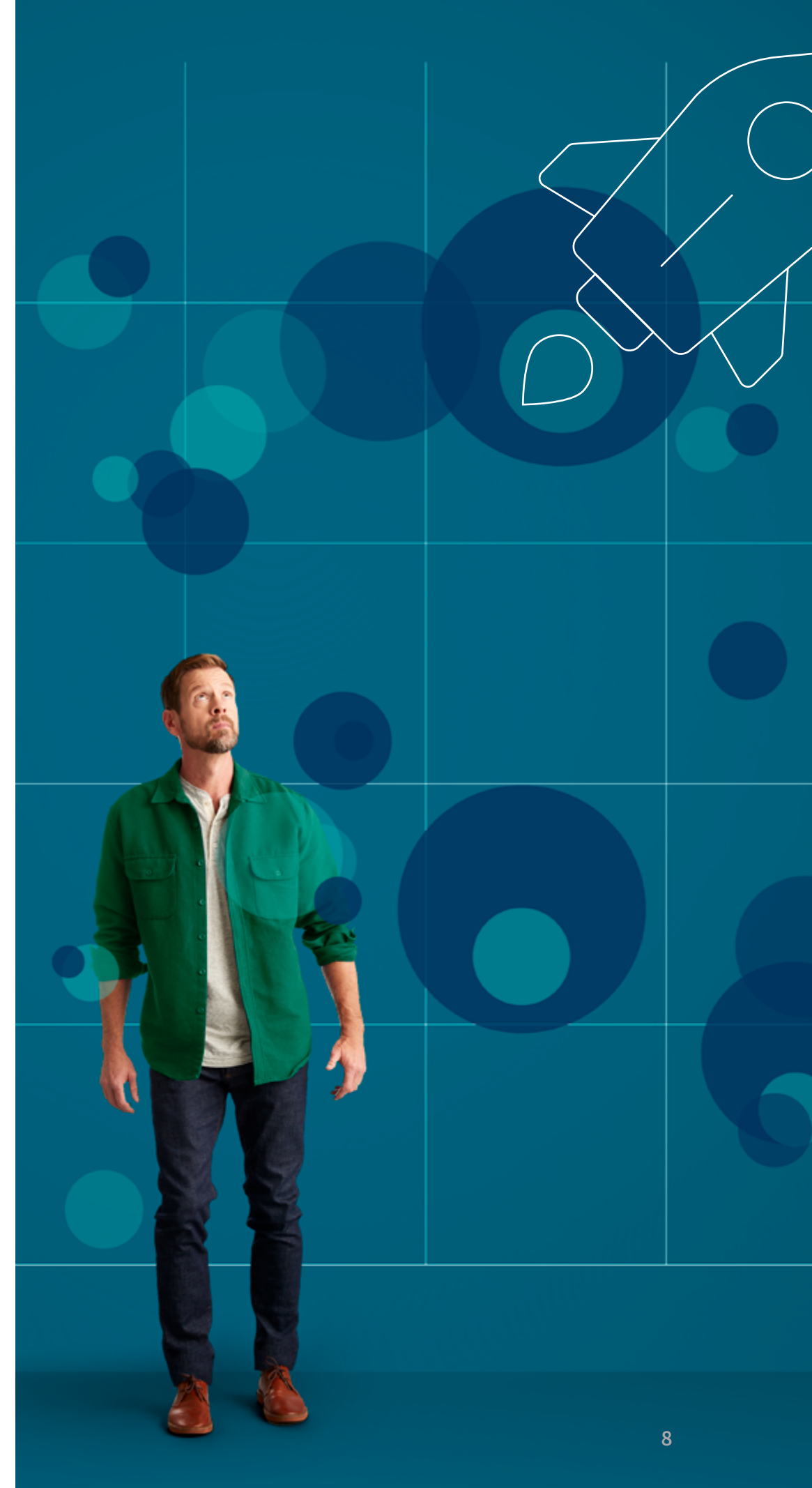
# 3 Let everyone explore without boundaries.

Artificial intelligence and automation can guide your users to more insights, more quickly – but there’s no replacement for human awareness and intuition. Everyone in your workforce should be able to freely explore their data, following their curiosity wherever it leads. That opens up the possibility of unanticipated discoveries.

In a modern analytics platform, users can interact anywhere – within visualizations, charts, graphs, filter panes, or even a global selections UI. And in a truly modern platform, users can pivot in any direction throughout all their data, following intriguing connections as they arise and seeing relevant context at every turn.

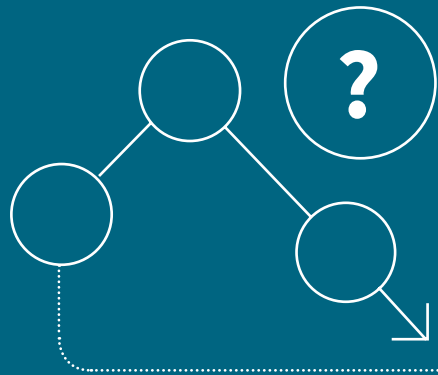
What does that look like? As users move through their data, they can select a new section of data at any time, whether it’s within their current data set or next to it. As they do, new, relevant context surrounds whatever they’ve selected, raising new questions and suggesting new possibilities.

When people can interact with their data in a free-form way, they can follow their natural thought processes and get relevant, contextual analysis. As a result, they make surprising discoveries – and uncover connections they couldn’t have seen any other way.



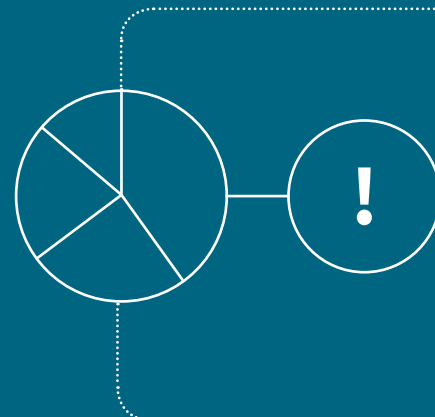


# What does free-form exploration look like?



A user might start with an open-ended question about sales by region. They might notice that sales in one region are down, which raises a new question: Why?

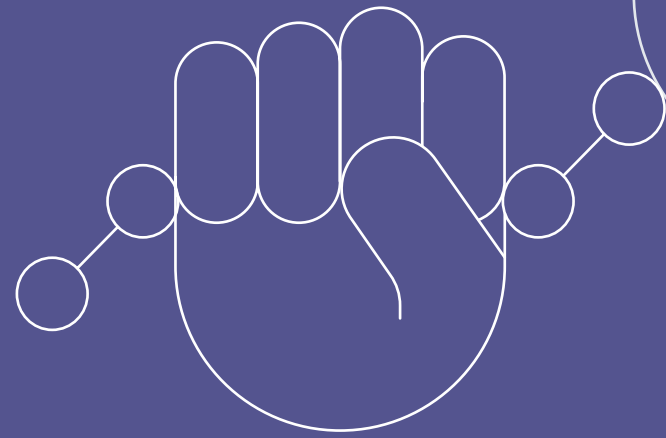
They drill into data for that region, viewing sales by month, week, and product. Finally, they pivot to sales by rep and discover that three reps are performing poorly.

At that point, machine intelligence retrieves historical data to reveal an unexpected connection: Reps in those three territories have underperformed for the past two years, when the territory maps were redrawn.



When the user pulls in geographic data, the problem is clear: Those territories are largely rural, with big distances to travel between locations.



## 4 Empower your people with data literacy.

One of the most important aspects of using data for transformation is data literacy – or the ability to read, work with, analyze, and argue with data.<sup>3</sup> When Digital Transformation is your goal, you should spread data literacy as widely as possible throughout your workforce, to all roles and all employees at all skill levels. With tens, hundreds, or even thousands of people exploring your data and uncovering insights, your business has exponentially more potential for transformation.

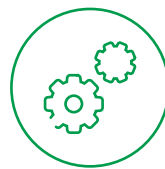
In a truly data-driven culture, data is a second language that everyone speaks. How can you make that happen? You don't have to send everyone to training immediately, though 80% of organizations are planning to develop data as a competency by 2020. You can look for analytics solutions that organically raise data literacy with the three preceding tools – AI and machine learning, analytics at the edge, and free-form exploration of data.

**70% of employees are willing to spend time and energy improving their data skills. At the director and manager level, that number jumps to 85%.<sup>4</sup>**

**Qlik is a founding member of The Data Literacy Project, whose mission is to ignite discussion and develop the tools we need to shape a successful, data literate society. Visit us at [thedataliteracyproject.org](https://thedataliteracyproject.org).**

# The outcomes of Data-Driven Digital Transformation.

When everyone in your business has the power to make discoveries every day, the stage is set for large-scale transformation. The outcomes of Data-Driven Digital Transformation vary, but they tend to fall into four main categories. Here's an example of each:



## Reimagined business processes

With a dedicated call-handling app that allows supervisors to easily monitor their teams, Britain's Avon and Somerset Police Department dramatically improved emergency-call response times, boosting productivity by +/- 20% and **saving £3.8 million.**



## Better customer intelligence

After combining and analyzing market-basket data and loyalty program data, oil and gas giant BP saw a **14% increase in its active customer base.**



## New revenue opportunities

Cisco associated all data from each business unit into a single customer view, empowering sales teams to intelligently up-sell, cross-sell, and follow up on renewals. The result? **\$100 million in new revenue** and **saved \$4 million in costs.**



## Better-balanced risk and reward

Using an analytics platform to balance production with sales of its perishable products, British beauty retailer LUSH **saved more than £1 million over two years.**

# The power of transformation is now in your hands.

The digital era has made data essential. Data, in turn, has made unprecedented innovation possible. When you combine a modern analytics platform with an approach that extends the power of discovery throughout your workforce, you overcome the obstacles of earlier generations of BI – and you become able to reinvent business processes, better understand your customers, uncover new revenue streams, and balance risk with reward. Your potential for transformation is nearly limitless.

Ready to start transforming?

**DISCOVER QLIK**



# Why choose Qlik?

Go further, faster with true end-to-end data integration and data analytics solutions and the expertise you need to build a data-driven enterprise.

With our modern data analytics platform, you can:

- ✓ **Empower everyone to explore with our unique Associative Engine**
- ✓ **Enhance data literacy through AI and natural language interaction**
- ✓ **Deploy with the convenience of SaaS and the choice of multi-cloud and on-premise**

With Qlik, you can empower your analytics users to follow their curiosity, explore their data freely, and make transformative discoveries.

**To start your free trial of Qlik Sense, or to learn more, click below.**

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## ABOUT QLIK

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Qlik's vision is a data-literate world, where everyone can use data and analytics to improve decision-making and solve their most challenging problems. Qlik provides an end-to-end, real-time data integration and analytics platform to close the gaps between data, insights and action. By transforming data into active intelligence, businesses can drive better decisions, improve revenue and profitability, and optimize customer relationships. Qlik does business in more than 100 countries and serves over 50,000 customers around the world.



[qlik.com](http://qlik.com)

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<sup>1</sup> Gartner, Predicts 2018: Analytics and BI Strategy, Gareth Herschel, Alexander Linden, et al., 26 March 2018

<sup>2</sup> Gartner, The Edge Completes the Cloud: A Gartner Trend Insight Report, Bob Gill, David Smith, 14 September 2018

<sup>3</sup> <http://www.kanarinka.com/wp-content/uploads/2015/07/DataLiteracyRahulCatherine.pdf>

<sup>4</sup> <http://dataliteracy.info/application>