

2022 Data Leadership Trends in North America

*The Top Data Trends that Executives
in Financial Services, Insurance,
Manufacturing, Retail, and Telecoms
are Focused on as They Address
Key Challenges and Advance
Their Strategies This Year*

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Contents

Click below to navigate

3

*Executive
Summary*

4

*Methodology &
Key Findings*

5

Contributors

6

THE BIG PICTURE
*Data is Coming of Age
and Has a Point to Prove*

10

FINANCIAL SERVICES
AND BANKING
*To Enable Advanced Techniques
Banks Need to Fix Data
Infrastructure First*

14

DATA POINTS AT A GLANCE
*Data Analytics
Maturity Benchmarks*

15

TELECOMMUNICATIONS
*Overcoming Culture Lag to
Make Data Access as Easy
as Shopping*

18

DATA POINTS AT A GLANCE
*Key Digital
Transformation Goals*

19

RETAIL
*Enterprises are Embracing
Machine Learning*

22

DATA POINTS AT A GLANCE
*Modernizing the Data
Analytics Stack*

23

MANUFACTURING
*Data Leaders Are Turning
to AI Engineering*

26

DATA POINTS AT A GLANCE
*Data Analytics Trends
in the Coming Year*

27

INSURANCE
*Data Leaders are
Implementing Cloud Apps as
Part of a Hybrid Strategy*

31

CONCLUSION
*Be Excited,
But Stay Grounded*



Executive Summary

It's time for North America's data and analytics leaders to show what they're made of. Board-level demand for analytics and AI **has ballooned** amid the COVID-19 pandemic, while the resources available for these technologies are continuing, overall, to increase.

On top of that, a large majority of enterprises have now achieved a baseline level of data maturity, with abundant stores of information available to them from multiple sources, waiting to be put to good use.

All this means pressure to deliver results is rising, and we will see data leaders called upon to flex their muscles and show tangible business outcomes for their enterprises.

More than a third of the data leaders we spoke to for this research said increasing profits was the most important business driver behind their companies' investments in data this year, while a quarter said the main goal was either to cut costs or maintain competitiveness.

To achieve their aims, enterprises are turning to a range of emerging data tools and technologies, each varying depending on the specific needs of the sectors they work in.

In banking and financial services, for example, 55% of respondents report that they are poised to invest in modernizing their data and analytics platforms, a sign that the sector sees value in making it easier and faster to generate advanced analytics and further democratize data.

Despite the increasing pressure to perform, though, more than half said they are struggling to deliver business outcomes fast enough, while just under half are having trouble moving ideas into production.

And as datasets and algorithms become ever larger and more complex, another major hurdle facing enterprises is complying with, and anticipating, regulations.

This report will cover emerging trends in data across five key sectors—telecoms, retail, manufacturing, insurance, and financial services and banking—while benchmarking the current level of data maturity in each one.

And as it outlines the major challenges facing enterprises, it will draw on expert commentary to highlight how data leaders plan to overcome these and deliver tangible business results. ■



Methodology

In April 2022 we polled 100 data and analytics leaders, 80 from the US and 20 from Canada. The respondents are from companies with annual revenues of at least \$1 billion across five sectors: financial services and banking, insurance, manufacturing, retail, and telecoms.

All respondents are at least a VP level at their companies and influence data, analytics, and cloud strategies. They answered 14 questions about their enterprises' data maturity, the challenges they are facing, and which use cases and technologies they have implemented or are planning to implement. ■

Key findings

47%

of companies, across the industries we surveyed, **plan to make further investments into data and analytics platforms** in the coming year

Only 14%

of respondents report that they can consistently **use data to make business decisions** and use data-driven innovation **to shape strategy**

62%

reported dealing with regulatory and compliance issues, with the biggest challenge data leaders are facing this year is **conforming with laws**

62%

of data leaders **within manufacturing** told us that AI engineering will be incorporated into their strategies

Over 57%

in retail said that AI/ML enhanced business applications are currently in production at their businesses

60%

of respondents said that the **insurance sector** was most interested in cloud-native platforms and wanted to incorporate them

Source: Corinium Intelligence, 2022

Contributors



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CHAPTER 1: THE BIG PICTURE

Data is Coming of Age and Has a Point to Prove

KEY FINDING

Almost every enterprise we surveyed has reached a baseline level of data maturity. The task now is to source high-quality data while staying ahead of regulators and delivering business outcomes faster

The era of fighting to convince people about the value of data and analytics is at an end. While pockets of resistance remain here and there in North American businesses, the vast majority are sold on the value of data-driven insights.

“Everybody wants data, baby!” says Sean MacCarthy, Vice President of Analytics at the outdoor leisure retailer Good Sam. “We’ve just gotta give it to them in the right way.” ▶





Processes, Platforms, and People Are Key to Maturing

Company executives are just as keen on data as anyone. Of the data leaders we surveyed, only one – who works in manufacturing – said enterprises in their industry had yet to secure executive support and budget for data strategies.

But while buy-in for the idea of data is no longer a key concern, that doesn't mean everyone has bought

into investing in the processes, platforms, and training required to source the high-quality data needed to produce results.

"There's some human somewhere, making a decision in the real world, making data entry points," MacCarthy says. "And how much have you made sure that they know, as part of their job, that those data inputs are incredibly valuable?"

That, he adds, is the key concern data leaders in many industries should address as they look to achieve greater data maturity over the coming year.

It will require a culture shift away from viewing data, analytics, and AI as the sole domain of data scientists and other specialists. But our findings suggest there is a way to go to achieve that.

Only a minority, 11%, said that businesses in their sector had "fully embedded" data and advanced analytics into company processes, creating continuous feedback loops to fuel innovation.

The good news is that most enterprises have now reached a baseline level of maturity; 95% said data was available to guide day-to-day decisions. Now, the task is to ensure it is properly used. ►

"Everybody wants data, baby! We've just gotta give it to them in the right way"

Sean MacCarthy

Vice President of Analytics, Good Sam

The US is Playing ‘Catch-Up’ on Data Privacy

Dealing with regulations and managing compliance is by far the most widespread challenge facing North American data leaders this year. Almost two-thirds told us they were still tackling this issue.

In the US, legislators have been slower than elsewhere to build regulatory frameworks to deal with fast-changing data analytics tools and algorithms.

But enough time has now elapsed since the California Consumer Privacy Act (CCPA) was passed in 2018 that legal rulings are beginning to come down, signaling how data protection laws may soon be enforced nationwide.

“We’re trying to play catch up quickly,” MacCarthy says. “The next 12 months will be about doing a lot of that work. Your company will

“I think some until now have managed to evade having to demonstrate those results. But it’s beginning to come under a microscope”

Ken Ho

Chief Analytics Officer, Synovus

have more guidance as to just how judges are interpreting these rules.”

As they work to stay ahead of the regulators, 56% of data leaders said they are also struggling to deliver business outcomes fast enough, another sign of the increasing pressure on them to deliver.

“I think some until now have managed to evade having to demonstrate those results,” says Ken Ho, Chief Analytics Officer at

financial services company Synovus.

“But it’s beginning to come under a microscope.”

Determining a cloud strategy is, according to our results, an equally pressing concern; 56% said they were dealing with this. Other top challenges include a lack of interoperability with legacy systems, the risk of vendor lock-in, and difficulties moving ideas into production. ►



Data and Analytics Platforms Will Help Drive Change

Across the industries we surveyed, 47% of data leaders plan to invest more into data and analytics platforms in the next year as they develop their enterprise data and analytics ecosystems. In addition, a total of 82% either have made or plan to make investments into data pipeline automation.

These technologies are powerful tools for data leaders to more effectively manage and operationalize increasingly complex data workflows. In competitive data and analytics-driven industries like the ones we surveyed, effectively combining these technologies will be essential to improve visibility by reducing reliance on disparate tools.

There are also signs of increasing interest in data fabric and data mesh, with 40% looking to incorporate the former and 23% the latter. Data mesh is the concept of not moving data from where it originates, but rather creating a layer over the top of it to allow access to it from anywhere. Data fabric, meanwhile, is the architecture used to implement this.



Among other things, this helps cut time to market, according to Pawan Verma, Chief Data Officer at the Industrial and Commercial Bank of China.

“If you have to physically move the data, either to a data lake or a cloud, there is inherent lag,” he says. “Unless I move everything into one central place, it’s just impossible to have consistent standards for data management. But if it’s a mesh, everything is following the same standards without moving the data.” ■

“Unless I move everything into one central place, it’s just impossible to have consistent standards for data management. But if it’s a mesh, everything is following the same standards without moving the data”

Pawan Verma

Chief Data Officer, Industrial and Commercial Bank of China

CHAPTER 2: FINANCIAL SERVICES AND BANKING

The Future of Data and Analytics Leadership

KEY FINDING

Only 15% of financial services firms and banks are using data to consistently shape their strategies and make data-driven decisions. To improve, many companies will have to make improvements to their foundational infrastructure

While the potential for such technologies is great, many banks still need to lay the groundwork. Half of all respondents in the sector said they are data-informed, one level above intuition-driven. Thirty percent said they were data-driven, the second most mature category, while 15% chose the most mature category, data-led.

Ken Ho, Chief Analytics Officer at Synovus, acknowledges that his bank's 130-year history of intuitive thinking feeds directly into realities in the organization today.

"[The bank] is very immature in data, just in terms of data layout and structure," he says.

To mature faster, bank executives must recognize what they should do, as opposed to what they can do with analytics. Before bringing in new tools and technologies, banks



must make sure the quality of their data-gathering operations is good, according to Pawan Verma, Chief Data Officer at the Industrial and Commercial Bank of China.

"Many of the banks are getting onto this bandwagon of 'Oh, [another] bank is doing AI/ML, I should also do that,' without even knowing that their data is bad, so even if they do AI/ML nothing is going to happen," he says. "They need to fix their infrastructure first, before going to the new things."

"A lot of vendors out there are selling tools that are called 'solutions', but they do not really bring monetary value," Ho says. "It's not that data science solutions from the outside are always bad. They just have to be very tailored towards what you need." ►

15%

of Financial Services and Banking organizations consider themselves 'data led'

Source: Corinium Global Intelligence, 2022

AI Innovation for Fraud Detection and Anti-Money Laundering

Generative AI also looks set to be widely adopted by financial institutions. Fifty-five percent of our respondents said they planned to include it in their strategies in the coming year.

This form of AI uses training data to create new, original artifacts that retain key similarities to the training samples. In banking and finance, this can be used to create generative adversarial networks and natural language generation for fraud detection, as well as risk modeling.

Self-learning systems can make automatic fraud screening more intelligent, says Ho. He gives an example of a system that detects a credit card being used once in New

“Many of the banks are getting on [the AI/ML bandwagon] without even knowing that their data is bad, so even if they do AI/ML nothing is going to happen”

Pawan Verma

Chief Data Officer, Industrial and Commercial Bank of China

York, and then again not long after in Manchester, England.

Traditional models would see this as a red flag and potentially suspend the account, but emerging ones can learn to recognize when such activity is not suspicious.

“What if he happens to be a very affluent customer and his credit card is actually being used by some research associates, whom he allowed to do it?” he says.

Forty percent of our respondents in the sector said that AI and machine learning systems are already in production at their enterprises. The priority for this kind of technology is keeping regulators happy with things like anti-money laundering systems, says Verma.

“With any new technology, the mandatory things happen first [because] there is a stick behind it,” he says. ▶





Cloud Security and Budget Restrictions Are Key Challenges

The biggest data-related challenge in banking identified in our survey is ensuring the security of data in the cloud. Seventy percent said they were tackling this problem, a reflection of the sector's increased sensitivity to security breaches.

Given how highly regulated banking is, a relatively small number of respondents – 40% – said regulations and compliance were a pressing concern, perhaps because banks have been dealing with stringent regulations since 2008 and so this challenge is factored into their strategies.

Securing the necessary budget for data projects was a bigger concern, with 65% saying this needed to be tackled.

“The problem is persistent,” says Verma. “There is only so much money people will allocate to data or any cost center.”

Ho says that a key task of his has been to make the case for the ROI on data projects at Synovus to secure funding.

And both say that staffing their data teams has been difficult in the wake of the COVID-19 pandemic.

While resources are an issue, data leaders are, as Verma and Ho noted, also grappling with trying to convince executives not to buy certain tools. This can require a careful approach depending on company politics but, Verma says, data leaders need to speak up. “You need to be bold enough to tell your people.”

65%

of Financial Services and Banking data leaders need to secure additional budget for data projects

Source: Corinium Global Intelligence, 2022



Generative AI and Autonomic Systems Set for Wide Adoption

Financial services and banking were, of all five sectors we surveyed, the most interested in autonomic systems. Three-quarters of respondents – well above the average of 54% across all sectors – said they will soon incorporate these systems, which learn from their environments to modify their algorithms in real-time to respond to complex situations.

In banking, many of these systems are currently software-based, but we can expect to increasingly see [hardware-based](#) autonomous systems in bank branches in the form of robotic assistants for things like debt management and automated lending.

The trend is so pervasive that by 2024, Gartner predicts that 20% of organizations selling autonomic systems and devices will ask their customers to waive indemnity related to these systems' self-taught behavior. ■

*“The problem is persistent.
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Pawan Verma

Chief Data Officer, Industrial
and Commercial Bank of China

DATA POINTS AT A GLANCE

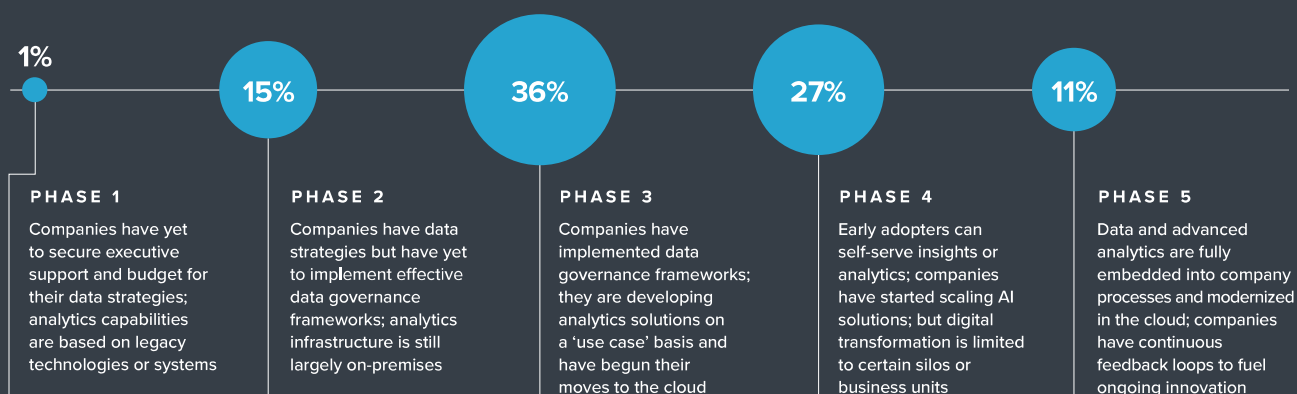
Data Analytics Maturity Benchmarks

KEY FINDING

Companies are Experimenting with Decentralization as their Data Analytics Strategies Mature

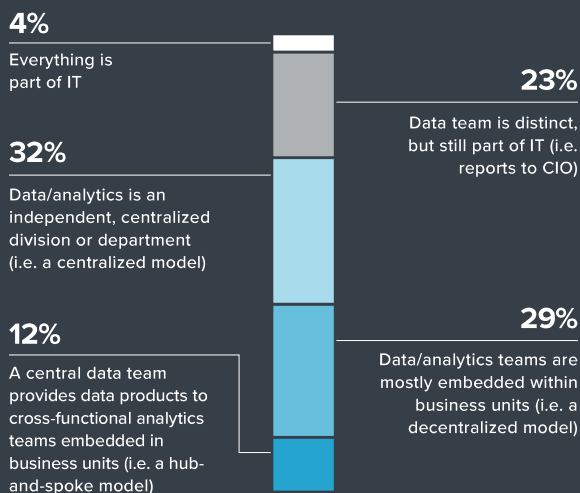
Only 11% of Organizations Have Fully Mature Data and Analytics Ecosystems That Provide Continuous Feedback Loops to Fuel Ongoing Innovation

Which of the following best describes the overall data and analytics maturity of enterprises in your sector or industry?



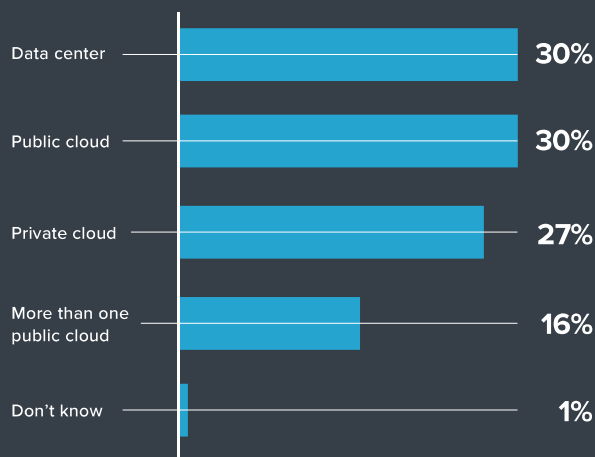
Data Teams are Largely Centralized but Some Have Moved to Embed Data Analytics Teams Within Business Units

How are data and analytics teams structured at your company?



Data is Being Deployed Increasingly in Public Clouds, and Sometimes More Than One

Where are your data platforms and tools deployed?



Source: Corinium Intelligence, 2022

CHAPTER 3: TELECOMMUNICATIONS

Overcoming Culture Lag to Make Data Access as Easy as Shopping

KEY FINDING

Most respondents in this sector said data insights are often still ignored at their companies, yet many now have the infrastructure in place to begin building a unified, user-friendly data experience

Lumen Technologies traces its roots back to the 1930s when it was a tiny telephone company in Louisiana with a single switchboard in the living room of the family that owned it. Today, the firm is undergoing a transformation from a traditional telecoms firm to a technology company with a huge range of data-driven offerings.

A fundamental part of that transition is making data and analytics into a unified, user-friendly experience for everyone, says Tobin Thomas, Lumen Technologies' Vice President of Data, Artificial Intelligence, and Automation.

"We're providing seamless access and a 'shopping experience' for data across our internal data consumers as well as for our customers," he says. ▶

"We're trying to change things while the plane is up in the air, so there's always a risk to the plane"

Tobin Thomas

Vice President, Data, Artificial Intelligence, and Automation, Lumen Technologies

Data Leaders are Focused on Innovative Technology

A key trend in telecoms this year will be intelligent automation, which combines artificial intelligence and robotic process automation. Half of the data leaders who answered our survey said they planned to invest in this, while 30% said they already had.

At Lumen, Thomas has intelligent automation and artificial intelligence as part of his portfolio. “We are driving continuous innovation with data as a product by infusing what we call data mastery, intelligent automation, and artificial intelligence,” he says.

“As we start integrating and mastering data, the actual value comes from the intelligent automation and the AI that we ingrain into some of our product solutions,” he adds.

“We’re providing seamless access and a ‘shopping experience’ for data across our internal data consumers as well as for our customers”

Tobin Thomas

Vice President, Data, Artificial Intelligence, and Automation, Lumen Technologies

For Thomas, the most cutting-edge work in his industry is happening around data as a product, a move towards a world where people can access data insights as easily as they do their grocery shopping.

“I think it’s absolutely essential for leaders to think that way,” he says.

In achieving a seamless data experience, one piece of the puzzle may be composable

applications. Of all the industries we surveyed, telecoms were the most interested in this technology: 60% of respondents plan to include it in their strategies in the coming year.

“Traditionally, developers have done this work, but if we can actually provide self-service, composable apps, all of a sudden, you’ve just accelerated the value equation and you exponentially cut the timelines,” Thomas says. ▶



The Sector is Behind in Terms of Data Culture

The change in thinking that Thomas calls for will require a major culture shift. Our survey results indicated telecoms was less mature than the other sectors in terms of its data culture, with 80% of enterprises saying either that leaders may ignore data to go with their gut, or that things are always done on intuition and experience.

So data leaders should nudge people toward a more holistic view of data, Thomas says. “Don’t just think about it from a technology stack standpoint,” he says. “It is also about providing a unified experience, a seamless experience—how you touch, explore, and leverage data.”

And there’s good news for those hoping to change attitudes: although data culture in telecoms is behind others, the sector did well in other maturity metrics. A majority of telecom companies – 55% – told us they have already begun scaling AI solutions and that early adopters can self-serve insights or analytics at their firms.

A fifth, meanwhile, has reached the highest phase in terms of overall data maturity. Phase five describes enterprises where data and advanced analytics are fully embedded into



company processes and modernized in the cloud, and that have continuous feedback loops to fuel innovation.

To leverage that progress, telecoms firms must maintain a focus on good data governance. Some 80% said they are effective at measuring data quality, while 65% reported being good at data quality remediation. But there was room for improvement in data access and data management, where 50% and 55% respectively said they were ineffective.

A Large Majority Are Facing Compliance Challenges

A large majority of telecoms firms, 75%, said they were still navigating regulatory requirements and managing compliance as they modernized their technology stacks. That means the sector was the most sensitive to this challenge out of the five we surveyed.

The second biggest challenge was moving ideas into production, or operationalizing, with 65% saying they were facing this issue. Another 60% said determining a cloud strategy is a challenge for them.

For Thomas, the key challenge is meeting customer expectations while continuing to transform. “We’re trying to change things while the plane is up in the air, so there’s always a risk to the plane,” he says. ■

80%



Percentage of Telecoms Firms Who Are Effective at Measuring Data Quality

Source: Corinium Global Intelligence, 2022



DATA POINTS AT A GLANCE

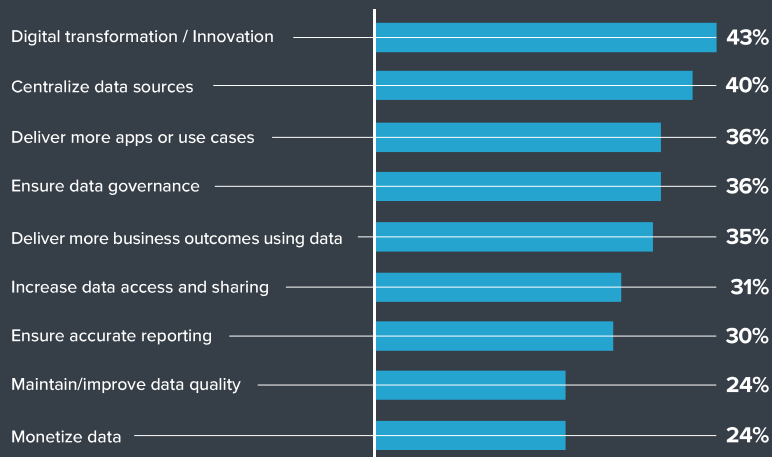
Key Digital Transformation Goals

KEY FINDING

For many organizations, additional investment is needed to reach key strategic goals

Data Leaders are Focused on Digital Transformation and Innovation

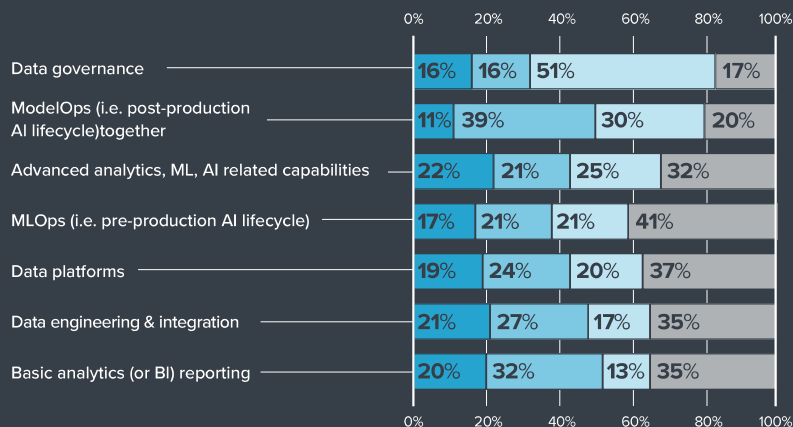
What are the three most important metrics for your data and analytics program?



Investment is Needed Into Data Governance to Meet Strategic Goals

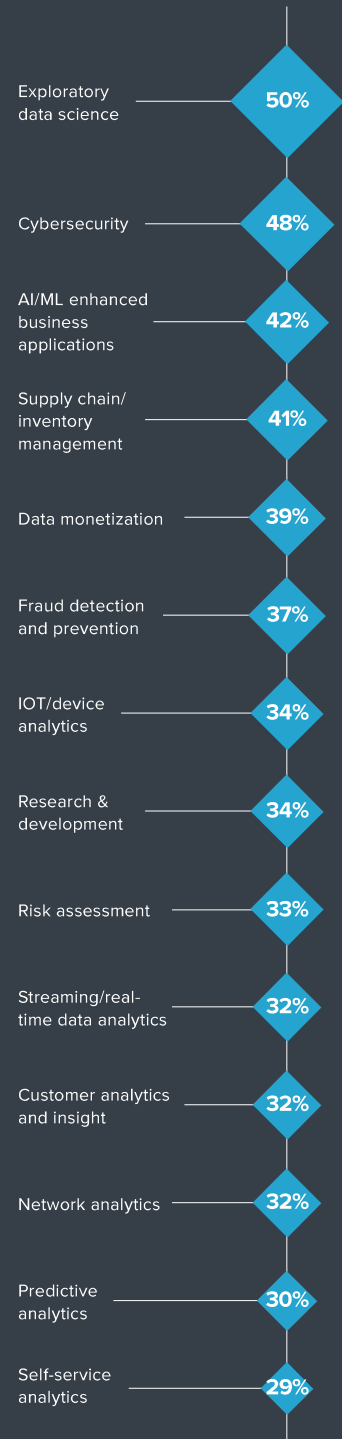
How would you describe the resources (i.e. staff and budget) your enterprise has allocated to each of the following data and analytics functions?

● Very Insufficient ● Insufficient ● Sufficient for now ● Sufficient to achieve our strategic goals



Data Leaders are Actively Working on Analytics Technologies to Enable Exploratory Data Science

Which of the following uses/applications for analytics technologies are currently in production in your enterprise?



Source: Corinium Intelligence, 2022

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CHAPTER 4: RETAIL

Enterprises are Embracing Machine Learning

KEY FINDING

Retailers are interested in cutting-edge technology, like the latest in natural language processing, and are working to find ways to marry new capabilities to their legacy systems

It may not be the most data mature sector, but few in retail are stuck at the starting line either: it was the only sector where none of our respondents self-described as being intuition-driven.

47% said they were only data-informed, with executives and leaders prone to ignore insights from the available data. Only 11% said they were truly data-led, below the average of 14% across all sectors.

Empowering Associates to Create High-Quality Data

According to Sean MacCarthy, Vice President of Analytics at Good Sam, the biggest issue preventing enterprises from becoming data-led is a lack of investment in associates to make sure they are inputting data the right way.

“It could be [a staff member] at the POS who’s got a customer, and they’re doing something that takes 10 steps to get it coded the right way, or there’s this shortcut method



that allows them to do it in four steps,” he says.

The shortcut method will save time and improve business performance from the associate’s perspective, but it may well mean lower quality data.

“How many executives have taken the time to understand what it takes to get all of that right? So that when it comes back into all those data warehouses the data picture accurately reflects the physical universe as it happened,” MacCarthy says.

Getting associates to collect data more effectively will require empowering them with better UX and UI on their interfaces, he adds. In other words: creating high-quality data should be made easy for them. ►

47%

of retail data leaders said that their business decisions were ‘data informed’ and not yet ‘data led’

Source: Corinium Global Intelligence, 2022

Retailers Must Build a ‘Robust Layer’ Over Legacy Systems

As with enterprises across all sectors, keeping on top of compliance was a key concern in retail, where just over 63% of respondents said they were dealing with this challenge.

After that, the three other most widespread concerns in the sector are determining a cloud strategy, ensuring data security in the cloud, and dealing with legacy systems.

“What ends up happening is you say: ‘okay, I’m never gonna get rid of my legacy underlying system, because I can’t, but at least what I

“What ends up happening is you say: ‘okay, I’m never gonna get rid of my legacy underlying system, because I can’t, but at least what I give the people on the front lines are the sexy tools that live in an iPhone”

Sean MacCarthy

Vice President of Analytics, Good Sam

give the people on the front lines are the sexy tools that live in an iPhone,” MacCarthy says

“Maybe that’s how it gets bridged in a faster way,” he adds, “we’ll

buy the front end to do the actual interaction with our associates in the field, but we’ll develop a very robust middle layer to handle interaction with our older legacy systems.”

As for the cloud, MacCarthy says enterprises planning their strategies should avoid building their cloud instances as if they were just on-premises appliances, and thus not taking advantage of an elastic eco-system.

Another pitfall is assuming that built-in security offered by cloud providers is enough. “They’re just tools, so you still have to know how to use them. How many breaches are simply because companies had contractors or employees using the default passwords?” MacCarthy says.

He advises full security audits on all relevant technology using encrypted pipes and encrypted data where possible.

Finally, he says, cloud strategies ought to avoid being too conservative in scope.

“Unless you absolutely can’t, size initially based on your one-to-three year growth expectancy, you’ll be there faster than you think,” he concludes. ▶





Expect Better Data Fabric Architecture and More Predictions

Enterprises in retail are set to reap the benefits from investments in AI and machine learning. Over 57% said that AI/ML enhanced business applications were currently in production at their businesses. Over 42%, meanwhile, have invested in machine learning platforms, while over 31% plan to do so.

For MacCarthy, one of the most exciting fields in ML is natural

language processing. He believes the technology has reached a point where we will soon see a drastic improvement in the quality of robotic customer service assistants.

Another key trend in retail is the adoption of data fabric architecture. Over 57% said they will incorporate this into their strategies in the coming year, meaning business users can expect to have easier access to consistent data services and capabilities.

Just over 20% of data leaders in retail said that predictive analytics is currently in production at their enterprises. That's below the average across all industries of 30%.

But a move towards using data to anticipate changes is most certainly coming, MacCarthy says, even if it's not across the board.

"The what-happened-last-week-and-why is at least semi-automated now for enough companies," he says.

Predictions may start with supply chains, where many firms have lots of data and where data is often relatively clean. And as consumer behavior stabilizes post-COVID, customer spending predictions will also become more popular.

ML algorithms can also play a predictive role, for example by telling associates what is about to go out of stock based on past customer behavior, nearby events, and social media data. ■

57%

of Retail organizations with AI/ML enhanced business applications currently in production at their businesses

Source: Corinium Global Intelligence, 2022



DATA POINTS AT A GLANCE

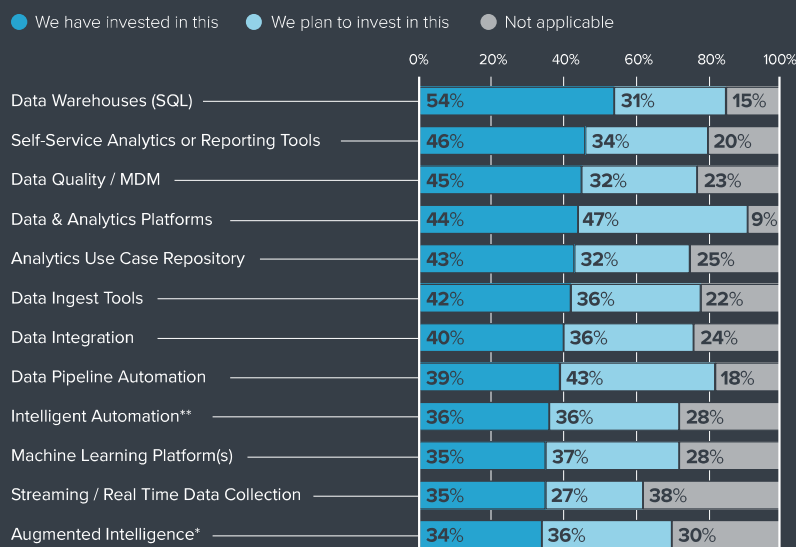
Modernizing the Data Analytics Stack

KEY FINDING

Master data management processes and meeting regulatory requirements are key challenges for data leaders

Organizations are Planning More Investments into Data Analytics Platforms

Which of the following technologies are part of your enterprise's data and analytics ecosystem?

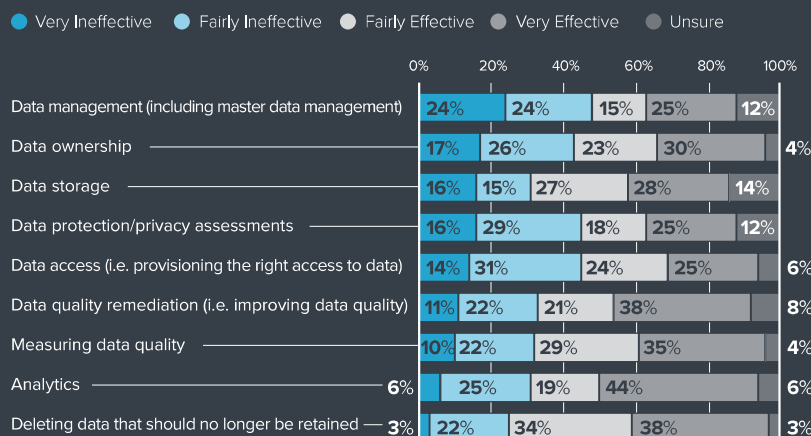


* i.e. AI-powered analytics with human expertise

** i.e. fully automated AI-powered systems

Data Management Processes Are the Least Effective Elements of Data Governance

How effective are your enterprise's processes for each of the following aspects of data governance?



Data Leaders are Struggling with Navigating Complex Regulatory Requirements

Which of the following challenges have you encountered and overcome while modernizing your enterprise's data and analytics stack?

- We're still dealing with this challenge
● We've overcome this challenge

Navigating regulatory requirements and managing compliance

62% 38%

Determining our cloud strategy

56% 44%

Delivering business outcomes fast enough

56% 44%

Ensuring the security of data in the cloud

54% 46%

Readiness of legacy systems (i.e. lack of systems interoperability)

52% 48%

Avoiding vendor lockin

48% 52%

Lack of a data-driven business culture

46% 54%

Moving ideas into production, operationalizing

46% 54%

Supporting broad range of analytics / ML tools

40% 60%

Securing the necessary budget

40% 60%

Defining the ideal data architecture for the enterprise

39% 61%

Integrating different tools and systems

37% 63%

Source: Corinium Intelligence, 2022

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CHAPTER 5: MANUFACTURING

Data Leaders Are Turning to AI Engineering

KEY FINDING

Manufacturing enterprises are turning to emerging disciplines like AI engineering while grappling with their cloud strategies

One emergent trend that is especially prominent in manufacturing is [AI engineering](#), a discipline dedicated to enabling the use of AI in the real world. Rather than focussing on individual tools and new capabilities, it asks broader questions about mission outcomes and the limitations of AI.

A full 62% of data leaders in manufacturing told us that AI engineering would be part of their strategies in the coming year, a sign that the sector could lead the way in helping AI models to break out of controlled testing environments and perform well in messy real-life situations. In many cases, this discipline may be applied to autonomous robots operating in dynamic environments. ▶

Data Pipeline Automation Is Set to Expand

Data pipeline automation – extracting, transforming, and combining data from different sources – will also be a key focus this year. More than 28% in manufacturing told us their enterprises had already invested in this, while over 52% said they plan to do so.

Haroon Abbu is Vice President, Digital, Data & Analytics at Bell and Howell, a manufacturer of automated machinery for e-commerce, robotics, industrial automation, and more. The company offers a complete portfolio of outsourced service offerings, including remote monitoring, repair, and diagnostics.

Manufacturers of such systems and equipment, he says, offer a complete solution for data leaders facing pressure to deliver tangible business outcomes. After all, it's not difficult to quantify the cost savings of repairing a machine remotely with the help of AI, rather than sending a technician.

62%

of data leaders in Manufacturing said they are incorporating AI engineering in their data analytics strategies this year

Source: Corinium Global Intelligence, 2022

"At the end of the day, when you add all that up, it should all result in bottom-line savings, your gross margin should go up," Abbu says.

With more than 71% of data leaders in manufacturing struggling to deliver business outcomes fast enough, it seems likely that many enterprises may choose to shape their strategies around directly improving the balance sheet.

Lack of Data-driven Business Cultures Remains a Challenge

Manufacturing was the most mature sector in terms of data culture, according to our survey: more than 23% said they were data-led, meaning

leaders consistently make decisions based on data and that strategy is shaped by data-driven innovation.

And just over 42% in the sector said they are data-driven, with data strategies aligned to overall strategy and insights from data consistently informing decisions. Even so, many said it still wasn't good enough; over 47% said that a lack of a data-driven business culture remains a challenge.

As someone who works at a company that manufactures equipment and provides field services to retail companies, Abbu sees lessons that manufacturing can learn from the retail sector.

"Retailers are on the cutting edge because it's a real low-margin business," he says. "We've seen that with many of the top retailers going with computer vision for automated checkouts, for example."

"Some manufacturing and field service companies are on the cutting edge, but a lot of others are not there yet," he says. "It's traditionally a break-fix model, but that's where more innovation needs to happen. We can learn from retail there."

"I know people have talked about this for years," he adds, "but there's been very slow progress when it comes to predictive services and prescriptive services, and one of the problems was data was not there in real-time. Now, the elasticity of the cloud allows us to do that." ▶





Determining a Cloud Strategy and Encouraging Adoption

One of the most prominent challenges in manufacturing is determining a cloud strategy; roughly 66% said they were dealing with this. Given the scale and scope of the cloud, it's not surprising that enterprises are anxious to get things right and avoid potentially costly and time-consuming pitfalls.

The cloud strategy at Bell and Howell, Abbu says, is managed by a digital steering committee consisting of himself, the head of engineering, the head of IT, and the CFO.

"Any of the new solutions that we want to bring forward to the company, we have this discussion within the digital steering committee so that we are working on the right priorities," he says.

While cloud solutions must be carefully planned, slow adoption of remote technologies is one thing holding the sector back, Abbu says. Machine technicians, for example, may be reluctant to embrace AI-enabled remote monitoring, partly because they have yet to see successful cases and partly because they may view it as a threat to their jobs.

"When it comes to analytics, when it comes to any digital technology, in improving our efficiencies or customer efficiencies, adoption plays a big role," Abbu says. "And that's all about people, not necessarily about technology. How do we make sure that they get on board, and they don't feel threatened by technology?" ■

"Some manufacturing and field service companies are on the cutting edge, but a lot of others are not there yet. It's traditionally a break-fix model, but that's where more innovation needs to happen. We can learn from retail there."

Haroon Abbu

Vice President, Digital, Data & Analytics, Bell and Howell

DATA POINTS AT A GLANCE

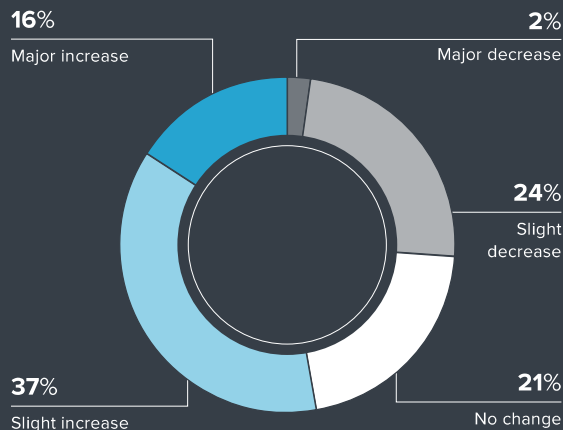
Data Analytics Trends in the Coming Year

KEY FINDING

Despite increasing emphases on data analytics most companies are not yet fully data-driven

Most Companies Are Placing More Emphasis on Data Analytics This Year

Compared to last year, do data and analytics programs have more or less resources and emphasis in your company?



Only 14% of Business Leaders are Able to Consistently Make Data-driven Decisions

Which of the following best describes the overall business culture within your enterprise today?

INTUITION-DRIVEN

Data is not available to guide day-to-day decision-making and our business strategy is guided by the experience and intuitions of company

5%

DATA-INFORMED

Data is available to guide day-to-day decision-making, but executives and leaders may ignore insights that conflict with their own 'gut feelings'

53%

DATA-DRIVEN

Our data strategy is aligned with the business' overall strategy and data-driven insights are used consistently to inform day-to-day decision-making

28%

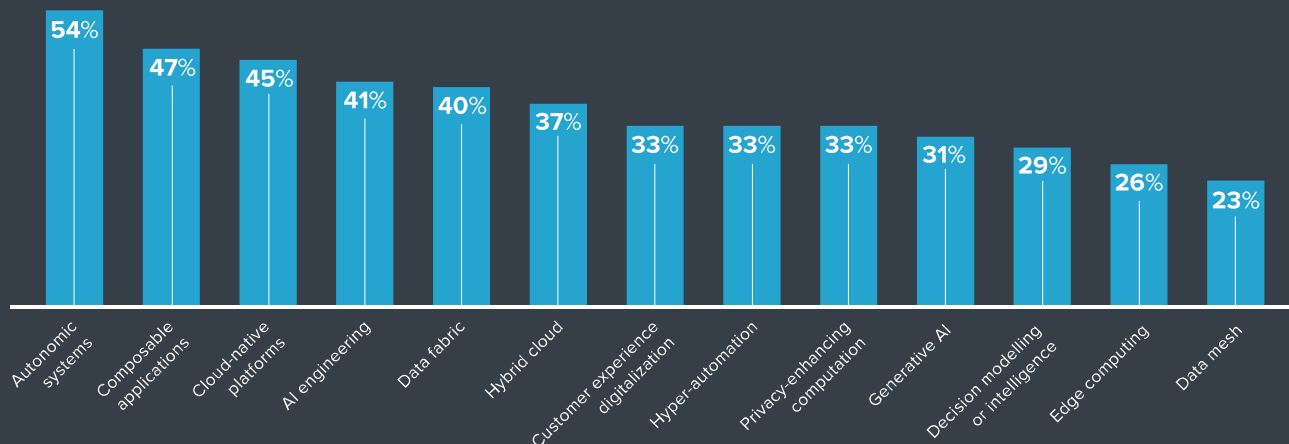
DATA-LED

Business leaders consistently make data-driven decisions and data-driven innovation is now shaping the business' strategy and enabling new operating models

14%

Data Leaders are Eyeing Trends in Autonomic AI and Composable Apps in the Next Year

Which of the following data industry trends will you be incorporating into your data and analytics strategies in the coming 12 months?



Source: Corinium Intelligence, 2022

CHAPTER 6: INSURANCE

Data Leaders are Implementing Cloud Apps as Part of a Hybrid Strategy

KEY FINDING

Health insurers are keen to incorporate cloud-based apps into their data strategies, but must also focus on improving data culture and access to resources

In an industry replete with arcane mathematical calculations that try to make sense of complex real-life events, data leaders are increasingly seeing the cloud as a way to streamline things. Among all the data industry trends listed in our survey questions, enterprises in the insurance sector were the most interested in cloud-native platforms, with 60% wanting to incorporate them. However, with much of their infrastructure and data sources still on-premises, many will be expanding a hybrid approach to data architecture that spans physical data centers and the cloud. ►

“We’re an industry where we love torturing the data. We do it more than most”

Vijay Venkatesan

Chief Analytics Officer,
Horizon Blue Cross Blue
Shield of New Jersey

Predicting Opioid Addiction and Analysing Grocery Shopping

In health insurance, enterprises are tackling difficulties with data collection by gathering data using cloud-based platforms from the very start, says Vijay Venkatesan, Chief Analytics Officer at Horizon Blue Cross Blue Shield of New Jersey.

“So you’re not dependent on the legacy technologies within health systems, you could now move to the cloud and get data accumulated there to synthesize it,” he says.

The insurance sector was, among the five surveyed, the most interested in using digital transformation as a metric for success. Half of all firms in the sector said their data strategies were judged based on how much they furthered digital transformation. And

“We’re interested in things like social determinants and we’re looking at other data sources like retail data”

Vijay Venkatesan

Chief Analytics Officer, Horizon Blue Cross Blue Shield of New Jersey

45% chose “deliver more apps or use cases” among their top three metrics.

Venkatesan has been working on delivering a use case to help predict when a patient in his company’s network is vulnerable to opioid addiction. This involves mining data for the number of hospital visits, the medications they’re on, whether they’ve skipped visits, and whether they’ve expressed suicidal thoughts,

among other things, he says.

And his team is using an inferential learning model to develop AI that can use data about grocery shopping habits in a given area to understand more about the eating habits of diabetic patients.

“We’re interested in things like social determinants and we’re looking at other data sources like retail data,” he says. ►





Health Insurers Torture the Data More Than Most

Insurance was the second least mature sector in terms of data culture after telecoms, according to our survey, with 75% of enterprises saying either that leaders may ignore data to go with their gut, or

that things were always done on intuition and experience.

But Venkatesan says that ignoring the data is not the only issue.

“To borrow an old adage, I think we torture the data so that it confesses to anything,” he says. “We’re an industry where we love

torturing the data. We do it more than most.”

And the sector has a way to go when it comes to aspects of data governance too. Sixty percent said their operations are ineffective when it comes to data management.

The reason may be that data governance is not widely seen as a metric for success. The insurance sector showed the least interest in maintaining and improving data quality and ensuring data governance, with just 15% choosing each of these as a top-three metric for success, below the average of 36% and 24% respectively. ►

70%

of insurance enterprises said meeting regulatory requirements and compliance is a key issue this year

Source: Corinium Global Intelligence, 2022

Putting Insights Before Data to Tackle Collection Challenges

This year, data leaders in insurance will have to tackle issues securing resources for certain technologies. A little under two-thirds of enterprises – 60% – said resources were either insufficient or very insufficient for basic analytics or business intelligence reporting.

The same percentage said they had issues securing resources for ModelOps, an AI-based approach that automates the improvement of data analytics models after they're launched.

The overall picture in terms of resources was mixed. Insurance was the sector with the highest number – 25% – reporting a major increase in resources, while another 20% said there had been a slight boost. But it was also the sector with the highest

“Most people think of data as the first step, before you get to insights. We think, ‘what’s the action or insight we want?’ and then ask the question, ‘what data is required to build that insight?’”

Vijay Venkatesan

Chief Analytics Officer, Horizon Blue Cross Blue Shield of New Jersey

number reporting a decrease; 30% said there had been a slight drop and 5% a major one.

And in keeping with the overall picture in our survey, regulatory requirements and compliance were flagged as an issue for 70% of insurance enterprises.

In health insurance specifically, gathering data remains costly and time-consuming, thanks to the fact that different patient records

are kept in numerous locations on various systems and recorded in different ways.

Venkatesan and his team are meeting this challenge by ‘working backward’, he says.

“Most people think of data as the first step, before you get to insights. We think, ‘what’s the action or insight we want?’ and then ask the question, ‘what data is required to build that insight?’” ■





CONCLUSION

Be Excited, But Stay Grounded

It's an exciting time to be a data leader in North America. After years of building infrastructure, winning buy-in, and gaining expertise in descriptive analytics, many enterprises are now prepared to move to the next level, with increasingly sophisticated AI models playing a key role.

The coming year will see an impressive array of use cases at enterprises that have laid the right groundwork, from robot banking assistants to AI models that can prevent opioid addiction and composable apps that allow people who can't code to build software.

The right way forward will vary markedly from sector to sector and from company to company. If there is a common lesson that emerges from our research, and the contributions of senior data leaders to this report, it is that even the most impressive tools are only of use in the right context.

In other words, there's plenty to be excited about in the coming year, but leaders must be careful in deciding what's exciting for them. ▶

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About the Editor

Gareth Becker is an experienced editor and content marketer and produces B2B stories that focus on emergent trends in data and analytics, cloud computing, information security and more.

He works with world-leading brands to shine a light on fresh ideas and innovative products using a range of multimedia content.

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Gareth Becker

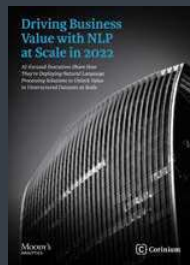
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