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Accelerate Business Insights With A Modern Full-Stack Analytics Platform

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Executive Summary

Nine in 10 respondents say their organizations' current solutions cannot meet all of their business objectives.

Full-stack platform users report their organizations' data and analytics solutions meet business needs at a higher rate than solutions built on siloed platforms and components.

Data insights fuel business and analytics solutions are the engine that powers business, driving revenue, accelerating innovation, and improving customer experiences. However, solutions built using legacy data platforms create speed bumps that slow the analytics-to-insights pipeline and greatly reduce the value of data. To maximize the value of data, firms turn to full-stack data platforms based on a highly scalable database management system (DBMS) optimized for analytics to build analytics solutions that provide the speed and agility needed to meet business goals.

Incorta commissioned Forrester Consulting to evaluate the impact of current data and analytics solutions on the data-to-insights cycle. Forrester conducted an online survey with 215 analytics and business intelligence decision-makers at North American retail, manufacturing, financial services, and supply chain/SI organizations to explore this topic.

KEY FINDINGS

- **Legacy data and analytics platforms aren't built for modern business needs.** Many current data and analytics platforms and solutions were not architected for today's breakneck pace of business, where agility is key and data insights need to flow in nearly real time. These architectural challenges add up to data and analytics solutions that can't meet the needs of the business. Nine in 10 respondents report their organizations' current solutions cannot meet all of their business objectives.
- **Increasing data velocity will push legacy solutions to the breaking point.** Analytics solutions that struggle to keep up today will be pushed to — and beyond — their limit. Respondents expect the data sources that feed analytics to more than double in the next 12 months. This tsunami of data will require a platform that is agile enough to incorporate new data sources, change analytics data sources, and spin up data reports and dashboards at the speed of business.
- **A full-stack analytics platform can help you move at the speed of business.** A modern full-stack data and analytics platform based on a highly scalable DBMS that is optimized for analytics can give your organization the agility it needs to meet the needs of the business. Respondents using solutions built on full-stack platforms report the ability to incorporate new data sources, build reports, and refresh dashboards faster on average than users of solutions built on other types of platforms. While only one in four respondents use a full-stack platform to build analytics solutions today, many more see it as their preferred method. The payoff for switching? Full-stack platform users report their organizations' data and analytics solutions meet business needs at a higher rate than solutions built on siloed platforms and components

Modern Analytics Solutions Can't Meet Business Expectations

As data volumes rapidly expand, businesses find themselves with an untapped source of insights that can drive innovation, improve customer experiences, and differentiate from competitors. To capitalize on this, it's imperative that data analytics move at the speed of business, transforming data to insights that can help businesses achieve their most important objectives. Unfortunately, in surveying midmarket and large enterprises in North America, we found this is rarely the case. And their legacy analytics solutions that are often the culprits.

Current solutions for data and analytics often fail to meet top business objectives (see Figure 1). Less than 20% of respondents say their organizations' current solutions completely meet their innovation, customer experience (CX), and revenue objectives. In addition, less than 20% of respondents also say their organizations' current solutions meet their business agility and time-to-market objectives. Overall, nine in 10 respondents indicated their organizations' current solutions can't meet all of their business objectives. With so much on the line, why are data and analytics solutions not making the grade? We sought to find out why.

Figure 1

"To what extent have your current data/analytics/BI solutions met your business objectives?"

Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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THE PACE OF BUSINESS OUTSTRIPS LEGACY SOLUTIONS' CAPABILITIES

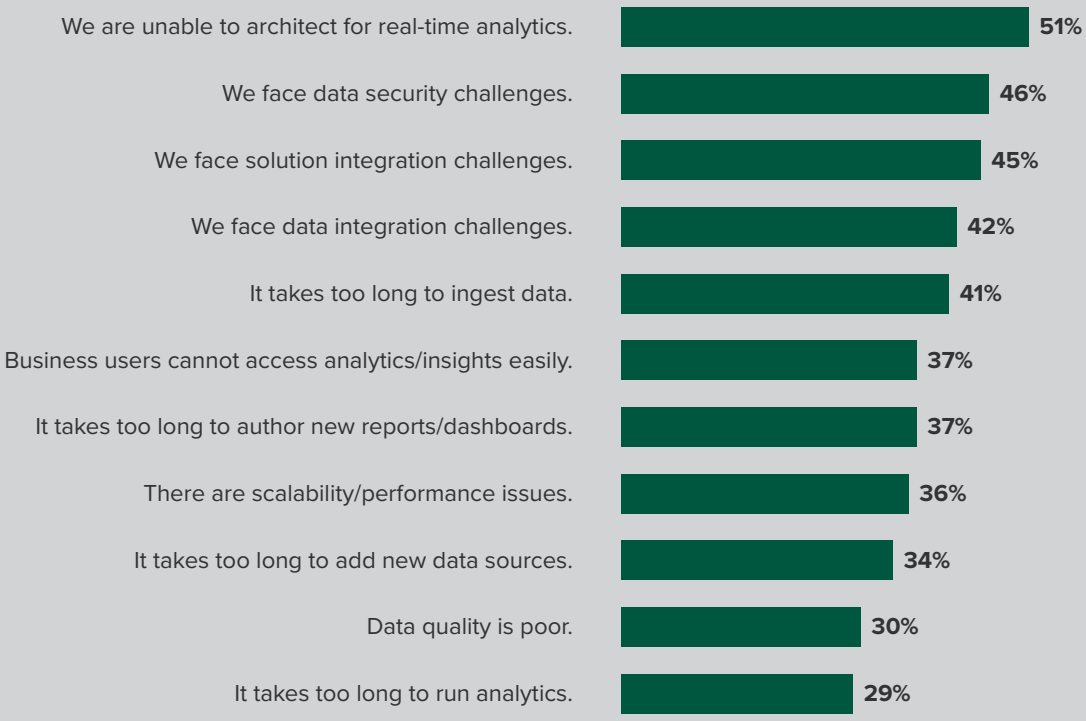
The transformation of data to insights is an extremely time-sensitive process. Acting on old data makes a company reactive instead of proactive, leaving them vulnerable to competitors who can adapt to changing market conditions faster. Slow, nonagile analytics bog down innovation, prevent businesses from responding to changes in customer behavior, and cause firms to miss revenue opportunities. With analytics speed being crucial to business success, what are the barriers to going faster? Our survey shows that today's data and analytics solutions:

- **Are not architected for real-time analytics.** Over half of our survey respondents report their organizations can't architect their solutions for real-time analytics, which is the main reason current solutions aren't meeting business objectives (see Figure 2). Real-time analytics is the key to combating increasing data velocity, generating data insights at the speed of data intake. Real-time or near-real-time capabilities are crucial to meeting business objectives, but many legacy data solutions were built using platforms that aren't architected or optimized to collect, analyze, and synthesize data insights at the speed needed for today's rapid pace of business and innovation.

Over half of our survey respondents said their organizations can't architect their solutions for real-time analytics objectives.

Figure 2

"Why aren't your current data/analytics/BI solutions able to meet all of your business objectives?"



Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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- **Create time-consuming integration challenges.** As the business demand for data and analytics has increased in velocity and complexity, many firms have built or bought point solutions to solve challenges or meet needs and integrate them together. Nearly three in four survey respondents report that their organizations use a solution that is orchestrated this way. But, over time, challenges from point solutions integration and data integration become obstacles to business success. Nearly half of respondents report that their organizations face solution integration (45%) and data integration (42%) challenges that keep them from meeting goals. Respondents noted that integration efforts take time both in data warehousing (40%) and analytics (45%) solutions, tying up resources and slowing down the path from data to insights.
- **Prevent the business from turning analytics to insights.** Almost four in 10 respondents report their organizations' current solutions make it difficult for business users to access analytics and insights, when easy access to this data allows users to act quickly on insights. Self-service analytics is a powerful tool to enable this, but many legacy solutions aren't built for this, and integration complexities make it challenging.
- **Can't deliver the key components of data insights fast enough.** To transform data to insights, that data must be ingested, transformed, analyzed, and visualized for use. The respondents' organizations current solutions don't move at the speed of business, taking too long to add new data sources (34%), ingest data (41%), run analytics (29%), and author new dashboards or reports (37%). Each of these steps is vital to generating business insights, and each is a current source of frustration.

ORGANIZATIONS THAT CAN'T KEEP UP MAY DROWN IN DATA COMPLEXITY

The data tsunami is growing. Respondents predict that the number of data sources that feed their organizations' analytics and business intelligence (BI) solutions will more than double in the next year (see Figure 3). New data sources are added to analytics/BI solutions every two months on average, and data sources change more frequently than that (on average every six weeks). This means that data repositories like data warehouses and lakes need tuning and optimization frequently. Almost 70% of respondents report that their organizations are doing so every month or more frequently. This explosion of new data volume leads to data warehousing challenges around managing different types of data, which 42% of respondents indicate this is a technology challenge with their data warehouse solution, and scalability (36%).

Respondents predict that the number of data sources that feed their organizations' analytics and BI solutions will more than double in the next year.

The data that organizations use today to fuel their analytics solutions often requires complex transformations between source data and data warehouse, which can create analytics latency and further complicate data velocity challenges. In addition, the need to generate data insights faster has led to the need to analyze this new data direct from the source in native form. Seven in 10 respondents report their organizations analyze data as is with some regularity. Analyzing data in multiple ways can create data movement and replication challenges, which over half of survey respondents noted. It also leads to difficulty in building new data connectors, which nearly two-thirds of respondents reported as a challenge today.

If organizations are unable to meet business objectives with current data and analytics solutions, what will they do as data volumes and complexity continue to increase and accelerate?

Seven in 10 respondents report their organizations analyze data as is with some regularity.

Figure 3

Analytics Must Be Agile To Keep Pace With New Data Acceleration

Average number of data sources feeding respondents' data/analytics/BI solutions today:

320 data sources

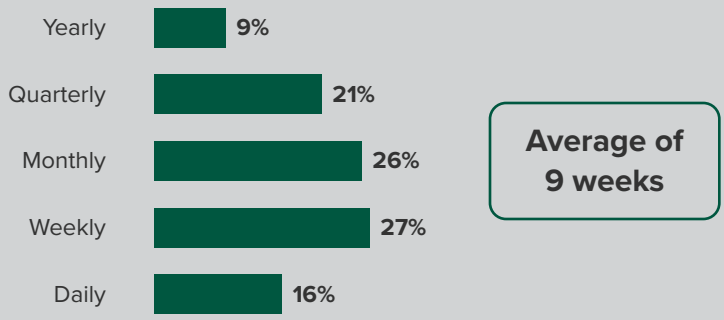
Average number of data sources in the next 12 months:

708 data sources

Respondents add new data sources to their data/analytics/BI solutions every **9.5 weeks** on average.

Respondents change data sources to their data/analytics/BI solutions every **6 weeks** on average.

"On average, how often do your data pros need to tune/optimize your data warehouse/data lake?"



Base: 215 North American data and analytics decision-makers
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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Leverage A Modern Full-Stack Analytics Platform To Build Solutions That Move At The Speed Of Business

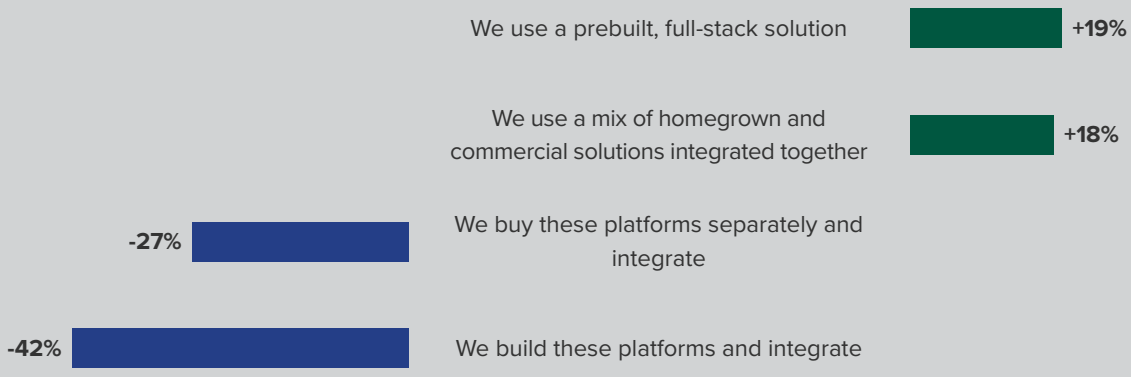
Current data and analytics platform and solution architectures contribute to challenges that hinder organizations' ability to meet modern business objectives. These challenges either create latency or slow the data analytics pipeline that organizations rely on to innovate, delight customers, drive revenue, and differentiate from competitors. They show the limitations of solutions built using legacy platforms that were not developed to handle the volumes of data, the inherent data complexity, and the analytics speed required for the new normal.

To avoid these speed bumps and deliver insights at the speed of business, organizations need to rethink how they source their data and analytics platforms. Instead of relying on platform suites cobbled together through patchwork integrations, some organizations adopt modern full-stack data and analytics platforms. These platforms are based on highly scalable DBMS optimized for analytics that cover the entire data analytics pipeline from transformation to analytics and BI (see Figure 4). While 26% of our respondents report their organizations use solutions built using a full-stack platform today and more see full-stack platforms as the preferred way to source analytics solutions in the future (31%). This represents the largest percent increase of all current approaches with a 19% increase. Our study found that this enthusiasm is well warranted and that a full-stack platform can build solutions that deliver faster data insights, improve analytics security, and better meet the demands of the business.

While 26% of our respondents report their organizations use solutions built using a full-stack platform today and more see full-stack platforms as the preferred way to source analytics solutions in the future (31%).

Figure 4

"Which of the following best describes how you source the data/analytics/BI platforms that make up your data analytics/BI solution? What would be your preference in the future?"
(Showing the difference between future preference and current sourcing method.)



Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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FULL-STACK PLATFORMS REDUCE THE DATA TO INSIGHTS CYCLE

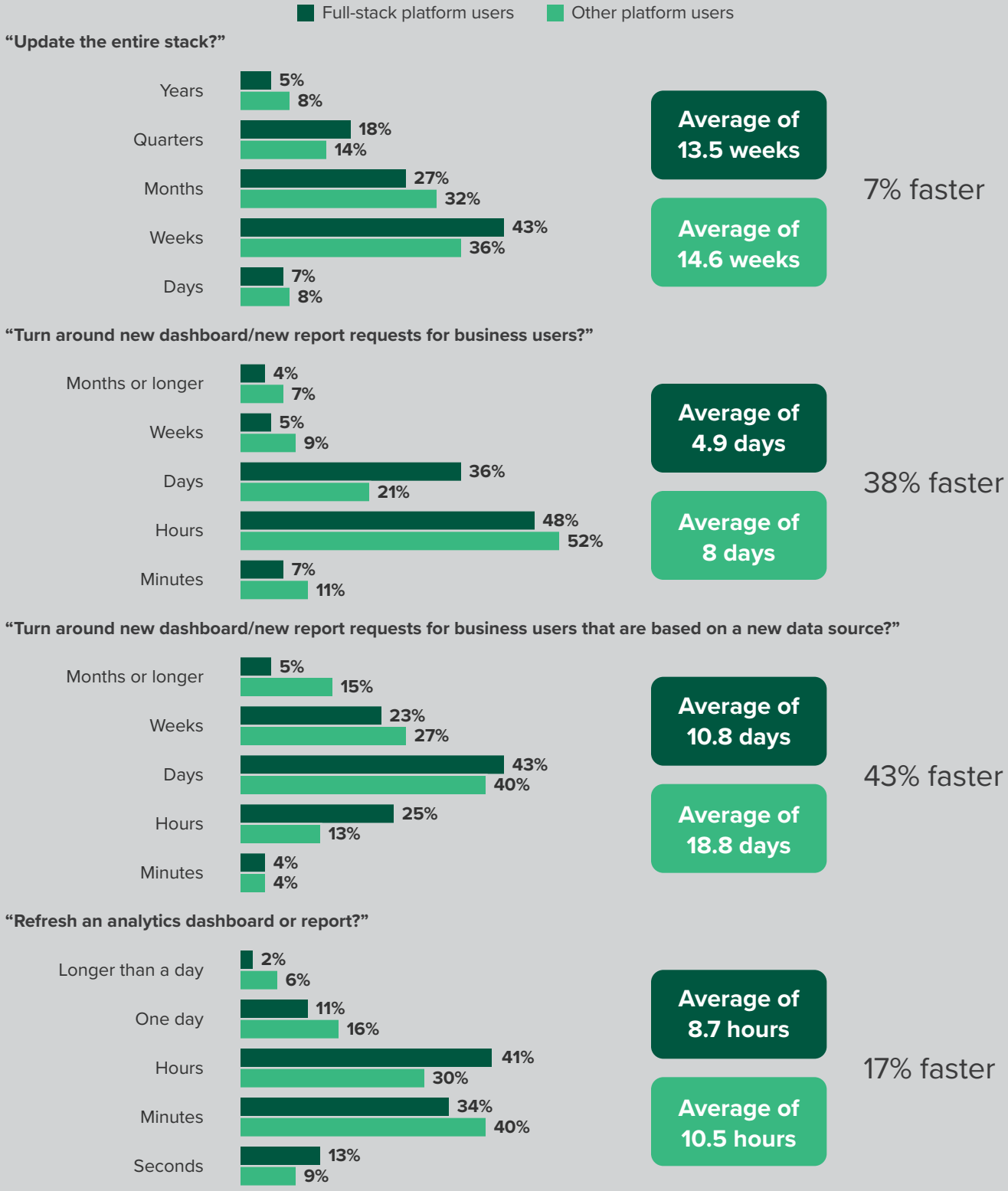
Our study uncovered a multitude of ways that a modern full-stack platform based on highly scalable DBMS optimized for analytics enable faster analytics and reduce the data to insights cycle:

- **Less time spent on integrating otherwise separate tech components.** Full-stack platform users reduced time-consuming integration efforts that plagued the analytics pipeline, therefore increasing their speed to business. Respondents using a full-stack platform were 14% less likely to cite integration effort as a data warehouse platform challenge, and 31% less likely as an analytics platform challenge.
- **Less time spent on new business requirements.** Respondents using a full-stack platform to build analytics solutions report faster average processes vs. others across the entire analytics pipeline, especially when incorporating new business requirements (see Figure 5). Updating analytics tech stacks with new or changes in data sources was 7% faster, while delivering new dashboards or reports for business users was 38% faster. Delivering dashboards based on new data sources was 43% faster. Users also report that refreshing analytics dashboards and reports is faster on full-stack platforms (17%) than other types. These speed increases serve to better meet the needs of the business. Respondents using other platform types are 30% more likely to cite the time it takes to author new dashboards as a reason their organizations' analytics solution cannot meet business objectives compared to full-stack platform users.
- **Ability to analyze data as is.** Modern full-stack platforms are often based on highly scalable DBMS optimized for querying and analyzing any data structures or models. This means there is no need for separate platforms to analyze data as is vs. in a data warehouse with heavy transformations. This capability is quickly becoming a must-have. Analyzing data as is also means less complex transformation effort is required, enabling faster time-to-insights.
- **Full-stack platforms enable better data security.** Analyzing data as is makes replicating source security — an important data protection capability — easier. Just 16% of full-stack platform users spend significant effort doing so, compared to 31% of respondents that use other types of platforms — almost double.
- **Full-stack platforms deliver better data warehouse performance.** With faster speeds and less integration challenges, it comes as no surprise that full-stack platform users report greater satisfaction with their data warehouse platforms than others with 59% of respondents that use a full-stack platform are "Satisfied" or "Very satisfied" vs. 52% of other platform users.

Respondents using a full-stack platform to build analytics solutions report faster average processes vs. others across the entire analytics pipeline, especially when incorporating new business requirements.

Figure 5

"On average, when there is a change in data sources, how long does it take to:"



Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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MODERN FULL-STACK PLATFORMS BETTER MEET BUSINESS NEEDS

Our study shows that full-stack data and analytics platforms build solutions that can deliver business insights faster and with less challenges than other platform types. The ultimate payoff comes from using those insights to drive innovation, improve customer experience, increase revenue, and provide competitive differentiation. Full-stack platform users report their organizations' data and analytics solutions meets these business needs at a higher rate than other types (see Figure 6). In addition, full-stack users were 42% more likely to report major quantifiable innovation increases as a result of their current analytics solutions than other types. Modern full-stack data analytics platforms transform improved analytics speed into top- and bottom-line business value.

Figure 6

"To what extent have your current data/analytics/BI solutions met your business objectives?"
(Showing "Completely" and "Very well" ordered by business importance.)

Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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Key Recommendations

Forrester's in-depth survey of data and analytics decision-makers at North American enterprises yielded several important recommendations:

Assess the current state. Take an inventory of your organization's data-to-insights pipeline to find the speed bumps. Assess the current state, the number of siloed solutions your organization uses, and the time spent on integration vs. addressing business requirements. Understanding where major sources of analytics latency exist can help plan requirements for your organization's analytics solution roadmap.

Envision a target state. Craft a target state based on the full-stack data and analytics platform you will leverage to take advantage of business opportunities and address business challenges. With fewer distractions like integrating siloed platforms and components, you can tune and optimize your legacy DBMS.

Look for solutions to analyze data as is. Not all full-stack solutions are built the same when it comes to capabilities for analyzing data as is. Evaluate full-stack platforms based on a highly scalable DBMS optimized to analyze data in any shape/model — key capabilities to enable as-is analysis.

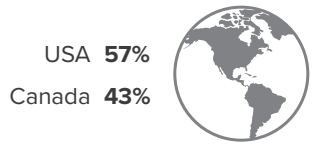
Build a target state business case based on tangible benefits. Build your business case for a modern scalable full-stack data and analytics platform based on tangible business and IT benefits. Business areas should see top-line benefits such as increased revenue and better CX based on improved and real-time insights. IT will see bottom-line benefits such as cost reduction due to less integration efforts and less time tuning and optimizing siloed platforms and components. Don't forget to add better regulatory compliance and risk avoidance achieved by improved transparency into data lineage — another key benefit of full-stack platforms — as business case parameters.

Appendix A: Methodology

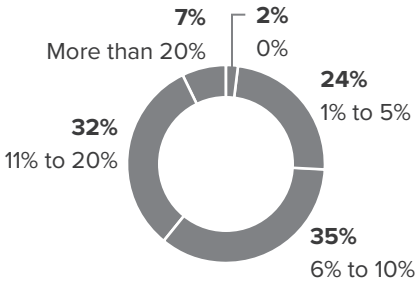
In this study, Forrester conducted an online survey of 215 financial services and insurance, manufacturing and materials, retail, and supply chain respondents in Canada and the US to evaluate current data and analytics solutions impact on the data to insights cycle. Survey participants included decision-makers responsible for analytics and business intelligence strategy decisions across IT and the business. The study was completed in February 2021.

Appendix B: Demographics

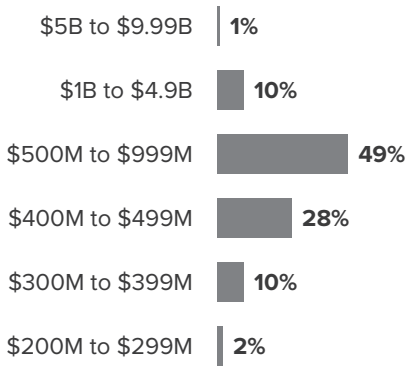
COUNTRY



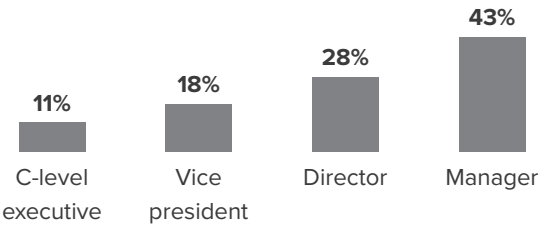
AVERAGE ANNUAL REVENUE GROWTH OVER THE LAST THREE YEARS



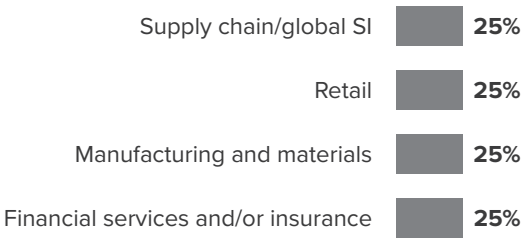
COMPANY SIZE



ROLE



INDUSTRY



POSITION/DEPARTMENT

Base: 215 North American data and analytics decision-makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Incorta, February 2021

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Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

"Enable An Insights-Driven Business," Forrester Research, Inc., April 29, 2021.

"Now Tech: Augmented BI Platforms, Q2 2021," Forrester Research, Inc., April 14, 2021.

"Your Business Is Only As Fast As Your Data," Forrester Research, Inc., January 15, 2021.