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HOW TO WIN IN TODAY'S DATA ECONOMY

Why data collaboration, cutting-edge business analytics, and inspiring data leadership are key

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EXECUTIVE SUMMARY

In 2019, Kraft Heinz took just nine months to transition its on-premises data centers to a multi-cloud environment—a feat that not long ago could have taken years.

By breaking down data silos, the multinational food giant made its data democratically and readily available throughout the business. An impressive achievement, but only the first step toward becoming a "Data Economy Leader."

Kraft Heinz is already a serious player in the data economy, operating across three interconnected domains in the cloud to advance its business:

1. Sharing data easily and seamlessly between its many subsidiaries and business units
2. Democratizing data access similarly to its wider ecosystem of suppliers, retailers, and other business partners
3. Connecting to potentially thousands of organizations around the globe to exchange third-party data, data services, and data applications

"Holding information is power, for sure … but sharing it makes you more powerful," Kraft Heinz's Vice-President of Digital Transformation, Mani Gopalakrishnan, said.

Technology and data are key but so are the people who provide and use the data to transform an organization. In late 2020, with a global pandemic taking hold of all aspects of work and society at large, Kraft Heinz accelerated its transformation. It launched a new operating model, vision, and values in order to develop and instill an agile, consumer-driven culture across the company.

But this journey required Kraft Heinz to learn new skills, build new mindsets, bring in new talent, and establish new ways of working. "We set ourselves an ambitious goal of being a digitally powered, agile enterprise by 2025," Gopalakrishnan explained.

Welcome to what could be your immediate future—the business edge that comes from near-boundless access to the data, data services, solutions, and collaboration that can only be found in the data economy. The organizations that exploit what the data economy offers are confronting the most complex business problems that were previously impossible to solve. They use data-driven insights to accelerate and guide research; reduce time to market of new products; improve customer experiences; and prevent fraud. They build new revenue streams by taking their data directly to market in the form of tailored data products and services made available to their customers, partners, and any other organization participating in the data economy.

Such organizations, however, remain in the minority. Our research, based on a survey of 1,000 senior business, technology, and data managers across eight countries and five industries, finds that many organizations:

Lack unrestricted access to their data—no more than 50% can access internal data wherever it resides

Do not regularly use data in making business decisions—no more than 38% indicate the majority of decisions are informed by data

Fail to use data strategically—48% use it at best "to some extent" to advance strategic business goals (such as growing revenue and identifying new opportunities) and 12% to "a small extent"

Lack the ability to exchange data with other organizations—just 45% are able to do so

Only a few organizations—6% of the sample—use, access, or share data in all these ways. These Data Economy Leaders are also achieving significantly better business results than their peers. For example, 77% of Leaders experienced annual revenue growth over the past three years, while just 36% of "Laggards" (the lowest-performing survey group) can say the same. Moreover, 60% of Leaders saw their market share grow over this period, compared with only 31% of Laggards.

Organizations that successfully participate in the data economy deploy technology, execute organization-wide strategies, and use data in ways that were unthinkable to them just a few years ago. Our research shows most organizations have ambitions to do the same but require guidance to lay the right foundations.

In addition to conducting the survey, we sat down with thought leaders—and with executives from our own customers—to hear their stories. We compiled the following report to explain what the data economy is, why it matters to you, and exactly how you can succeed in it.

ABOUT THE RESEARCH

- The analysis in this report is based on a survey of 1,000 senior business and technology executives conducted in November and December 2021.
- The survey was conducted in eight countries: Australia, Canada, France, Germany, India, Japan, the United Kingdom (U.K.), and the United States (U.S.).
- Five industries are represented: financial services, healthcare/life sciences, retail/consumer packaged goods (CPG), advertising/media/entertainment, and technology.
- Only representatives of mid-sized and large organizations ($250 million or more in annual revenue) were included.
- Just over half the respondents were C-level business executives and board members, with the balance consisting of other senior technology managers.

SECTION 1

READY OR NOT, THE DATA ECONOMY IS HERE

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The data economy represents global supply and demand for live data, data applications, and data services. It is powered by the technologies organizations use to share and access data locally and globally, including cloud data platforms, data exchanges, and data marketplaces that enable one-to-one, one-to-many, and many-to-many data relationships.

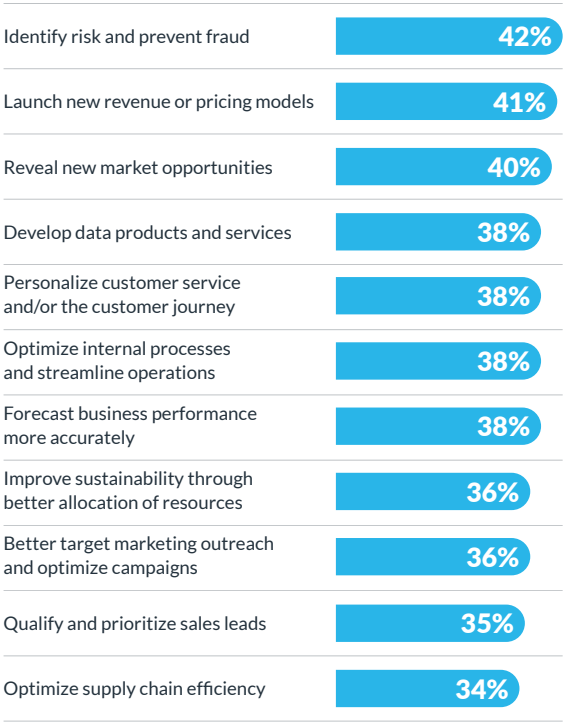
The data economy grows because organizations require more data products and services to reveal previously unforeseen insights. These new insights help organizations understand and better serve their customers; identify new market opportunities; streamline their operations; and develop data relationships with business ecosystem partners. The most advanced participants in the data economy have transformed their traditional business models by monetizing data, data-driven insights, data services, and data applications.

Which insights do organizations seek, and how are they applying them? Those we surveyed provide a snapshot of current use cases. Risk management and fraud prevention are most commonly cited, followed closely by uses that contribute directly to top-line growth: launching new revenue or pricing models, identifying new sales opportunities, and developing new data products and services. Other frequently applied use cases are those that deliver a more personalized customer experience, greater operating efficiencies, and more accurate business forecasting.

But winning in the data economy is not only about democratizing data and adopting new technology. It's also about understanding data leadership as a business value; nurturing a data culture that articulates the business benefits of the data economy for all internal and external stakeholders; and developing a data strategy that breaks down data silos, empowering all members of the organization to collaborate with data.

Figure 1: Common use cases for the data economy today

Share of respondents' organizations currently "using data strategically" in the indicated ways (top responses)



“The data economy *is* the economy now. Any business that is not participating in it will become legacy before too long.”

— CINDI HOWSON,
Chief Data Strategy Officer, Thoughtspot

FROM INSIGHT TO ACTION

Real-world examples across industries illustrate what organizations can accomplish once they have plugged into the data economy. They become part of a mutually beneficial ecosystem, both providing and receiving significant advantages from sharing data and data-driven insights with other participants via data-management technologies.

USE DATA TO REVEAL NEW MARKET OPPORTUNITIES:

NBCUniversal, a U.S. media company, has launched an "audience insights hub" based on a cross-cloud, data clean room environment, which enables it and other companies in its advertising ecosystem to integrate and analyze audience data in a productive and secure context.

DEVELOP DATA PRODUCTS AND SERVICES:

U.K. supermarket chain Sainsbury's launched a service that enables customers to instantly compare its products to those of its competitors.

TARGET MARKETING OUTREACH MORE EFFECTIVELY AND OPTIMIZE CAMPAIGNS:

By accessing weather and geolocation data via a modern data marketplace, Pizza Hut's analytics teams correlate weather patterns with customer purchasing habits and use this data to optimize targeted marketing campaigns, getting tailored marketing messages to customers just when they are most receptive to them.

OPTIMIZE INTERNAL PROCESSES AND STREAMLINE OPERATIONS:

U.S. asset-management firm Aflac has reduced from hours to minutes the time it takes its analytics models to deliver insights to its portfolio managers. "Consolidating all our data, and the ability to scale for growth and performance seamlessly, will ultimately help senior management make data-driven investment decisions," Aflac's Head of Global Investments IT, Ravishankar Radhakrishnan, said.

DELIVER MORE PERSONALIZED CUSTOMER SERVICE:

Anthem, Inc., a health company, shares data and insights with its care-provider partners, enabling them to offer more accurate diagnostic services and treatment to Anthem members. "We're able to predict business trajectories and then share that information with internal and external partners. Then, they can work with our members to really support them," Anthem's Chief Data & Insights Officer, Ashok Chennuru, said.

OPTIMIZE INTERNAL PROCESSES AND STREAMLINE OPERATIONS:

Novartis, a global pharmaceutical company, believes it can reduce the time it takes to bring a new drug to market from 12 years to 9 by applying data and artificial intelligence to the process. Novartis also believes it can bring new drugs to consumers at lower cost. "We want to reimagine medicine for the age of digital technology, and we want data and data science at the center of this transformation," Novartis's Head of Digital Delivery, Loic Giraud, said.

KEEN TO TAKE PART, BUT GUIDANCE REQUIRED

It is clear from our survey, however, that most organizations struggle to manage data and effectively extract value from it.

Just 38% of respondents say that data informs most or all decisions their organizations make. Only 45% say they are able to share data with or access it from external partners. "In many cases, organizations are not averse to the idea of sharing data, but they don't know how to do it and they don't have the infrastructure for it," explained Afua Bruce, author of *The Tech That Comes Next: How Changemakers, Philanthropists, and Technologists Can Build an Equitable World*.

Many organizations also fail to break down internal data silos, impeding data sharing and collaboration across the organization's business units. Only 55% say that such sharing can happen freely in their organization.

Why are so many businesses struggling to make the most of data? A lack of direction from senior leaders. According to Dan Vesset, Group Vice-President, Analytics and Information Management at IDC, "Without strong leadership from the start, organizations will find it difficult to develop the type of culture needed at lower levels to consistently generate and apply insights from data."

Figure 2: Not everyone is participating fully in the data economy

Share of respondents agreeing with statements about their use of data

We can share and access data across business units within our organization	55%
We can easily access all available data through a single system/application	45%
We can share and access data from organizations external to our own	45%
Most or all decisions in our organization are informed by data	38%

Yet, 49% of respondents' firms lack a C-level mandate to reposition the organization as "data forward" by promoting and facilitating data sharing and embedding data-driven insights at the core of business strategies and decision-making processes. Moreover, while 60% claim to have a fully developed and articulated data strategy, fewer than half (48%) have a C-level role responsible for delivering it.

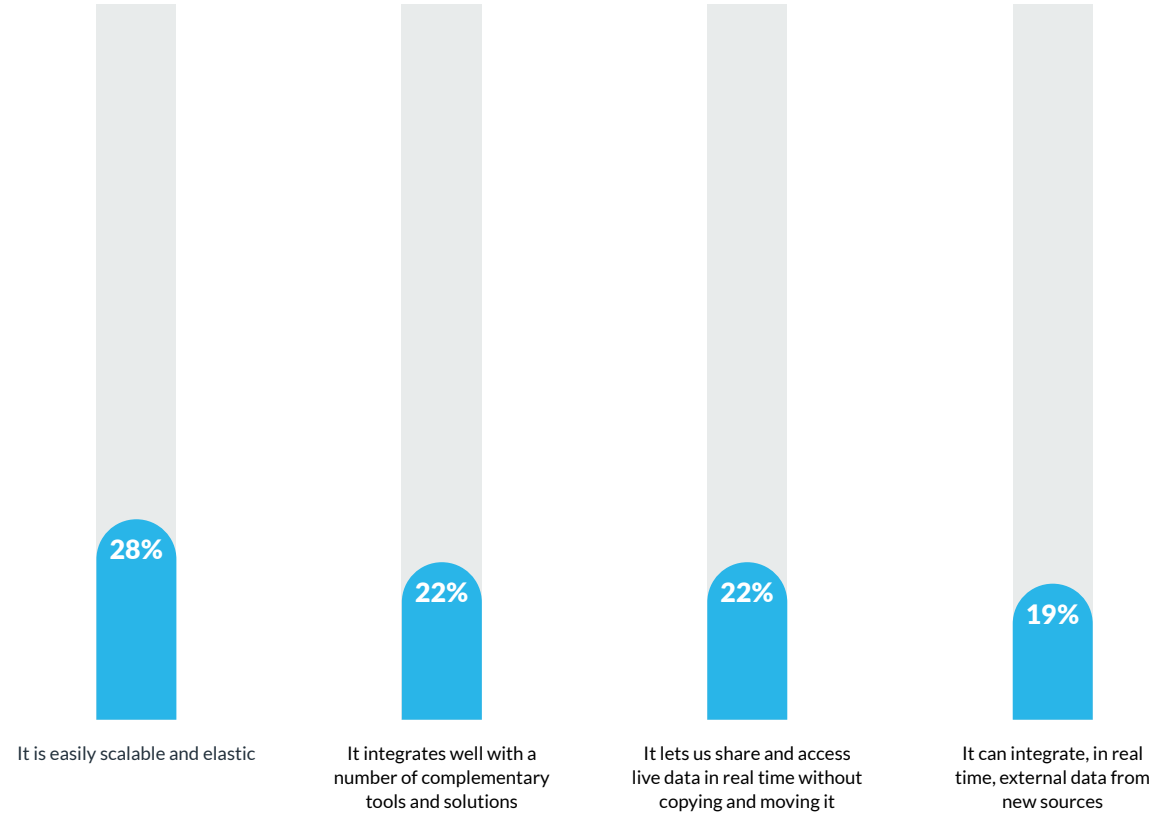
At many organizations, the technologies in use are not fit for the data economy. The data platform, for example, must be scalable and elastic and able to manage a near-unlimited amount of data with near-limitless concurrency and performance. Fewer than one-third of the 240 IT and data management respondents in the survey (28%) say their data management solutions are easily scalable. More important, less than one-quarter said their solution lets them share, access, and integrate live data in real time. This is a crucial distinction; many organizations have been sharing data within and outside their businesses for years but are constrained by traditional technologies that require them to copy and move data in limited quantities, allowing it to become "stale" and lose value immediately.

This is the biggest data technology challenge, according to Michele Goetz, Principal Analyst - Business Insights at Forrester. "Scaling your data capabilities may be straightforward for a very specific type of analytic exercise," she said, "but not when you're managing it across thousands of data and machine-learning models, thousands of dashboards, and thousands of interaction points with your partners and customers."

There is, however, a small group of organizations represented in the survey that outperform their peers in their management, analysis, and innovative application of data. And their efforts are bringing superior business results.

Figure 3: Technology weaknesses

Share of respondents agreeing with statements about the technology they currently use to store and manage data



SECTION 2

THE DATA ECONOMY LEADERS

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The organizations best positioned to benefit from the data economy display several common attributes.

To identify these companies in the survey—those we term Data Economy Leaders—we applied four specific criteria:

- They have unimpeded access to their data, no matter where it resides.
- They are using data to inform all or most of their business decisions.
- They are using data to advance strategic goals, such as growing revenue and identifying new business opportunities.
- They are able to share data securely with external partners.

There are currently very few organizations that meet all four criteria—just 6% of the entire survey sample—a reflection of the significant challenges involved in participating fully in the data economy.

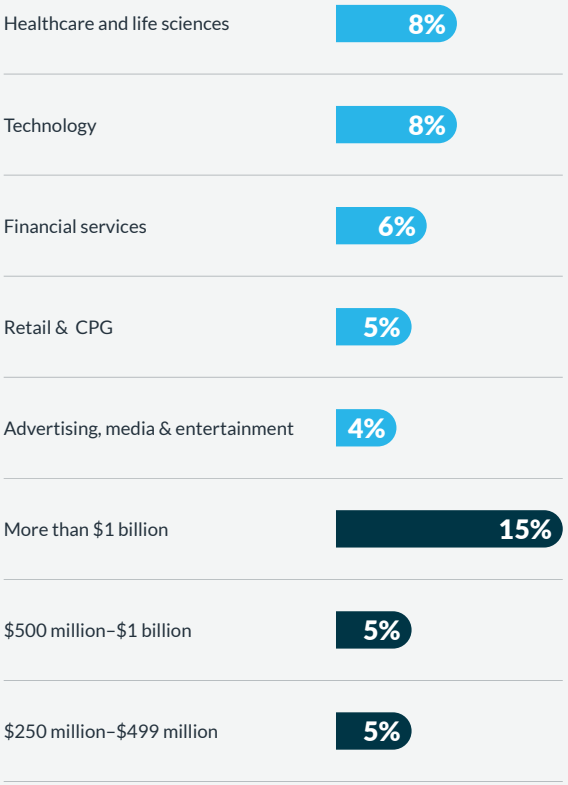
WHO ARE THE DATA ECONOMY LEADERS?

While they constitute only 6% of all firms, the Data Economy Leaders are present in all the industries represented in the survey. The healthcare and life sciences and technology industries boast a slightly higher number of Leaders. Other industries, including financial services, retail, CPG, advertising, and media firms, have slightly fewer high performers.

It is noticeable, however, that size (or revenues) matter—at least for now. A considerably larger share of companies earning in excess of $1 billion in annual revenues fall into the Leader category than do those with smaller revenues. (As many as 15% of >$1 billion firms are Leaders, while just 5% of those earning between $250 million and $1 billion can lay claim to the title). Larger, wealthier firms naturally have the advantage of greater financial and other resources to invest in cutting-edge technology and attract the most sought-after talent to implement their data transformations. However, new technologies and business models can ensure even smaller organizations will not be left behind in the data economy.

Figure 4: Where Leaders are more numerous

Share of Data Economy Leader respondents in each industry and revenue category



Deeper analysis of the identified leadership group reveals several other areas in which its members considerably outperform their peers in the survey. Their strengths are exhibited across three main pillars: people, process, and technology.

KEY ATTRIBUTES OF DATA ECONOMY LEADERS

PEOPLE

- Executive support
- Data and analytics leadership
- Enterprise-wide data-literacy training

PROCESS

- Alignment of data-strategy objectives
- Governance of data uses and outcomes
- Collaborative data sharing

TECHNOLOGY

- Scalability and power
- Openness and extensibility
- Ability to securely access and share real-time data

PEOPLE

Strong leadership is essential if organizations are to thrive in the data economy. Executive support, for instance, is crucial to establishing a positive, enterprise-wide approach to data innovation.

For almost two-thirds (63%) of Data Economy Leaders, there is a C-level mandate to become data-forward. Among the Laggards—the lowest performing group in the survey—only 39% say the same.

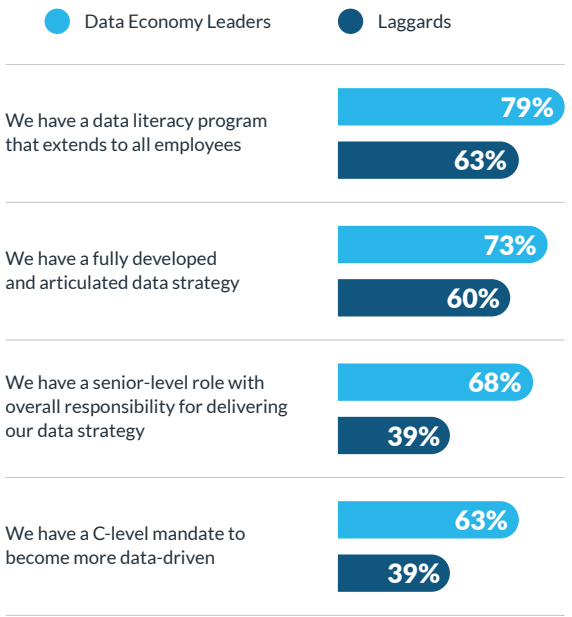
A strong and focused leader—a chief data officer (CDO) or equivalent—is required to drive and coordinate governance, literacy, and best practices in data management and analytics. The gap between Leaders and the rest is yawning here: 68% of Leaders have appointed a senior-level role with responsibility for delivering data strategy, compared with just 39% of the Laggards.

Leaders are also considerably more likely than Laggards (79% vs. 63%) to have set up data training and literacy programs across the enterprise. "Every employee must be data literate, not just data scientists," NielsenIQ's Head of Global Platform Engineering, Bhaskar Peddhapati, said. "We've set up knowledge hubs for sharing information across the organization to help employees become more data literate and help them use data to drive meaningful insights at various levels for our manufacturer and retailer clients' organizations."

Figure 5 (right) shows that more than 60% of Laggards have a strategy and programs intended to establish a data culture, governance, and processes within their organizations. In contrast, only 39% of Laggards have created a C-level mandate and role to deliver their data strategies. This brings into question how effective programs can be without executive support.

Figure 5: Data Economy Leaders exhibit stronger leadership

Share of respondents agreeing with statements about data culture, governance, and processes within their organizations



PROCESS

Ensuring the efficient and effective use of data does not require centralizing data-strategy implementations. Instead, data-strategy objectives must be aligned and coordinated across teams.

The Data Economy Leaders are better at this — 62% have a data or analytics center of excellence that coordinates data policies, and 54% enable users to access all available data through a single system or application.

Alignment is critical to governance of the entire data-management lifecycle, including data use and the outcomes delivered. "We're trying to reduce the time it takes from defining a business problem to showing outcomes, to create a 'fail fast' kind of model," Anthem's Chief Data & Insights Officer, Ashok Chennuru, said. "Data and analytic projects always have to be done in alignment and integration with the [rest of the] business."

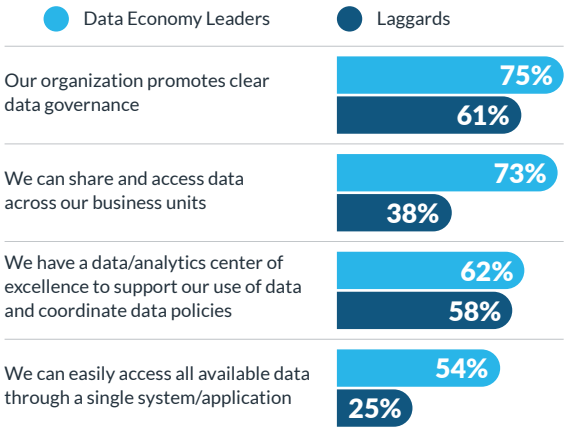
Data governance requires end-to-end coordination, starting with the setting of common data definitions, formats, and other requirements as well as the population of a data catalog that captures not only the data but also data models and other knowledge generated during its use. Three-quarters (75%) of Leader respondents say their organization promotes clear data governance, compared with 61% of Laggards.

Data collaboration is fundamental to the data economy. If an organization fails to access and share live data across both its enterprise and externally, it is not participating in the data economy. Data-forward companies collaborate across business units and functional teams, making their data mutually available via internal data exchanges and marketplaces.

For example, the analytics teams within the Finance, Sales, and Marketing functions should be sharing data to develop more accurate lead generation, lead scoring, sales-pipeline creation, and revenue forecasting. In addition, all Leaders share data with and access it from external parties. None of the Laggards do this. There is also a large divide between the 73% of Leaders able to share and access data across the organization's business units versus 38% of Laggards.

Figure 6: Aligned, tightly governed, and collaborative

Share of respondents agreeing with statements about aspects of their data strategies and capabilities



TECHNOLOGY

At the core of every Data Economy Leader's technology strategy is a cutting-edge cloud data platform offering the latest cloud architecture and features.

Twice as many Leaders as Laggards (50% versus 24%) describe the data storage and management technologies they use as "easily scalable and elastic." Leaders face fewer constraints on the data that can be accessed and analyzed, and are therefore able to deliver insight more rapidly.

In addition, Data Economy Leaders draw upon a greater volume of data, in different formats and from diverse sources, to fuel historical, predictive, and prescriptive analytics, delivering a competitive advantage. That data comes from across the enterprise, from external business partners, and from commercial data providers.

There are almost no data silos in the Data Economy Leaders' landscape. To deliver the previously unimagined insights they need, their data platforms must ingest and and analyze large volumes of data—easily managing structured, semi-structured, and unstructured formats—and deliver results in a timely manner. In competitive environments, that often means analyzing live data in real time.

Data Economy Leaders also collaborate. They implement technologies that enable internal business units and broad ecosystems of external partners to share live data, data services, and data applications. A strong example is NielsenIQ's data infrastructure: "Our infrastructure opens the door to an open, scalable, and agile [cloud data] platform, on which customers can easily access data sets," Peddhapati explained. "This allows them to extract the data they need to fit their own technology strategy."

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— BHASKAR PEDDHAPATI,
Head of Global Platform Engineering, NielsenIQ

A PERFORMANCE EDGE

Their mastery of the data economy appears to be contributing to superior business results for the Leaders.

More than three-quarters of them (77%) experienced positive annual revenue growth over the past three years; just 36% of Laggards said the same. Leaders are also substantially more likely than the others to report improvement in the past three years in other key metrics, such as market share (60% vs. 31%), profit margin (62% vs. 36%), and operational agility and speed (63% vs. 44%).

Figure 7: Accelerated top-line growth

Change in annual revenue over the past three years

35%	Increased by up to 5%	25%
29%	Increased by 6–10%	9%
13%	Increased by >10%	2%

SECTION 3

HOW TO BECOME A DATA ECONOMY LEADER

HOW TO BECOME A DATA ECONOMY LEADER

Given the benefits of being a Data Economy Leader in terms of results, outlook, partnerships, and market status, the logical question all other organizations must ask is, How do we become one?

As they chart a path to full and effective participation in the data economy, organizations must make a number of commitments to ensure that their organizational capacities grow with the increased demands of the environment.

CDO AS BUSINESS LEADER

In creating a CDO role or equivalent, the CEO must view it as much more than a technology or data management role. The CDO has to deliver the near-term endgame: technology and data democratization across the enterprise; rapid, universal access to data, no matter where data or users reside; and seamless data collaboration across the enterprise, with any business partner, and with commercial data and data-service providers, locally and globally. Only when the CDO has achieved all these aims will the organization be seen as genuinely data-driven.

Tom Mazzaferro, CDO of Western Union, views his role as that of a leader of transformation: "The role today needs to encompass more than data management and data governance, enabling the pipeline, and managing the environments. The CDO needs to drive digital transformation by enabling data to power product development."

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— TOM MAZZAFERRO,
Chief Data Officer, Western Union

COLLABORATION

As the saying goes, the whole is more than the sum of its parts. This is as true of data as for anything else. A collaborative data culture identifies data sharing (access and acquisition) as the backbone of successful operation in the data economy. To be a Data Economy Leader, an organization must disseminate as widely as possible the most effective approaches to data sharing—across departments, subsidiaries, and geographical boundaries.

Moreover, an organization must measure the business impact of its data-collaboration strategy. By doing so, it will continue to advance those efforts and further evolve the organization as a Data Economy Leader. Capital One nurtures such a culture, partly through its use of technology. According to Biba Helou, the firm's SVP Enterprise Data Platforms and Risk Management Technologies, "We have internal platforms that provide visibility to our users and analysts of which data is where, so they can request to see it and figure out how to leverage it. We also invest in labs so users can innovate and come up with ideas using that data."

MONETIZATION

Data Economy Leaders soon realize that the value of their data lies not only in the insight that can be extracted for use by their own organizations but that which they can offer to others. In essence, if your data is driving your business forward, what would it be worth to help other organizations do the same? Generating new net revenue by taking data to market represents one of the most valuable wins from participation in the data economy. The following steps are key to this undertaking:

1. Determine the value of the data your organization holds and a pricing model for it.
2. Develop realistic use cases for your data products.
3. Ensure adherence to industry and regional data regulations through sound data governance, privacy, and security.

TECHNOLOGY

CDOs and CIOs must not compromise on the core features required of a modern data platform, which include the capacity to:

- Scale almost instantly and near infinitely
- Centralize and integrate all previously siloed data
- Connect easily with any complementary solution
- Operate globally and seamlessly across public clouds and their regions
- Enable data collaboration of any format and scale
- Execute diverse analytic workloads
- Provide a development and operating platform for your applications
- Offer a fully managed, secure, resilient, and governed solution
- Provide the benefits of consumption-based pricing while tracking the value of its usage.

SHIFTING THE GOALPOSTS

CDOs can be certain that the bar of data economy leadership will be even higher in a few years' time than it is today.

Tomorrow's Data Economy Leaders may not be using data and analytics insights vastly differently than they are now, but it almost certainly means that the speed, accuracy, and efficiency with which Leaders generate insight will have continued to evolve. Leaders will also be deriving even greater gains from their participation in the data economy. For example, we should expect to see more companies earning revenue directly from data products that they have taken to market.

In this report, we have highlighted the opportunities for all organizations to participate, and become Leaders, in the data economy. In a series of supporting articles, we delve deeper into what leadership means in relation to the three pillars of people, process, and technology. We will also apply a vertical lens to the research, exploring how organizations in different industries strive to succeed in today's data economy.

ABOUT SNOWFLAKE

Snowflake delivers the Data Cloud—a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the Data Cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Snowflake's platform is the engine that powers and provides access to the Data Cloud, creating a solution for data warehousing, data lakes, data engineering, data science, data application development, and data sharing. Join Snowflake customers, partners, and data providers already taking their businesses to new frontiers in the Data Cloud. **snowflake.com**

CITATIONS

1. Survey questions designed to assist detailed assessment of data technologies were asked of the 250 respondents holding IT roles. Based on their responses, just 18 merited Data Economy Leader status—too few to cite hard statistics but enough to offer indicative comparisons with the firms of the other 232 IT executives.