



BARC DATA CULTURE SURVEY 22

HOW TO SHAPE THE CULTURE OF A DATA-DRIVEN ORGANIZATION

TOPICAL SURVEY



Authors

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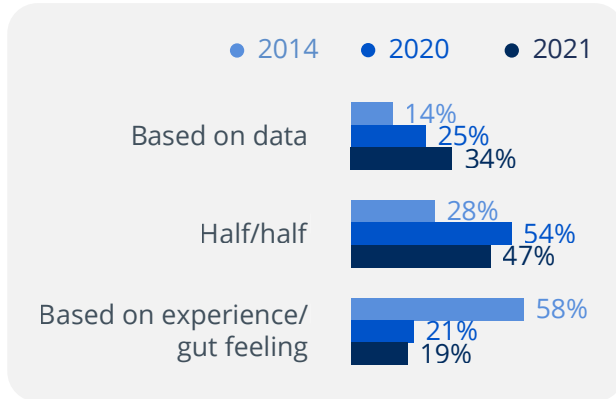
FOREWORD

“We are a data-driven company,” is a familiar refrain we hear from business leaders and managers. This is evidence of a fundamental shift in mindset, reflecting the fact that leaders have now understood and internalized the concept of the data-driven enterprise. However, when attempting to restructure and reorganize data flows and processes and bring in new ways of working with data, particularly CDOs, CIOs and data teams often run into what feels like a brick wall. Acceptance and lip service may have been paid to a data strategy, but the application of the strategy is fraught with hurdles. The realization comes soon enough: Data culture and its manifestation in the day-to-day running of the business can make or all too often break any carefully crafted strategies. So, understanding what data culture means within each organization is critical to its success. At BARC, we see data culture as part of the corporate culture. It refers to all the values, norms and attitudes in an organization that are the basis for actions and decisions related to the handling of data and analytics. The manifestation of data culture can come in different flavors. For example, it can influence where investments are made to improve the BI and analytics landscape and it can dictate the number and roles of the employees who are working with data.

Due to steadily growing interest in the topic, we conducted this survey to better understand the flavors of data culture within organizations, the hurdles they are facing, the initiatives that are on underway and of course the wins that have already been achieved with these measures. We learned that 81 percent of our respondents consider data or information as an asset. This supports the hypothesis that more organizations are recognizing the integral value data and analytics can bring to their business. Following this trend, when we asked about data culture specifically, 76 percent of participants stated that their company is striving for a data culture. Such figures are encouraging as they support the hypothesis that a mind shift is taking hold. The new mindset realizes that the road to the digital business is not only paved with technological innovations and no single company can purchase its way to data-driven decisions and processes. Instead, the softer, more difficult structures will enable the ultimate transformation to becoming a fully data-driven business. Together with the lessons learned from this study and the BARC Data Culture Framework, we hope to provide resources that help leaders to ride the wave of this new mindset and begin to shape their data culture.

Nina Lorenz and Carsten Bange
Würzburg, November 2021

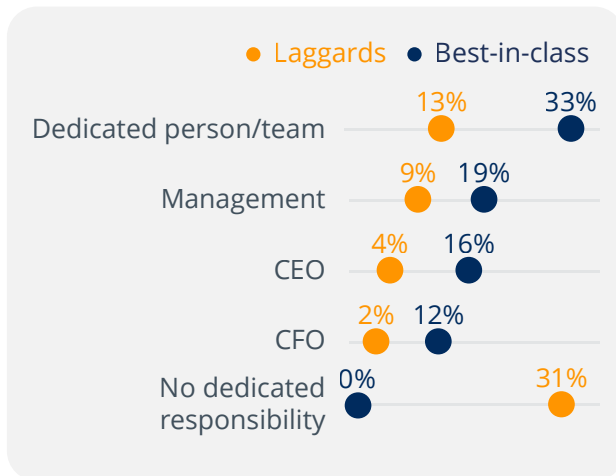
MANAGEMENT SUMMARY



Overall, are decisions in your company based on data or gut feeling? 2021 vs. 2020 vs. 2014 (n=429/412/697)

01 THE STATE OF DATA CULTURE

In the past seven years, a notable change has occurred. The share of businesses with partially or purely data-driven decision has risen from 14 percent to 34 percent. This substantial increase is emblematic of the importance of data culture. Though many businesses acknowledge that some decisions are still based on gut feeling, the trend is developing in the right direction. The survey results also reveal that decisions at operational level are still less data-driven compared to management and executive levels. In addition to the growing importance of data for decision-making, the survey records a high emphasis on data as an asset and as a general enabler for improved processes as well as revenue and cost-saving efforts. Organizations are also using data to improve their own processes and create a smoother work stream.



Who is responsible for your company's data culture? by best-in-class (excerpt, n=137)

02 ORGANIZATION IS CRITICAL TO THE SUCCESS OF DATA CULTURE

To successfully develop a data culture requires clear leadership and well-defined responsibilities. This is exactly the issue that emerges from the study results. 31 percent of laggards have yet to assign responsibilities for their data culture to a department or person. In contrast, the best-in-class companies have already implemented the organizational measures to embed a data culture. In other words, they plan their data culture initiatives more carefully. In the majority of cases, responsibilities lie with a dedicated person such as the Chief Data Officer or a data office. In the absence of these roles, leadership must assume responsibility. Best-in-class companies are more successful in spreading their message company-wide, while laggards still focus on establishing a data culture within their finance and accounting departments.

MANAGEMENT SUMMARY



03 IN TIME, EVERY DATA CULTURE INITIATIVE IS VALUABLE

Our survey respondents confirm that all data culture initiatives are important. Currently, the most implemented approaches clearly pertain to access, governance and strategy. Organizations that are still early in the process of shaping their data culture seem to fare better when focusing their strategy on establishing a data democracy. More than a third of them have planned specific initiatives for data governance and data access. To succeed in these areas, employees must also be able to attain the level of data literacy that is needed to fulfill their role. Respondents largely report that this is not yet the case in practice. Employees' lack of knowledge where data and analytics is concerned is the second most common challenge to data culture, hitting best-in-class companies and laggards almost equally hard.

Data access initiatives

33% 36%

Data governance initiatives

31% 35%

- Relevant and being implemented
- Relevant and planned

Please indicate the current status and relevance of the following data culture measures/approaches in your company (excerpt, n=400)

04 THE RETURN ON INVESTMENT OF DATA CULTURE

Respondents to this survey strive for the same goals, such as cost reduction, revenue growth and competitive advantage. Of interest here is whether these goals are achieved with an improved data culture. Indeed, this is the case for many organizations. In particular, companies have been able to improve their decision-making, reduce costs and improve their processes with the help of data. A harder goal appears to be achieving competitive advantage. Granted, this is a much broader and less clear goal than improved decision-making, but it is one that continues to incentivize leaders to work on their data culture

Improved decision-making

50%

Cost reduction

40%

Continuous process improvement

38%

Revenue growth

30%

Greater acceptance of decisions

28%

Which positive effects of a data culture have you already achieved? (top 5, n=405)

MANAGEMENT SUMMARY



We need sponsorship for data culture change. It is vital to understand that building a data culture and governance is more than a project, rather it is a continuous process.

- A respondent of The Data Culture Survey 22



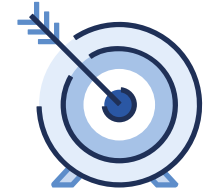
05

THE BIGGEST OBSTACLES TO ESTABLISHING A DATA CULTURE

A huge pain point for many professionals is a lack of management commitment to data culture initiatives, data-driven decisions and improved data handling. Related to this issue is the motivation of employees on a broader level. Two scenarios are frequently mentioned here: employees who have a longer tenure are less open to change in general and employees who are less data literate feel a lot of anxiety around potential changes. The more mature a company's data culture initiatives are, the more detailed the description of the hurdles becomes. For example, teams who have been actively working on their data culture report a critical problem once their initiatives are launched and specific projects are completed. It takes substantial change management to keep working on and improving a data culture.

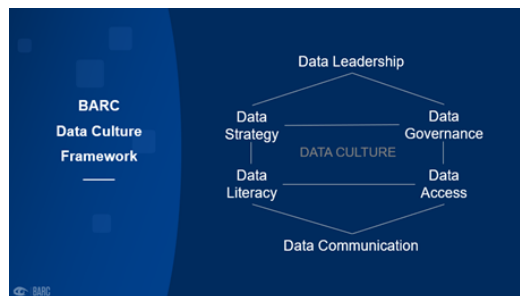


ACTION ITEMS



We created the BARC Data Culture Framework to answer the frequently posed question of how to positively address data culture in an organization. The framework identifies the six most important action areas, thus giving companies a guideline on where to focus their attention.

There is no hierarchy among the six action areas. Strategy, leadership and governance typically specify goals and parameters in which a data culture is promoted or can be restricted. Data access and data literacy are important enablers, while data communication serves as a facilitator for data culture.



Based on the BARC Data Culture Framework, we have identified the following action items:

01 ADDRESS DATA CULTURE IN A HOLISTIC WAY

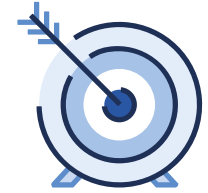
This survey confirms that the six action areas defined in the BARC Data Culture Framework are all contributing to success in establishing a positive data culture. They should all be addressed, but with differing priorities depending on the maturity of the company. Companies with a less developed data culture should start with the fundamental action areas of data access and data governance, while more advanced companies are better advised to fine-tune data strategies and improve leadership and communication.

02 DATA LEADERSHIP

Authentic leadership starts with the actions and commitment the leaders themselves show. Nearly two thirds of respondents agreed that they need inspiration from the top through leaders who set a shining example of how to work in a data-driven way. Amongst the most important action items for data leadership are:

- Lead by example: pay particular attention to embodying the data strategy yourself, for example, by emphasizing fact-based decisions.
- Instill a data-driven meeting culture.
- Formulate and communicate the data strategy clearly, explicitly and frequently.
- Invest in competence development by providing sufficient resource for training and further education in data and analytics.
- Drive and monitor data and analytics initiatives at an executive level.

ACTION ITEMS



03 DATA STRATEGY

Nearly half of the laggards in our study identified the lack of a data strategy as a major obstacle. That is why defining a data strategy is so important. Define a data strategy that:

- is an integral part of the business strategy and
- shows clearly how it supports the organization's strategic goals;
- is holistic by covering both data and analytics,
- addresses business, technical and organizational aspects in a balanced manner and
- addresses data culture in each of these aspects.

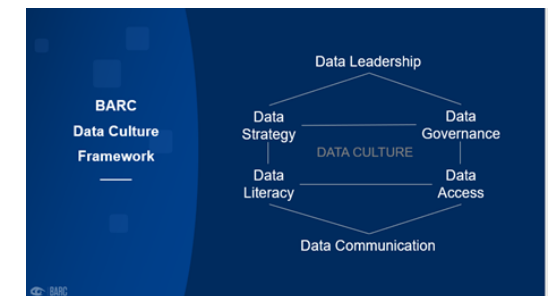
04 DATA GOVERNANCE

The key challenge in setting up data governance is the definition of guidelines that set the necessary boundaries to any activities with data but at the same time support a positive, fearless atmosphere in which to use data and analytics as well as new use cases. Important action items are:

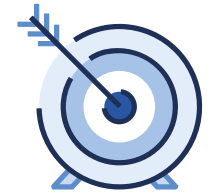
- Define responsibilities around data with special attention to improving data quality and breaking up data silos, two of the most severe inhibitors of a positive data culture, and even digitalization as a whole.
- Enable the company wide availability of conformed KPIs and data products.
- Ensure that information about data (metadata) is available to data consumers and data product developers, for example, by defining the necessary responsibilities for data producers to provide such information or by implementing tools such as data catalogs and business glossaries.
- Define data ethics guidelines as an important compass for every employee using or analyzing data and communicate them internally (and maybe also externally).
- Find the right balance between ensuring security and privacy while making sure that these aspect do not kill any creativity and innovation.

We created the BARC Data Culture Framework to answer the frequently posed question of how to positively address data culture in an organization. The framework identifies the six most important action area, thus giving companies a guideline on where to focus their attention.

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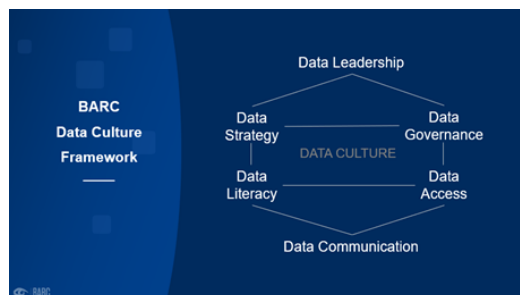


ACTION ITEMS



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05 DATA ACCESS

Having access to data is the foundation for any activity with data. While this sounds very simple, there is more to it than might seem obvious at first glance. After all, it is about much more than just technical access to data. Action items are:

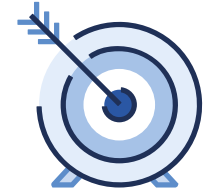
- Provide technical access with interfaces, APIs etc.
- Establish a “right to know” data access culture whereby all data sources should be accessible to anyone unless they contain secret, personal or other data worthy of protection.
- Define responsibilities to make data understandable (e.g., by obliging data producers or system owners to publish metadata about data originating from their systems).
- Enable all relevant employees (and potentially also external stakeholders) to understand and work with data and analytics.
- Communicate clearly the “rules of engagement” with data in data governance and data ethics guidelines.

06 DATA LITERACY

Data literacy is the ability to find, evaluate, prepare, analyze and visualize data using appropriate tools, as well as to communicate using data and interpret analysis results. Action items are:

- Build a long term and broad educational approach to competence development in many different areas.
- Make sure that competence development is not just aimed at the employees who already work with data anyway, but also includes almost everyone in the organization.
- Define diverse data literacy curricula for different job roles, career paths etc.
- Do not only focus on how to get to and understand data but also how to analyze, use and communicate it.
- Technology training is one part of data literacy but should not be the main issue.
- Teach data literate persons to communicate with data and collaborate around data.

ACTION ITEMS



07 DATA COMMUNICATION

There are many stakeholders needed to communicate as broadly and extensively as possible about data:

- The corporate leadership team should explain how data and analytics drive the business strategy and be very clear about the importance of data sharing, exploring analytics and AI and developing data products or even data-driven business models.
- The CDO or data and analytics leaders should:
 1. Market the capabilities, data products and success stories to show where data and analytics can help the business,
 2. Create spaces for communication (e.g., community meetings, exchange platforms, internal data and analytics conferences, hackathons etc.)
 3. Foster peer exchange, public speaking etc.
- Internal and external communications, public/investor relations and marketing departments should communicate success stories and maybe also the company's high level data strategy or data ethics approach both internally and externally



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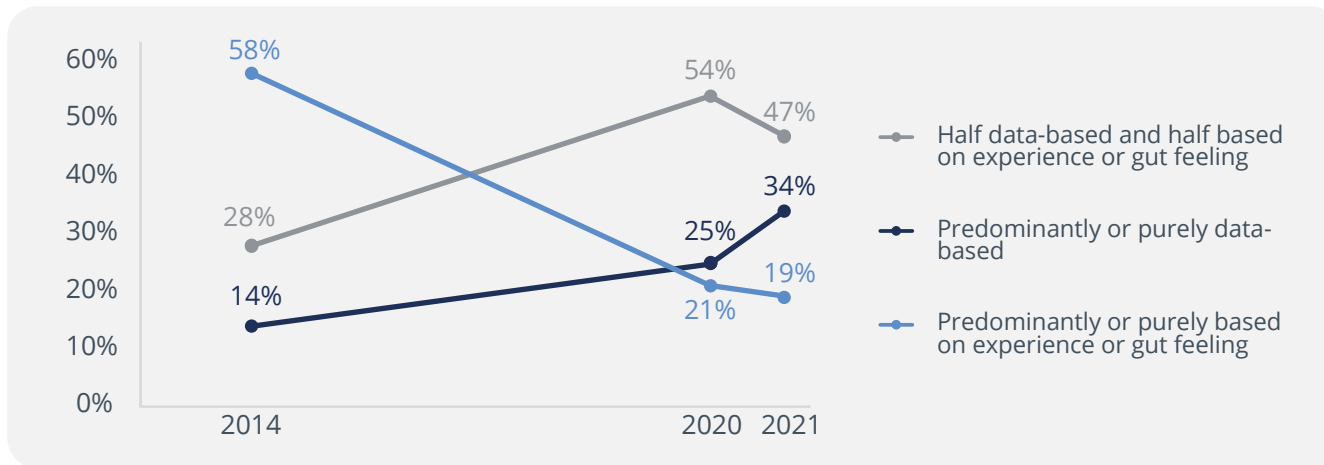
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01 THE STATE OF DATA CULTURE

PROGRESS IS NOTABLE, BUT THERE IS STILL SOME WAY TO GO



Overall, are decisions in your company based on data or gut feeling? 2021 vs. 2020 vs. 2014 (n=429/412/697)

A look back at our first Data Culture Survey in 2014 offers orientation on where companies currently stand on their path to becoming data-driven. Compared to 2014, a noticeable shift has occurred. Most notably, the percentage of companies relying predominantly or purely on gut feeling and experience in their decision-making has shrunk from 58 percent to 19 percent. Looking at this from a positive perspective, the proportion of partially or purely data-driven companies has risen from 14

percent to 34 percent. Such a development is a testament to the ongoing shift in mindset. Leaders are recognizing the substantial benefits of using data in decision-making and elsewhere.

The figures also show the road ahead. Almost half of respondents report that they are in an in-between state, no longer relying on intuition but not yet predominantly data-driven. Meanwhile, a third have truly achieved a desirable position with the majority of decisions being based on data. The

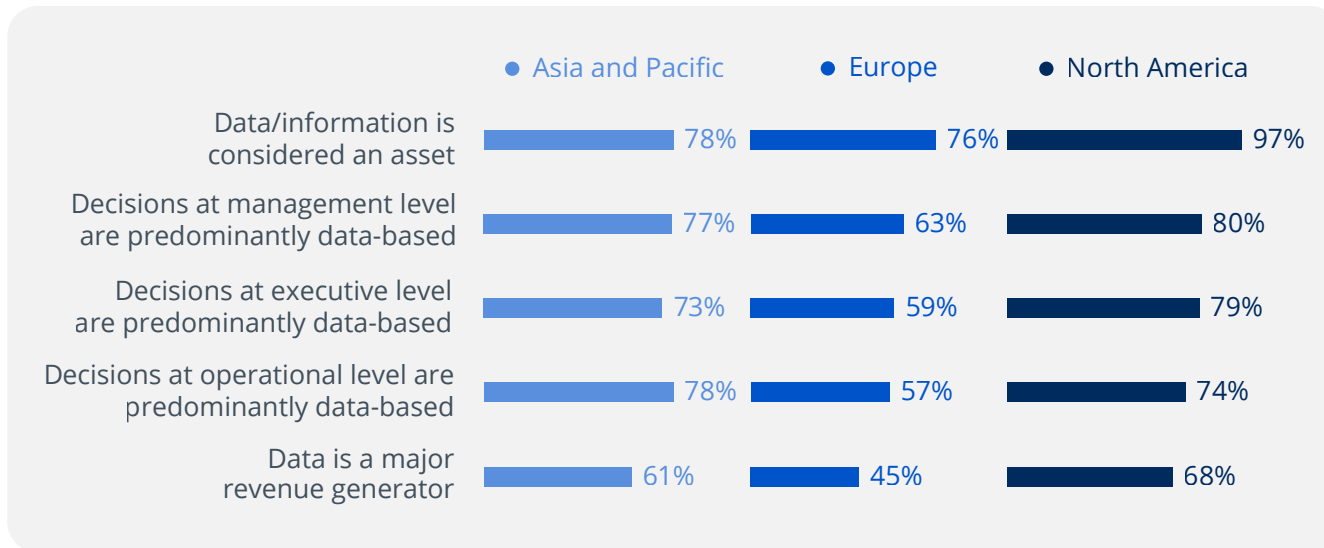
increase is valuable and will ideally continue to rise in the coming years. However, despite the pressure to increase data-driven decisions, becoming purely data-based is not the recommended goal. Keeping human judgement and experience is highly valuable too. The goal, therefore, should be to raise the amount of informed, fact-based decisions with the right balance of human influence and interaction. In certain situations where decisions are merely rule-based, require high speed, large amounts of data to be processed or complex influencing factors, the next step is fully data-based decision automation.

A further drill-down into the survey results reveals more details about decisions at every level. Decisions at operational level are still less data-driven compared to management and executive levels. Furthermore, data has become relevant in processes beyond decision-making. A case in point is the 51 percent of respondents who are using data as a major revenue generator. Organizations are also using data to improve their own processes and create a smoother work stream, and corporate management is greatly improved by the consistent definition of KPIs and the prediction of future trends.



01 THE STATE OF DATA CULTURE

THE DETAILS: WHERE DOES THE MARKET STAND NOW?



To what extent do you agree with the following statements regarding the current data culture in your company? By region (n=431)

To gain a deeper understanding of where the market currently stands, this study examines the status of data culture from a variety of angles, including region, industry, company size and maturity level. A few observations stand out. A surprising problem that seems to be holding back digital transformation for 70 percent of less mature companies is a lack of clarity over data platforms and tools for employees.

The frequently cited hypothesis that Europe is lagging behind North America in many IT – as well as data and analytics – issues is also verified in the case of data culture. For example, 97 percent of North American businesses (compared to 76 percent of European) agree that data is considered an asset within their organization. Meanwhile, companies from Asia Pacific also value data more highly than European companies, and are

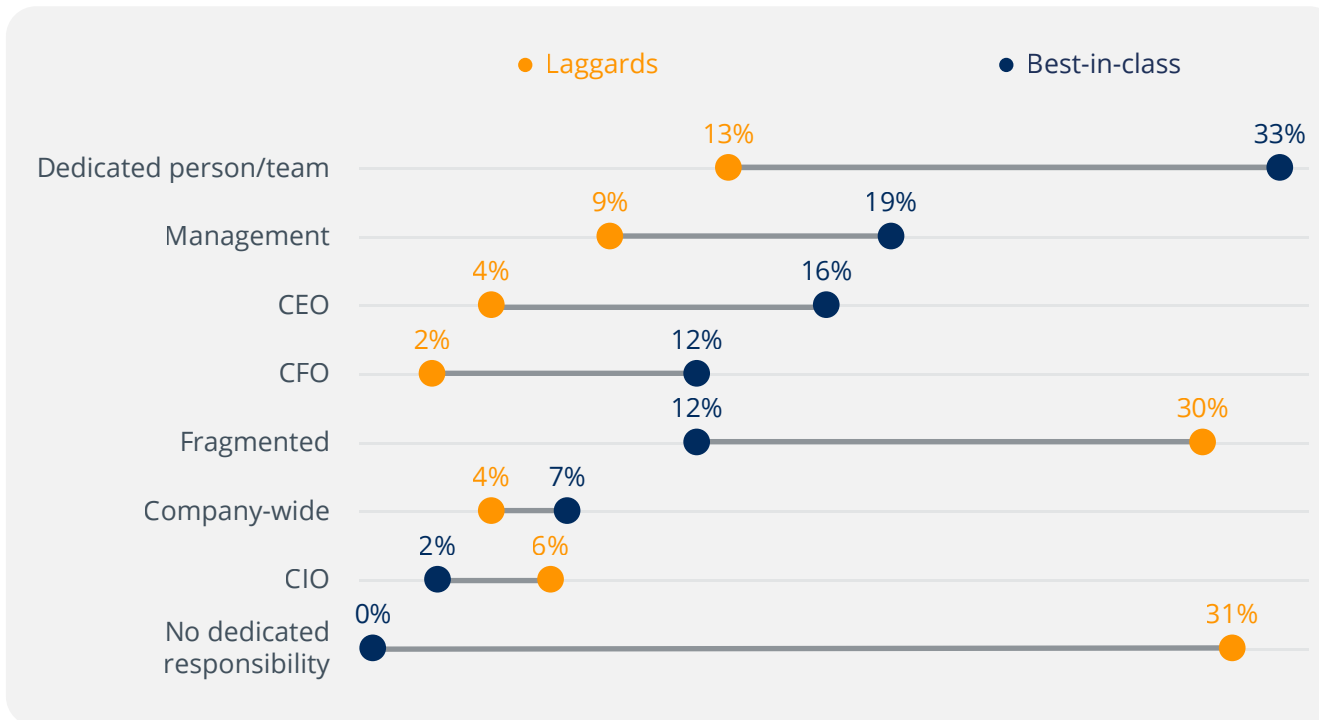
the most advanced when it comes to data-driven operational decisions. For European businesses, falling behind in global comparisons has long been a source of frustration. Still, it can be noted that they are moving forward and more than two-thirds now see data as a valuable resource.

Interesting insights pertaining to industry sectors are less clear. Generally, the retail/wholesale sector leads the way in all aspects of data-driven decision-making, which is underlined by the fact that 91 percent say that KPIs are defined throughout the company for corporate management purposes. Furthermore, the majority use information to continuously improve operational processes. This is in strong contrast to the banking and finance sector, which under most circumstances is ascribed a high level of data literacy and data-based processes. However, in the case of improved operational processes, banking and finance comes in last with 66 percent. Despite these outliers, we conclude that maturity in terms of data culture does not correlate especially strongly with any specific industry.

02 ORGANIZATION IS CRITICAL TO THE SUCCESS OF DATA CULTURE



DATA CULTURE THRIVES WHEN IT HAS SPACE AND COMMITMENT



Who is responsible for your company's data culture? By best-in-class (n=137)

Data culture is difficult to implement for a variety of reasons. Certainly, the wider implications for a broad range of people and areas are an important factor. Another is the seemingly intangible nature

of the concept. Under these circumstances, it makes sense that clear leadership and well-defined responsibilities are required to successfully develop a data culture. This is exactly the issue

that emerges from the study results. 31 percent of laggards have yet to assign responsibilities for their data culture to a department or person. Another 30 percent have fragmented responsibilities, which is probably the result of half-hearted attempts to establish data owners and stewards.

In contrast, best-in-class companies always have clarity of vision, which indicates that they have carefully planned their data culture initiatives. In the majority of cases, responsibilities lie with a dedicated person such as the Chief Data Officer or a data office. In the absence of these roles, leadership must assume responsibility.

Interestingly, the vision of shared company-wide responsibility seems to remain a pipe dream. At least when it comes to leading efforts to create a data culture, the lesson is clear: dedicated leadership is required, if possible by a single person or team.



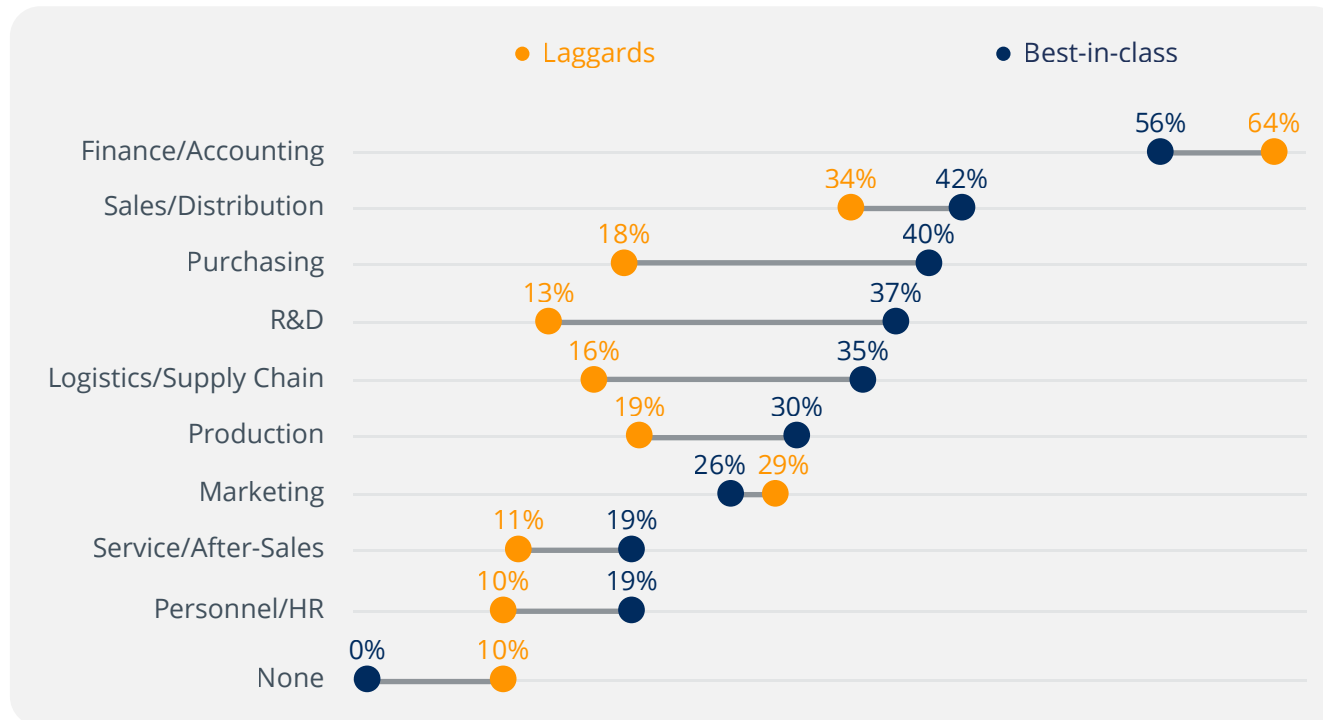
Assigning responsibilities for data culture is a success factor.



02 ORGANIZATION IS CRITICAL TO THE SUCCESS OF DATA CULTURE



COMPANY-WIDE DATA CULTURE HELPS TO CREATE A DATA-DRIVEN BUSINESS



Which departments in your company are the most data-driven in their decision-making, operational processes and/or organizational structure? By best-in-class (n=137)

Traditionally, the focus of data-driven work has been ascribed to finance and accounting departments. They are thought to have a higher level

of data literacy, excellent tools and overall, more markers of the desired data-driven culture. The survey findings support this theory to some

extent. However, they do offer a far more varied perspective on its distribution within businesses.

Best-in-class companies are more successful in promoting a data-driven mindset evenly across the organization. Though it is not yet fully realized, this is the pronounced goal of a company-wide data culture. The broader the foundation for the data-driven business, the more innovation the company can expect.

Looking at the extent of data-driven decision-making, operational processes and/or organizational structure from a departmental perspective, finance and sales remain the front-runners, while HR is rated as the least data-driven department. In this comparison, the retail and wholesale sector emphasizes its position as the most data-driven with a fairly even distribution across departments (except for production and HR). Banking and finance is the surprise leader for data-driven marketing and far surpasses the services industry.

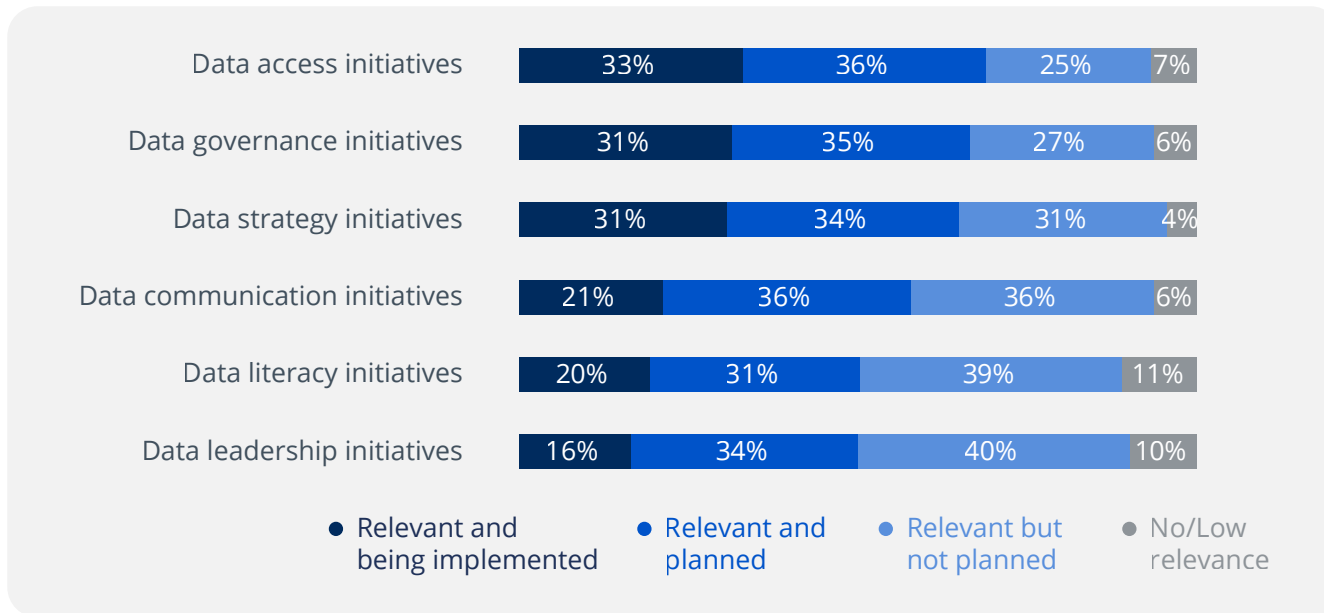


Data-driven decision-making needs to be a company-wide feature.

03 IN TIME, EVERY DATA CULTURE INITIATIVE IS VALUABLE



FOR A SUCCESSFUL DATA CULTURE, A RANGE OF MEASURES IS NEEDED



Please indicate the current status and relevance of the following data culture measures/approaches in your company (n=400)

When it comes to specific action and measures for improving or establishing a data culture, the BARC Data Culture Framework can help by offering a structured overview of the various directions to take. Survey respondents confirm that all six columns of the framework are relevant for their

business. However, many have yet to start implementing the approaches.

Currently, the most popular approaches relate to access, governance and strategy. The top priorities for best-in-class companies are slightly different.

Here, the implementation of data strategy initiatives surpasses that of governance and access. Specifically, 67 percent of best-in-class companies report that they have implemented data strategy initiatives.

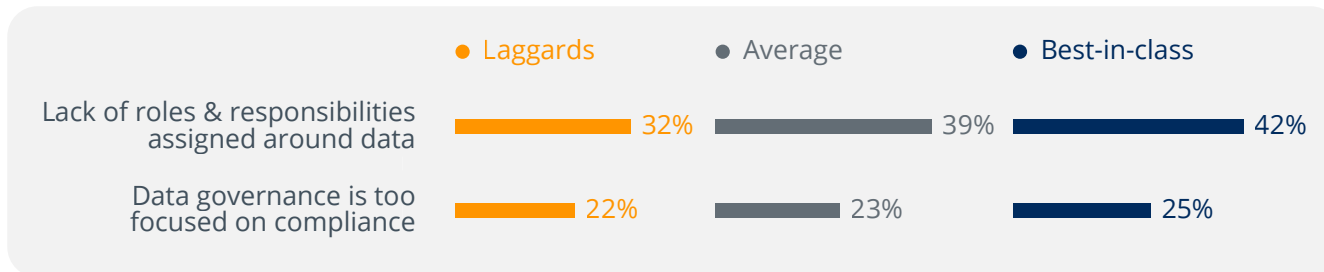
A data and analytics strategy describes an organization’s functional, technical and organizational goals for using data and analyzing it, and specifies when and how these goals are to be achieved. Organizations that are still early in the process of shaping their data culture seem to fare better when focusing their strategy on establishing a data democracy. This does not negate the need for a holistic data strategy but rather clarifies the order of precedence. Best-in-class companies, which are more mature, can focus on perfecting their strategy in order to maximize the positive impact it has on their day-to-day business.

Most companies start with the fundamentals: Making data accessible.

03 IN TIME, EVERY DATA CULTURE INITIATIVE IS VALUABLE



DATA ACCESS AND DATA GOVERNANCE LAY THE GROUNDWORK FOR A DATA CULTURE



What are the main obstacles to the implementation or initial establishment of a data culture in your company? (n=433)

A deep dive into data access and data governance is in order, given their importance and the number of companies still struggling to create a data culture. Companies must first reconcile their data handling policies in order to become data-driven. Laggards have identified their weaknesses in this area as a major roadblock to successful data handling and data culture improvement. More than one third have planned specific data governance and data access initiatives.

The two approaches are inextricably linked. Data governance encompasses the people, processes and technologies necessary to manage and protect an organization’s data assets. The goal is to ensure

universally understandable, accurate, complete, trustworthy, secure and locatable corporate data for the seamless flow of operational processes and decision-making. Data access describes the technical accessibility of data, its comprehensibility and organizational rules governing access to data. 39 percent of respondents claim they are having trouble implementing a data culture because they have not assigned the required roles and responsibilities. Laggards account for 42 percent of this total.

Particularly for these laggards and many others, healthy access to data can only be achieved with a “new deal” between data producers and data consumers. In this renewed understanding, it

is the data producer’s responsibility to provide all data with an easy-to-understand description (metadata) to anyone in the organization. This can be set up structurally through technical access and functional access. Technically, the way to get data can be facilitated by embedded APIs, which allow for a fully integrated process that does not require specialized knowledge. Functionally, technologies such as data catalogs and the curation of metadata transform data loads into data assets of explained data that are accessible, legible and unambiguous. This approach posits a reversal of the conventional understanding of roles, where the data provider must enable (not wait for) requests. Such an approach can be adequately realized when data producers offer data as a service, whereby users have the opportunity to shop for data.

The ultimate goal of this substantial reorganization is the achievement of a data democracy. True data democracy in an organization means that all employees have the right, authority and capability to access, understand, value and contribute to their organization’s information and its use. Data access and data governance are the levers that must be pulled to make headway in this direction.

03 IN TIME, EVERY DATA CULTURE INITIATIVE IS VALUABLE



LITERACY AND COMMUNICATION ARE THE MEASURES THAT GIVE LIFE TO A DATA CULTURE



What are the main obstacles to the implementation or initial establishment of a data culture in your company? (n=433)

Beyond questions of access and governance, a holistic data culture approach includes initiatives for improving data literacy, strategic data communication and of course leadership support. This is true for the concept of data democracy as well. To succeed in these areas, employees must also be able to attain the level of data literacy that is needed to fulfill their role. Respondents largely report that this is not yet the case in practice. Employees' lack of knowledge where data and analytics is concerned is the second most common challenge to data culture. It is also frequently cited in the survey's comments section. The pervasive

nature of the issue hits best-in-class (41 percent) and laggards (46 percent) almost equally hard. Not far behind, a lack of internal communication is third in the list of barriers to achieving or improving data culture.

In both cases, more than half of all respondents are either currently acting on these problems and introducing measures to rectify their deficiency or planning to do so in the near future. The roadmap for data literacy often seems clear but communication and ways to improve it are less obvious. To be precise, data literacy is the ability to find, evaluate,

prepare, analyze and visualize data using appropriate tools, as well as to communicate using data and interpret analysis results. Data communication includes internal and external communication and marketing for data and analytics projects and successes as well as everyday communication and collaboration between employees (e.g., being able to work together easily with data and communicating data and analysis results as a discussion and decision-making basis in an accessible form).

Most executives have an understanding of data literacy but only few have fully accepted that they have to upskill outside of their data teams to achieve a good data culture. As one survey respondent put it: "Line of business employees don't often interact with data in an analytical way, forcing managers to rely on their intuition."

Even though the problem is cited over and over, when employees are asked what measures they consider useful for a better data culture, 56 percent call for better opportunities for competence development (i.e., sufficient resources for training and education on data and analytics).

03 IN TIME, EVERY DATA CULTURE INITIATIVE IS VALUABLE



THE MOST POPULAR DATA LEADERSHIP MEASURES



Which data leadership measures do you consider to be particularly successful/helpful? (n=417)

Finding measures that are both practicable and helpful is a delicate balance. Asked about their opinions on the most fruitful measures that can be adopted by data leaders, nearly two thirds of

respondents agreed: they need inspiration from the top from leaders who set a shining data-driven example. The fact that this measure was selected so frequently implies that it is currently

not the case. The second most popular measure continues in this spirit: using data in meetings as both a source of information and as the basis for decisions ultimately means anchoring and living a data culture in day-to-day business tasks.

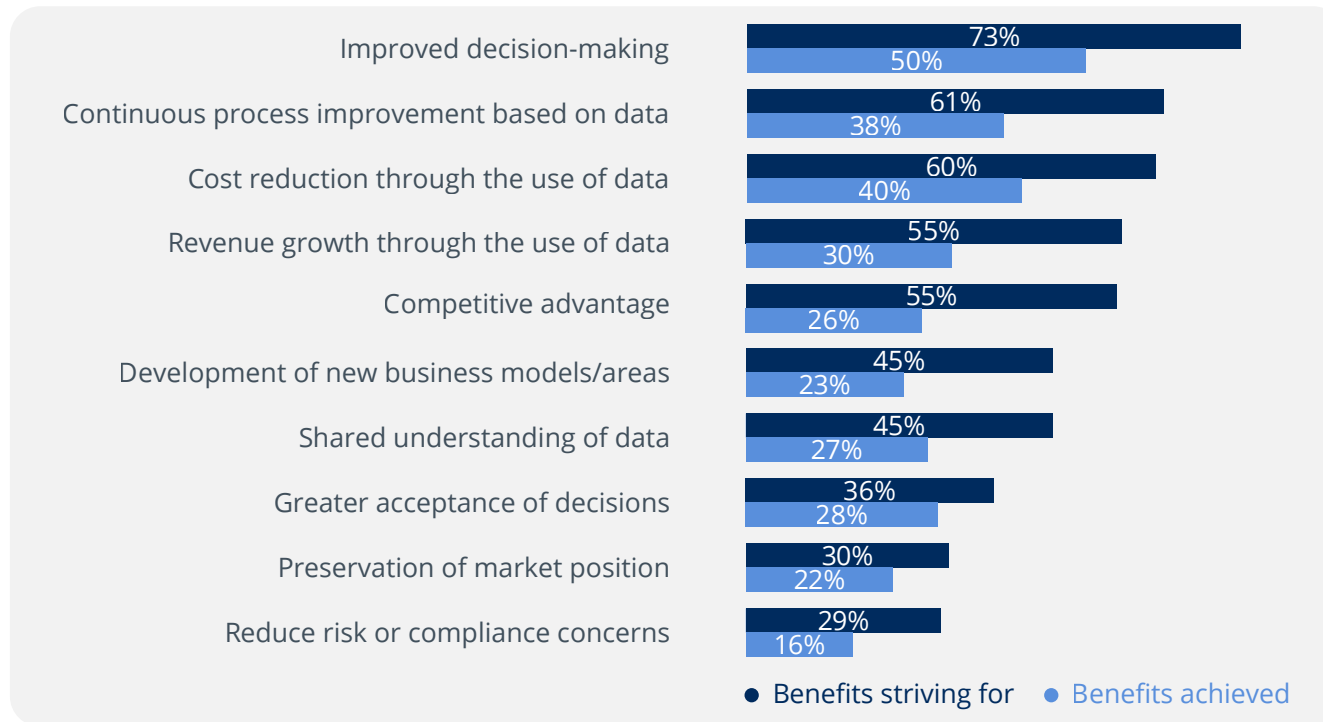
The wish for clear communication and the need for supervision from executives are also two branches of the same tree. Both give a clear signal to leaders that employees are in need of clarity concerning their data strategy, how it affects their work and what is expected of them. The responsibility for keeping data culture initiatives going lies with executives.

This list can be used as a starting point. In particular, leading by example and adopting a data-driven meeting culture are measures that can be applied immediately and with no grander strategizing required. Naturally, they will grow into habits that make a big difference. Measures such as clear communication and competence development require more effort and planning. They are no less important but are likely to have a greater impact when thoroughly considered and carefully planned.

04 THE RETURN ON INVESTMENT OF DATA CULTURE



IMPROVED DECISION-MAKING, PROCESS IMPROVEMENT & COST REDUCTION ARE THE MOST TANGIBLE BENEFITS



Which positive effects of a data culture are you striving for? vs. achieved (n=433)

Before any meaningful change can be delivered, it is essential to understand the rewards and outcomes that make the goal worthwhile. Data culture initiatives are no exception. Respondents

to this survey are striving for common goals, such as cost reduction, revenue growth and competitive advantage.

But can these goals be achieved with an improved data culture? For many organizations, this is certainly true. A good proportion of the companies surveyed have improved their decision-making, reduced costs and improved their processes with the help of data. The hardest achievement appears to be achieving competitive advantage. Granted, this is a much broader and less clear goal than improved decision-making, but it is one that continues to incentivize leaders to work on their data culture. In this area, the survey results reveal North American businesses to be a little more bullish. They are more likely to strive for revenue growth and a competitive advantage and reach this goal more often than companies in other regions.

Lastly, a quick word about some of the softer benefits of data culture that are not listed here. Data-driven culture is essentially part of modern corporate culture in the 21st century. Do not underestimate the value of an innovative workplace. Fewer bottlenecks, resulting from better processes, can increase motivation. Also, young talent is often itching to apply newly-learned data skills. The motto here is – in an all-too-real sense – “use it or lose it”.

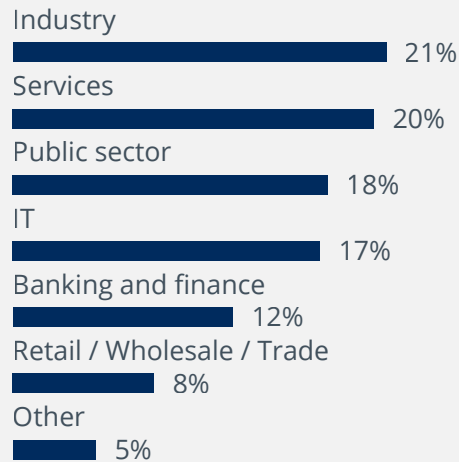
DEMOGRAPHICS



BROAD SPECTRUM OF INDUSTRIES AND COMPANY SIZES

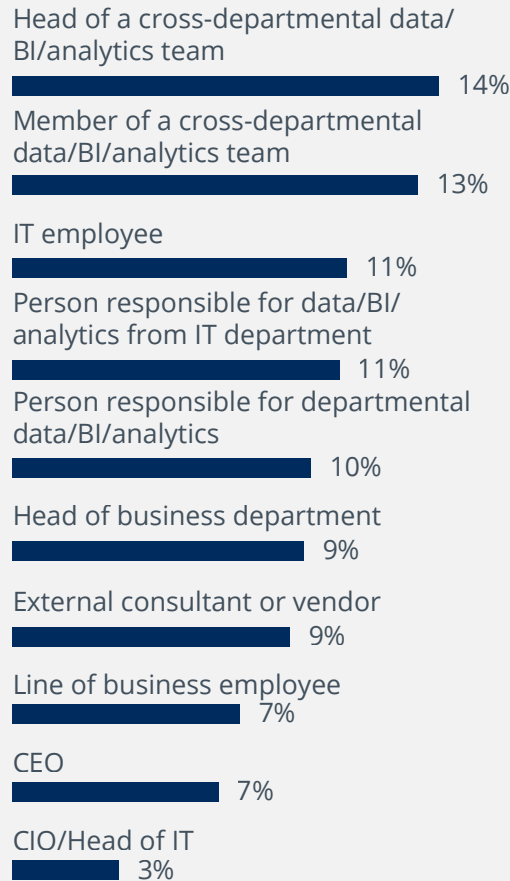
This study was based on the findings of a world-wide online survey conducted in July and August 2021. The survey was promoted within the BARC panel, as well as via websites and newsletter distribution lists. A total of 434 people took part, representing a variety of different roles, industries and company sizes.

INDUSTRY SECTOR



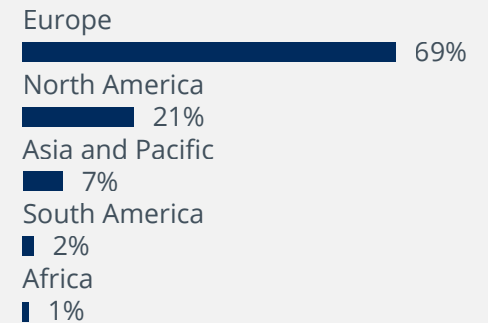
Which of the following best describes your organization's industry sector? (n=419)

POSITION IN THE COMPANY



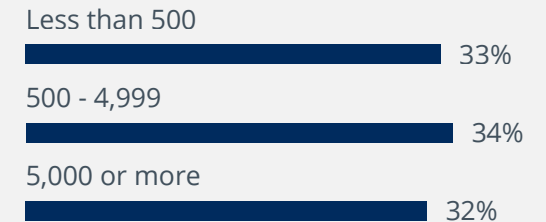
What is your role in the company? (n=419)

REGION



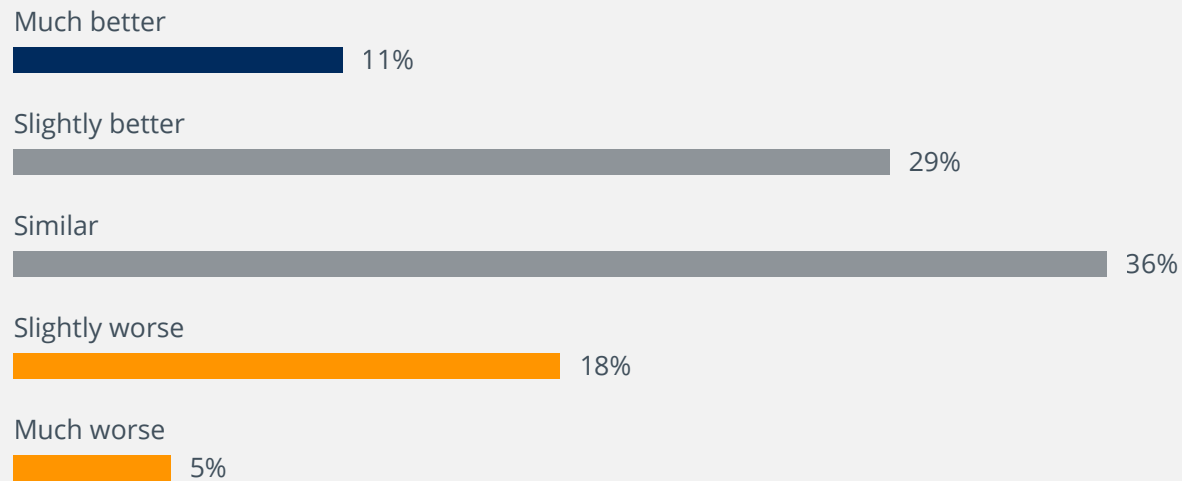
In which region are you located? (n=419)

COMPANY SIZE



How many employees does your company have? (n=419)

BEST-IN-CLASS



How would you rate your company's data culture compared to your main competitors? (n=401)

We divided the sample into “best-in-class” and “laggards” in order to identify differences in terms of the current data culture within organizations, the hurdles companies are facing and the initiatives that are underway. This division was made based on the question “How would you rate your company’s data culture compared to your main competitors?”. Companies that have a much better data culture than their competitors are referred to as “best-in-class” (11 percent) while those who have a slightly or much worse data culture than their competitors are classed as “laggards” (23 percent).

BARC – MAKING DIGITAL LEADERS

BARC – BUSINESS APPLICATION RESEARCH CENTER

BARC (Business Application Research Center) is one of Europe's leading analyst firms for business software, focusing on the areas of data, business intelligence (BI) and analytics, enterprise content management (ECM), customer relationship management (CRM) and enterprise resource planning (ERP).

Our passion is to help organizations become digital companies of tomorrow. We do this by using technology to rethink the world, trusting data-based decisions and optimizing and digitalizing processes. It's about finding the right tools and using them in a way that gives your company the best possible advantage.

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Decision-makers and IT industry leaders come together at BARC events. BARC seminars in small groups, online webinars and conferences with more than 1,000 participants annually all offer inspiration and interactivity. Through exchange with peers and an overview of current trends and market developments, you will receive new impetus to drive your business forward.

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SPONSOR PROFILE: ALATION

ABOUT ALATION

Alation pioneered the data catalog market, leading the evolution of data management from simply managing data to driving data culture. Alation customers leverage the data catalog as a platform to drive data search & discovery, data governance, data stewardship, analytics, and digital & cloud transformation. With its powerful behavioral and linguistic intelligence technologies, collaboration capabilities, and open interfaces - Alation provides a platform for a broad range of metadata management applications by combining machine learning with human insights to tackle the most demanding challenges in data management.

- Alation brings governance with an active, business-led approach. Alation offers intelligent data stewardship capabilities, including a stewardship dashboard designed to make stewarding data and analytics fast and easy, usage-based assignment to help prioritize and assign curation duties, and analytics to give greater visibility into people, data, and documentation. The impact analysis helps determine which assets are impacted by upstream

changes. Deprecation alerts email affected users about changes in asset.

- Alation helps organizations to drive productivity with behavioral intelligence. Automation empowers teams to better understand data by discerning technical terms and converting them to simple to understand business terms and by interpreting organizational usage behavior to automatically provide a business glossary.
- Alation supports the promotion of confident analytics with guided navigation. Whether users are writing SQL queries or leveraging BI dashboards, Alation's TrustCheck promotes best practices directly within a user's natural workflow by delivering data health flags (data quality, privacy policy, age, etc.) to avoid data misuse and compliance problems.

More than 300 organizations across the globe are driving their data cultures and improving their organizations' decision making with Alation - including AbbVie, DraftKings, Exelon, Finnair, Genentech, GoDaddy, Marks & Spencer, Mercadolibre, Munich Re, New Balance, New Relic, Pfizer, Scandinavian Airlines, Scout24, and US Foods.



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Board is the #1 Decision-Making platform empowering people, from more than 3,000 companies worldwide, to have a transformative impact on their business by rapidly deploying Planning, Predictive Analytics and Business Intelligence applications on a single unified platform. Board allows companies to intuitively explore and leverage their data to produce a single, accurate, and complete view of business information, gain actionable insights, and achieve full control of performance across the entire organization. With Board, organizations can manage and control their entire decision-making process from goal setting down to operational execution through the ability to analyze, simulate, plan, and predict in one, user-friendly environment.

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SPONSOR PROFILE: COLLIBRA

ABOUT COLLIBRA

Collibra is the Data Intelligence company. We accelerate trusted business outcomes by connecting the right data, insights, and algorithms for all Data Citizens. Collibra removes the complexity of data management to give you the perfect balance between powerful analytics and ease of use. Our platform unlocks your data to solve problems, implement ideas and grow your business.

Collibra acts as the system of engagement for data, delivering end-to-end Data Intelligence to accelerate digital business transformation and helping you to:

- Quickly find, understand, and access data via a single integrated platform to confidently drive your business forward
- Build a shared language around data so you can share and reuse trusted assets and information
- Operationalize data privacy by centralizing privacy policies and automating workflows to meet regulatory requirements and minimize risks

- Consolidate tools to optimize spend and drive transparency with a single enterprise-grade, cloud-native platform

Collibra has a diverse global footprint, with offices in the U.S., Belgium, Australia, Czech Republic, France, Poland and the U.K. For more information, visit collibra.com.



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SPONSOR PROFILE: CRATE.IO

ABOUT CRATE.IO

Crate.io are the developers of CrateDB, a global multi-model database that enables companies to access data insights at scale. CrateDB's ability to ingest and manage massive amounts of data from diverse sources empowers companies worldwide to turn data into business value.

The flexible, distributed database solution combines the performance of NoSQL with the power and simplicity of standard SQL. Optimized for large data volumes with high compute and data versatility requirements, CrateDB runs in the cloud, on the edge and on-premise.

Founded in 2013, Crate.io operates globally with offices in Germany, Austria, Switzerland, and the US. In 2021, CrateDB won the IoT Evolution Industrial IoT Product of the Year Award. Clients maximizing their data potential with CrateDB include: Alpha, McAfee and Gantner. For more information, please visit www.crate.io



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SPONSOR PROFILE: FIVE1

ABOUT FIVE1

The best way to make advanced analytics initiatives successful is to find the right balance between technology, (data) culture and the strategic goals. With our Five1 Data Thinking method, we have a structured and at the same time agile process for developing advanced data products. We believe you have to be decision-driven to become data-driven. That's why we always focus on people and a specific problem, rather than on data. Because errors and mistakes have an exponential impact on costs and project success over time, we place special emphasis on the early phases of data initiatives.

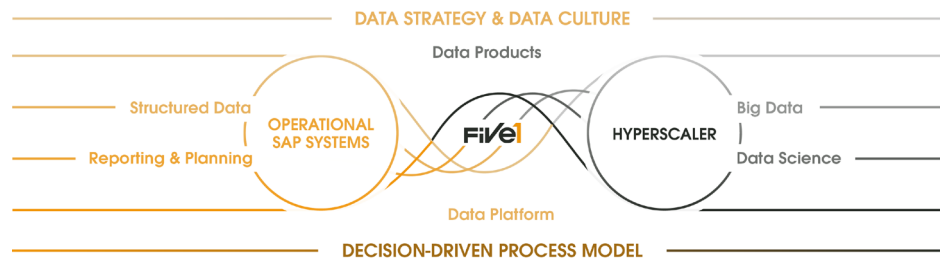
No matter what challenges you face in your transformation to a data-driven enterprise, we can support you. Our services range from the conception of a tailored data strategy to the prioritisation of use cases and the implementation of concrete data products.

Since 2008, we have been supporting our customers in making better decisions with the help of data. We have been awarded several times as SAP Gold and AWS Advanced Consulting Partner, as well as best employer by Great Place to Work.



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SPONSOR PROFILE: SNOWFLAKE

ABOUT SNOWFLAKE

Thousands of organizations, including 187 of Fortune 500 companies, use Snowflake's Data Cloud to unite siloed data, discover and securely share data, and execute diverse analytic workloads. Wherever data or users live, the Data Cloud delivers a single data experience that spans multiple clouds and geographies. 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. Learn more at www.snowflake.com



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SPONSOR PROFILE: TABLEAU

ABOUT TABLEAU

Tableau helps people see and understand data. Tableau's self-service analytics platform empowers people of any skill level to work with data. From individuals and non-profits to government agencies and the Fortune 500, tens of thousands of customers around the world rely on Tableau's advanced analytics capabilities to make impactful, data-driven decisions. For more information, please visit www.tableau.com.



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Dr. Carsten Bange is the founder and CEO of the Business Application Research Center (BARC). He is considered one of the leading experts on the successful use of information technology for business intelligence and data management in the transformation to becoming a data-driven company. As a long-standing and neutral market observer, he is a coach and strategic consultant to companies of various industries and sizes, a frequent speaker at conferences and seminars, and the author of numerous publications and market studies.



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Nina Lorenz is an analyst at the Business Application Research Center (BARC) in Würzburg, Germany. Her research areas include business intelligence front ends, data culture and process-oriented BI applications. She is co-author of blog posts, articles and market research studies within the field of BI and analytics, and is responsible for the concept and implementation of the content browser for BARC's powerBImap.



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