DATA STRATEGY AND CULTURE: PAVING THE WAY TO THE CLOUD

Exasol

The analytics database

DATA STRATEGY AND CULTURE: PAVING THE WAY TO THE CLOUD

CONTENTS

THE CURRENT STATE OF PLAY

WE'RE AMASSING DATA AT BREAKNECK SPEED. ACCORDING TO RECENT PREDICTIONS BY IDC, THE AMOUNT OF DATA CREATED WORLDWIDE WILL REACH AN ENORMOUS 163 ZETTABYTES BY 2025. THAT'S TEN TIMES THE AMOUNT PRODUCED IN 2017.

Businesses of all sizes, operating across every sector, are taking note. Chief data officers (CDOs) are now a frequent fixture at the executive table, and leaders recognize that it's impossible to be a digital business without being data driven.

BUT THERE'S A CATCH.

Despite this progress, an alarming number of firms aren't even scratching the surface of what they can achieve with their data. This is often because they're attempting to manage it without fully understanding the key steps needed to optimize the success of their data strategy.

Many organizations are spending precious time and resources working out which deployment method to choose – whether it be cloud, on-premises or a hybrid approach. While this is an important consideration, it shouldn't come before the basics of a data strategy and a data-driven culture are in place. By focusing on the deployment model first, organizations risk rolling out a disjointed approach. In this scenario, employees can quickly become disillusioned and lose trust in the process.

Businesses are at a critical crossroads when it comes to how successfully they work with data. According to our research, just 32% of data teams can always extract the insight they need. Not only this, but almost half (46%) of organizations believe that the democratization of data simply isn't feasible for them. There's still a lot of work to be done.

EVERYONE NEEDS CLARITY

Agreeing an effective data strategy up front is the first step to success for any business. But communicating this effectively is just as important. Our research has revealed that, while management believe that their data strategy is being rolled out effectively, employees feel quite the opposite. Some believe they are being kept in the dark, while others are concerned or confused by their company's approach. If they're not careful, leaders risk neglecting the very people who drive their business on a day-to-day basis.

Success requires a carefully considered approach. **In this report, we'll outline the key ingredients that make up an effective strategy, examining culture, the democratization of data, and deployment models. We'll also explain the steps that need to be taken to gain an edge over the competition and reap real rewards.**

Armed with the tools we provide in the pages that follow, I believe that you will have everything you need to not only become data-driven, but to achieve true data excellence.

I hope you find this a useful resource,

Aaron Auld

Aaron Auld CEO, Exasol

163
ZETTABYTES
OF DATA
BY 2025

STRATEGY IS KING

APPLYING DATA EFFECTIVELY CAN MEAN THE DIFFERENCE BETWEEN SUCCESS AND FAILURE FOR A BUSINESS.

Gathering data is one thing, but it is largely useless if you don't develop insights that can be used to make positive changes to an organization. An increasing number of firms are recognizing this and are prioritizing data strategy as a result.

Those firms that not only support their strategy with technology but use it as a driving force for their business, become more agile. However, those firms that let technology infrastructure impose limitations on their data strategy are incumbered by significant challenges. They restrict the ways they can access data and integrate with other applications. Forever shackled to one way of doing things, they hamper their capacity for growth.

Our research regarding this is reassuring. The majority (81%) of respondents somewhat agree or completely agree that their organization has a strong data-driven culture and 83% are working to strengthen this further. What's more, most respondents (92%) believe that data strategy has a significant or moderate influence on IT infrastructure decisions. These

are positive signs from decision makers, but whether this translates to the teams they manage is another question.

ARE YOUR EMPLOYEES ENGAGED WITH YOUR DATA STRATEGY?

What's clear from our research is that employees and management have polarized perceptions of how their organization's data strategy is working. Less than half of decision makers believe that those working in senior management (40%) or mid-management roles (32%) are very effectively informed of their organization's data strategy.

This is cause for concern. No matter how brilliant your strategy, it is worthless if employees don't buy into it. This applies directly to infrastructure decisions. Choosing a deployment model that ultimately restricts how successfully an organization's strategy can be applied can have a significant impact on how the people within the business feel about working with data.

36%
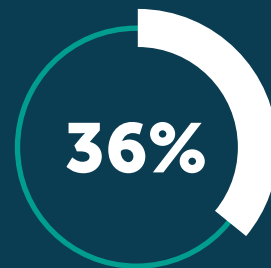
OF THOSE RESPONDENTS WHO HAVE EXPERIENCED RESISTANCE, 36% CITE A LACK OF UNDERSTANDING OF THE DATA STRATEGY.

Ultimately, successful businesses are those that can identify the key capabilities that are required to execute their data strategy effectively. Infrastructure decisions are an inherent part of this. Any limitations can cause frustration and poor engagement – traits that are not conducive to becoming an effective data-driven company.

RESISTANCE TO CHANGE MIGHT BE HOLDING YOU BACK

Employees beyond just the senior management level need to be clear on what the data strategy is, how it will benefit them and that a deployment option will be chosen based on what best suits the relevant workloads and, as a consequence, what will make their lives easier. They also need reassurance that the move to become data-driven is in their best interest.

This is where a lot of firms are falling short. Our research has revealed that many employees are unsure of the benefits of their firm's data strategy. There's also a more fundamental concern: they believe that data-driven technology might put them out of a job.

53% of respondents have experienced some resistance from employees to the adoption of data-driven methods at their organization. Of those who have experienced some resistance, over a third (35%) attribute it to anxiety over job security if all decisions are based on data, while 36% cite a lack of understanding of the data strategy.
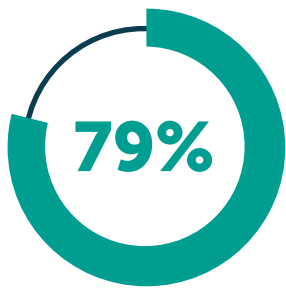
SOMETHING ISN'T ADDING UP

Success requires organizations to recognize employees' concerns and place the human at the heart of their data strategy. Only then will they be able to increase productivity, reduce costs and rethink how they operate as a business.

Employees also need reassurance that their jobs are not being threatened – in fact, it's quite the opposite. According to McKinsey, an effective data strategy will open the door to exciting new career opportunities and progression. The proportion of occupations that can be fully automated using currently demonstrated technology is actually very small – less than 5%. However, data-driven firms are able to remove menial processes from workers' daily lives, freeing up their time for more rewarding and profitable tasks. If this isn't reassuring enough, the World Economic Forum predicts that, by as soon as 2022, technology innovations will create 58 million more jobs than they displace.

WHO'S DRIVING SUCCESS?

Our research has also revealed a widespread dissatisfaction about who's initiating data-driven strategies in organizations. 74% of decision makers either agree or somewhat agree that data strategies are driven at the board level. However, more than half (55%) believe it should really be driven by a Data Center of Excellence (CoE) or Innovation Lab.

Establishing a Data CoE, or simply making a concerted effort to engage with employees and other stakeholders who will directly benefit from data programs, could be the catalyst to achieving the shift in culture that a data-driven strategy demands. This in turn will help firms to take the next vital step to success – effectively democratizing data.

79%

79% OF DECISION MAKERS BELIEVE THAT THERE IS ENOUGH AWARENESS ACROSS THE BUSINESS OF THE POSITIVE IMPACT THAT A DATA-DRIVEN STRATEGY CAN HAVE.

Piedmont
HEALTHCARE

A HEALTHY DATA STRATEGY

The democratization of data is an important goal for not-for-profit healthcare provider Piedmont, who wanted to turn its 555 billion data points into actionable information for its employees. However, amid an aggressive growth strategy, its existing system was failing to keep up.

By replacing its data warehouse and its core data repository with a high-performance in-memory analytics database, the firm has opened up access to data to more decision makers who are now much more informed and able to improve the running of the company. Previous data models maxed out at a size of 100 million records, but today there are data models with over two billion records immediately available for analysis.

Hospital care quality, operation outcomes, and patient satisfaction have all improved as a result of Piedmont transforming into a data driven healthcare provider.

"When we need answers, we can get them in near-real time," says Mark Jackson, Director of Business Intelligence at Piedmont Healthcare. "[The platform] delivers results, at speed and are confident in its ability to scale for our future. Working life has much-improved."

THE DEMOCRATIZATION OF DATA: A BUSINESS GAME-CHANGER

THE DEMOCRATIZATION OF DATA IS ESSENTIAL IF YOU WANT TO INSTILL AN EFFECTIVE CULTURE TO UNDERPIN YOUR STRATEGY.

Businesses need to find a way to put a sustainable plan in place for employees at all levels of the business so that they can access data which they can use to make better decisions and uncover new opportunities.

This is where businesses naturally think of the benefits the cloud can bring. A cloud model removes data silos, and data can be shared at scale in a secure and cost-effective way. Senior staff believe that they are providing employees with these benefits: 74% of decision makers say that employees at all levels within their company are being given sufficient access to data to improve their decision making. For hybrid cloud users this rises to 81%.

ROOM FOR IMPROVEMENT

However, this doesn't tell the full story. Our research has also found that just 32% of data teams can always extract the insights they require from their organization's data. Meanwhile, 58% of respondents would like to increase access to data across the workforce.

Decision makers are feeling the weight of the problem. Almost four out of five respondents to our survey say their current IT infrastructure makes it challenging to democratize data in their organization. Additional barriers include too many new sources of data (25%); a lack of relevant data skills (24%); outdated infrastructure (22%); and performance limitations (21%).

79%
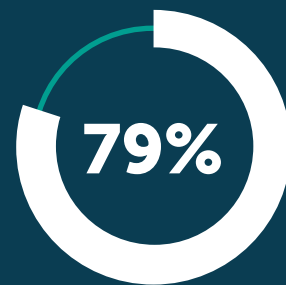
79% SAY EXISTING IT INFRASTRUCTURE MAKES IT DIFFICULT TO DEMOCRATIZE DATA.

Consequently, almost half (46%) of respondents have lost faith: they believe that the democratization of data simply isn't feasible for their organization.

Business leaders cannot afford to bury their heads in the sand about this. If their technology infrastructure is preventing them from opening up access to data across the business, then they are thwarting their efforts to become data driven.

THE NEED FOR SPEED

Speed is just one area where these firms will be held back. For many organizations with incumbent systems, queries can take hours – sometimes even days. However, we're now operating in a real-time world and many queries need to be answered in seconds, otherwise the answers, no matter how brilliant they are, have limited value. Conversely, a fast database gives you the ability to aggregate data on the fly, asking whatever questions you like without needing to get the data prepared beforehand.

46%
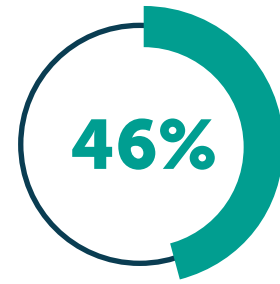
46% OF DECISION MAKERS DON'T THINK DATA DEMOCRATIZATION IS FEASIBLE IN THEIR BUSINESS

74%
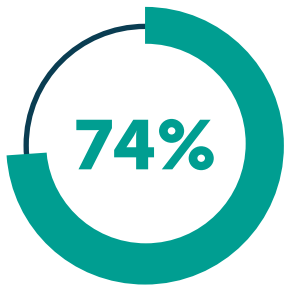
74% OF DECISION MAKERS BELIEVE THAT ALL LEVELS OF EMPLOYEES ARE BEING GIVEN SUFFICIENT ACCESS TO DATA TO IMPROVE THEIR DECISION MAKING.

Revolut

BANKING ON SUCCESS

Revolut, the fastest growing fintech in the world, has made self-serve data analytics a reality for all its employees across business functions.

Revolut has over six million customers situated across the globe. Its rapid growth has led to an explosion in data – volumes increased 20-fold within 12 months.

"It was starting to get difficult to manage this data using our operational databases," said Demeter Sztanko, the firm's Head of Data Engineering. "We maintain around 800 dashboards and run around 100,000 SQL queries on a daily basis across the organization. Some queries were taking hours to run."

To address this problem, Sztanko chose a high-performance in-memory analytics database running on Google Cloud Platform. "Queries that used to take hours are now completed in seconds," he said.

By choosing a system with on-premises, cloud or hybrid and multi-cloud deployment options, companies aren't incapacitated by vendor lock-in. This allows Revolut to expand to countries where Google Cloud Platform is not available.

THE DEPLOYMENT MODEL MATTERS

ONCE YOUR STRATEGY IS REALIZED, AND INFORMATION IS EASILY ACCESSIBLE ACROSS THE BUSINESS, IT'S TIME TO CONSIDER THE DEPLOYMENT MODEL.

41% of respondents to our survey say the performance of software and services is a key factor driving their organization's decision to invest in a cloud deployment for their data strategy. What's more, in addition to our earlier findings that almost four out of five decision makers believe infrastructure is a blocker for data democratization, 22% claim that outdated infrastructure is one of the biggest barriers in their organization.
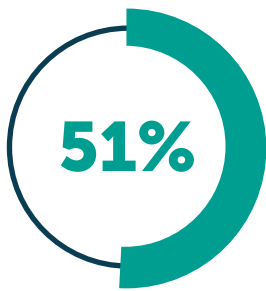
IS THE CLOUD RIGHT FOR YOU?

While an on-premises approach can work for some, especially those operating in highly regulated industries such as financial services or the public sector, a cloud model can help many organizations to streamline their data by removing silos and connecting data stores.
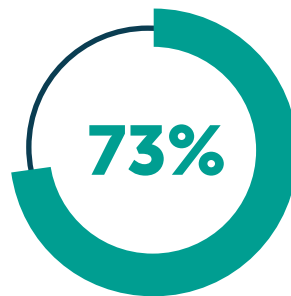
According to our research, 96% of decision makers believe a cloud model can make it easier to democratize data. Meanwhile, 73% state that migrating data workloads to the cloud has had a positive impact regarding what they can do with their data. Of these respondents, 51% say that the cloud has improved ease of access and shareability of data, and 46% cite faster query/response times as a benefit.
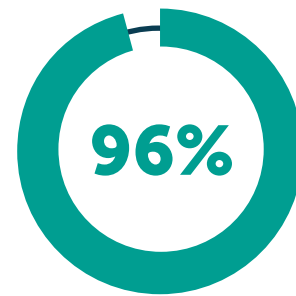
22%

22% CLAIM THAT OUTDATED INFRASTRUCTURE IS ONE OF THE BIGGEST BARRIERS IN THEIR ORGANIZATION.

51%

73%

96%

51% SAY THAT THE CLOUD HAS IMPROVED EASE OF ACCESS AND SHAREABILITY OF DATA.

73% STATE THAT MIGRATING DATA WORKLOADS TO THE CLOUD HAS HAD A POSITIVE IMPACT REGARDING WHAT THEY CAN DO WITH THEIR DATA.

96% OF DECISION MAKERS BELIEVE A CLOUD MODEL CAN MAKE IT EASIER TO DEMOCRATIZE DATA.

A CONSIDERED APPROACH IS KEY

While the cloud is often considered an instrumental part of effective strategy, it's important to remember that it isn't right for every business or every workload – it's crucial that decision makers carefully think about what works best for them and what questions they need to answer when making such infrastructure decisions.

Respondents to our survey evaluate several factors when deciding whether to invest in the cloud. 37% claim the agility to react to future requirements is key, while 34% say the speed of getting software or services is an important consideration. 30% say they consider cost.

Our research has also revealed that the specific workloads that are most suited to the cloud are the data warehouse (according to 52% of respondents) and predictive/prescriptive analytics and data science (according to 49%).

THE BEST OF BOTH WORLDS

With all this in mind, having flexibility is crucial – and this is where a hybrid approach really delivers. Firms can manage sensitive workloads on-premises, while using public cloud offerings to manage less-critical information. Costs are kept under control and greater agility is achieved, enabling a firm to not only quickly adapt and change as their business evolves, but turn their data into value faster than ever before.

FOUR KEY INGREDIENTS FOR SUCCESS

STEP 1

GET YOUR DATA STRATEGY RIGHT

A data strategy is critical to ensuring that data is managed and used like an asset. Trying to effectively manage data without a well thought out strategy is akin to driving to a new location without a map or Sat Nav – you'll end up lost.

Those firms that get it right are the ones that mirror their data strategy with their overall business strategy. They don't let their existing technology hold them back either – a massive 92% of decision makers believe data strategy has a significant or moderate influence on IT decisions. The most effective firms also establish common methods, practices and processes to control and distribute data across a business in a repeatable manner.

Having a dedicated owner is essential to effectively implement the use of data within an organization. The CDO is suitably placed for this role. In fact, recent research by KPMG has found that businesses that have a CDO are twice as likely to have a clear digital strategy.

Learn more about the role of the CDO here.

STEP 2

LEAD BY EXAMPLE

Establishing a data community can be the catalyst to achieving the shift in culture that a data-driven strategy demands.

This should look both inside and outside of an organization to own data governance, capture and disseminate new knowledge and practices, and to push data-driven culture throughout the wider business.

For bigger organizations, a data community might take the form of a Data CoE, comprising a dedicated, cross-functional team of data scientists, data engineers, workflow integrators, data architects, delivery managers, visualization analysts, and more. However, if you're a smaller company, it's totally possible to scale down a little. Assigned members of your business units can work on short-term data projects in an agile manner, while still dealing with daily demands of their normal functions. Ultimately, it's about building relationships and proving the benefit of data for each department.

92%
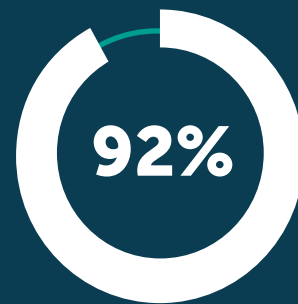
THE MAJORITY OF DECISION MAKERS BELIEVE DATA STRATEGY HAS A SIGNIFICANT OR MODERATE INFLUENCE ON IT DECISIONS.

STEP 3

ADDRESS THE HUMAN SIDE OF DATA ANALYTICS

80% of decision makers believe that opening up access to data has a positive impact.

This is of utmost importance: a data strategy won't work in practice unless the culture allows it. Organizations need to achieve buy-in from across the business to effect real cultural change. This can only happen if data analytics is seen as a contributor to the day-to-day business, rather than an afterthought or executive function.

The CDO is perfectly placed to make this happen. The most effective CDOs recruit 'data citizens' in different departments, making the tactical use of data more entrenched across the organization. By doing this, they make data an open, useful tool, rather than a confusing gated asset that can only be accessed by a few who are able to navigate the complexities of it.

Tools need to be easy to use too. Powerful and intuitive business intelligence solutions sitting upon a high-performance analytics database will help ensure data is accessible by all levels of a company, without the need for extensive user training.
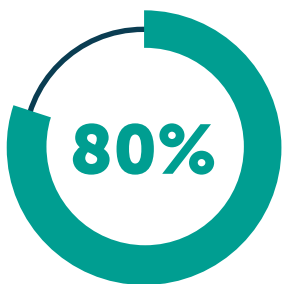
80%

STEP 4

CONSIDER YOUR DEPLOYMENT STRATEGY

While the cloud is often considered king, it's important to remember that there is no one-size-fits-all approach when it comes to deployment strategy. You need to carefully think about how your strategy may evolve in the future, and whether certain applications are better kept on-premises.

Ultimately, the deployment model you choose should enable every worker across your business to access the insight they need in real time. Flexibility in where you store your data and analytic apps is a priority, not only for your data teams and your developers, but for your company's financial bottom line. Often cloud services sound very cost effective in the beginning, but once you begin handling increasingly heavy data workloads it can become very expensive very fast. A data-driven organization should not be penalized for applying data analytics.

No matter where you want to take your strategy next, speed and performance are fundamental. Once you can guarantee you have the power to access data from anywhere in your organization, you'll be able to turn it into business value more effectively than ever before. The potential that this will buy you in breathing space is only limited by the size of your strategic vision.

A DATA-DRIVEN ORGANIZATION SHOULD NOT BE PENALIZED FOR APPLYING DATA ANALYTICS

METHODOLOGY

This report is built upon the findings of our survey of over 2,000 data strategy decision makers from four key markets: the UK, Germany, the US and China. Respondents work in a broad range of business roles – from C-level through to marketing and operations – and are all responsible for gathering or applying insights from data. All respondents have some or all of their data infrastructure in the cloud.

80% OF DECISION MAKERS BELIEVE THAT OPENING UP ACCESS TO DATA HAS A POSITIVE IMPACT.

TAKE THE NEXT STEP AT EXASOL.COM/ PRODUCTS/ CLOUD

TAKE THE NEXT STEP AT EXASOL.COM

GERMANY

Exasol AG
Neumeyerstr. 22 – 26
90411 Nuremberg
German

T: +49 911 23991-0
F: +49 911 239 91 241
E: info@exasol.com

UNITED KINGDOM

Exasol UK Limited
Cannon Green. 27 Bush Lane,
London
EC4R 0AA, UK

T: +44 20 3813 8310
E: info@exasol.com

USA

Exasol, INC.
c/o WeWork
1372 Peachtree Street
Atlanta, GA, 30309
USA

T: +1 415 363 5500
E: info@exasol.com

Exasol
The analytics database