Becoming a data-driven organization

The what, why and how

Ongoing digitization is turning everything into data, forcing companies to become more data-driven. While the benefits of the data-driven organisation are clear (improved performance, more profitability, stronger innovations), there are still some technical and business challenges to overcome.

Technological advancements in data analytics are, however, making it possible for any type of company in every industry to become data-driven.
Discover the basic do's and don'ts in 'Becoming a data-driven organisation: the what, why and how'.

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Why become data-driven?

You may not have noticed, but everything around us has turned into data. Not just our cars or mobile phones, a growing number of other appliances, machines and 'things' are generating a constant flux of data. Where we are and what we do is used for marketing purposes. Sensors in machines tell companies how to improve their output.

This flood of data is transforming our world. Companies that want to stay ahead must become data-driven.

The rise of the data-driven organisation

Many organisations worry about staying competitive in the midst of Big Data, Artificial Intelligence (AI), Machine Learning or the Internet of Things (IoT). Especially as many of these concepts are already generating value for many companies. The glue that binds all of these together is data.

What is being data-driven all about?

Data-driven organisations process and use ever more data to improve and speed up their decision-making. The goal of having superior analytics is having superior insights. In data-driven organisations, decisions that aren't supported by data, are considered suspicious. Smarter analytics technologies now enable every company to become more data-driven.

As consultancy firm McKinsey says:

"Businesses no longer have to go on gut instinct; they can use data and analytics to make faster decisions and more accurate forecasts supported by a mountain of evidence."

Data-driven organisations use analytics to become smarter:

(1)

They perform better

The data shows where they can streamline their processes.

(3)

They are more profitable

Constant improvements and better predictions help to outsmart the competition and improve innovation.

(2)

They are operationally more predictable

Data insights fuel current and future decision-making.

These advantages make an organisation more **shock-resistant** and less likely to be surprised by the next economy - or technology **disruption**.

Gut feeling no longer makes the difference

Gut feeling is not good enough anymore to **differentiate yourself** from your competitors. To be truly competitive, you will need data. Lots of **relevant data**. Luckily, any organisation can set out on the journey to become data-driven. You no longer need to be a data scientist to work with data. **Citizen Data Scientists** are not your professional statistician or trained analyst, nor your maths wizard or computer scientist, but rather regular business users who create and use advanced analytical models.

Citizen Data Scientists are part of the ongoing wave of **democratization of analytics** in every department. These business people have the right attitude – curious, adventurous, determined – to research and improve things in your organisation. They want to get their hands on the data themselves and find new ways to get answers. They're willing to learn new methods and use new tools. They often think, "I don't want to ask a statistician. I want to try it myself."

ZOOM-IN ON SWISSCOM

SWITZERLAND | TELECOM | CUSTOMER SERVICE

7x FASTER

2,500 PB

Every day, the world creates 2,500 petabytes of data. In the past two years, mankind has generated more data than in the preceding 5,000 years combined.

Source: IFL Science

CUSTOMER SERVICE DATA IS NOW PROCESSED **7X FASTER** MAKING IT FAR MORE USEFUL IN ISSUE SOLVING.

Swisscom, Switzerland's biggest telecom operator, found that the analysis of their **customer service data** was **too slow** and required too much manual work. As such, it did not really help to improve customer service. Through smarter text analytics, however, **relationships and possible solutions** were shown much faster, often almost simultaneously as the ongoing call center documentation evolved. Reports are now sent daily instead of weekly or even monthly.

"We are able to create fully automated daily reports, which has a direct positive effect on service quality and customer satisfaction."

Albert Labermeier
Senior Marketing Analyst at Swisscom

2

The road to becoming data-driven

While the benefits of becoming more data-driven are apparent, in our experience, many companies are still faced with a few bumps in the road. Luckily, technical advances are bringing data analytics within reach of a growing number of organisations.

Changing mindsets

On the road to becoming data-driven, it's crucial for people to change their mindset and organisations to change their processes. Doing so, will help overcome some of these hurdles:

1

UNSTRUCTURED DATA

Data that is not predefined or does not fit the mould of traditional data models. This includes text documents, pictures, e-mails, sensor data, and much more. This data is hard to analyse for traditional analytics programs, although it contains valuable information.

2

UNCONNECTED SYSTEMS

Organisations often use multiple information storage systems side by side with no or difficult connections between them. These systems may even offer conflicting information because they use different sources, processing methods or naming conventions.

3

LOW DATA QUALITY OR UNAVAILABLE DATA

Sometimes, the data quality simply isn't good enough, because of poor data input or poorly implemented data connections. It is hard to get good business intelligence from poor – or plain wrong – data.

4

MISALIGNMENT WITH IT

Business units shouldn't have to depend on IT for data analytics, they should be able to run it themselves. With IT being under constant pressure to keep delivering more at lower costs, your data analytics requests may end up at the bottom of their list.

But all of these challenges can be overcome by defining a roadmap towards better data analytics.

ZOOM-IN ON ASTRAZENECA

SWEDEN | HEALTHCARE | MANUFACTURING

VARIATIONS IN THE PRODUCTION PROCESS HAVE BEEN MINIMIZED.
THE CONTENT OF THE ANALYSES HAS BEEN GREATLY EXPANDED.
PRODUCTION CYCLES HAVE BECOME LEANER.

AstraZeneca, a global pharmaceutical company, wanted to make the production process for its inhalers more cost-effective and qualitative by better using the production data. Not an easy task, given the system's 1,700 parameters and a total data growth of 1.5 million rows per week.

With the proper analytics system in place, automated data management for each production batch has become possible, thus allowing for quick analysis throughout the manufacturing process. Between 50 and 100 employees – as diverse as engineers, operators and managers – now create or receive reports from the system while knowledge sharing is greatly facilitated.

"Due to the success of the program, several other products from the same family which are produced in AstraZeneca's Swedish operations have now been included under the system. We plan to use the same system for completely different product groups as well."

Henrik Åkerblom
Process Engineer at AstraZeneca

80%

Analysts at Gartner estimate that 80% of all enterprise data today is unstructured

Source: Gartner

45%

According to an IDG survey, 45% of business leaders cite 'unstructured data' as their single biggest hurdle to overcome in analytics.

Source: IDG

3

The three foundations of better analytics

Technological improvements within analytics platforms enable more companies to become data-driven, as it enables organisations to manage their data better, run more complex analyses and visualize the outcome in a more understandable manner. Getting the technical foundations right puts you well on your way.

Laying the foundation

There are **three foundations** to becoming data-driven.

1 | DATA MANAGEMENT

This is the data you use as input. A good analytics platform can process any combination of structured, semi-structured and unstructured data. Automated connections between your analytics platform and other systems ensure that the most recent data is always available and used. While not every data point will be crystal clear from the start, technical advances in Machine Learning and the like already automate data management, for the most part. Similarly, data inputs and data comparisons can be automated, neatly breaking down the obstacle of handling semi- and unstructured data. By applying the right governance structure, privacy rules can be applied to personally identifiable information.

2 | ANALYTICS

Pouring over endless rows of figures and numbers is the heavy lifting of data science. By leaving this task to specialized software, you leave less room for human error and create more room to actually start using the results of your analysis. Complex calculations can now be run by a click of a button, making it available to any regular business user.

3 | DATA VISUALIZATION

The end result of your analytical work should be smarter insights. By visualizing this in different types of graphics and charts, the outcomes become easily understandable for everyone at a glance, while reports and dashboards can quickly be set up, thus opening up the insights to a growing number of people across the whole organisation.

74%
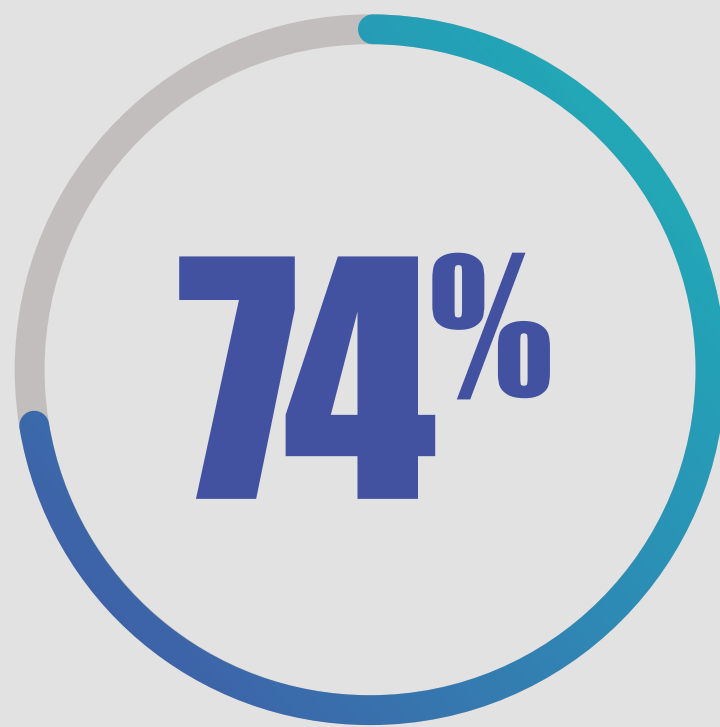
According to a Forrester study, 74% of all companies would like to be more data-driven, but only 29% claim that they are actually good at putting this idea into action.

Source: Forrester

The power of analytics that everyone can use

These three solid foundations enable you to build an **analytics platform** that works **for everyone**. This has major benefits that help eliminate the obstacles on your data-driven journey.

1 You get **clear, actionable results**, even from imperfect or unstructured data. Cleaning up your data and perfecting your input models can come later.

2 Your intelligence is **easy to view and understand** with visuals that are more captivating than any line of text could ever be.

3 Because the platform is easy to use, **self-service** reduces reliance on IT. In turn, IT can focus more on its core business.

ZOOM-IN ON RABOBANK

THE NETHERLANDS | BANKING | OPERATIONS

TRANSPARENCY THROUGHOUT THE ORGANISATION HAS INCREASED. DATA VISUALIZATION ENABLES THE BANK TO PROVIDE PERTINENT INFORMATION AND DIRECT CHAIN MANAGERS MORE EFFECTIVELY.

The Rabobank Group, a leading global financial services provider serving more than 10 million customers and headquartered in the Netherlands, wanted to optimize its operations by improving the financial and collaborative alignment across its chains. The company discovered that there was a huge amount of data available from all groups of the bank's organisational chain such as departments, business units and local branches, but **there wasn't one single system that could integrate and structure all the information efficiently** and provide the ability to share results.

With data visualization, large amounts of data are presented visually. The diverse pictorial or graphical options lead to new questions that weren't asked before. The bank is now much more flexible in its ability to provide information and it can direct chain managers more effectively. At the same time, employees have become more engaged because they can quickly see the results of what they do.

"With the knowledge and access to all chain information, we are able to let go of old business models and replace them with more dynamic ones."

John Lambrechts
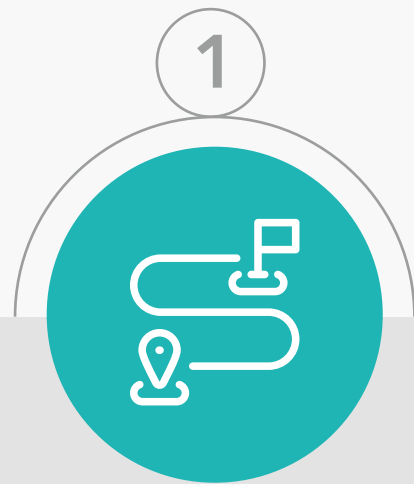Manager Concern Control at Rabobank

4

The
data-driven
journey

So where do you start your data-driven journey? Anywhere is good, as long as it isn't everywhere. A 'big bang' approach is risky: it can overcomplicate things or may simply lack focus. We recommend a step-by-step approach as the surest way forward to success.

Plotting the course

1

Choose your starting point

This can be a team (e.g. the marketing department) or a specific data source. Consider collecting data from your CRM system to get a better insight into customer behavior, or begin with productivity data from the shop-floor.

Recorded customer service calls or data from your finance department could equally be your first project. It is best if your starting-point is something you're **already familiar** with, and if you have a clear goal in mind.

2
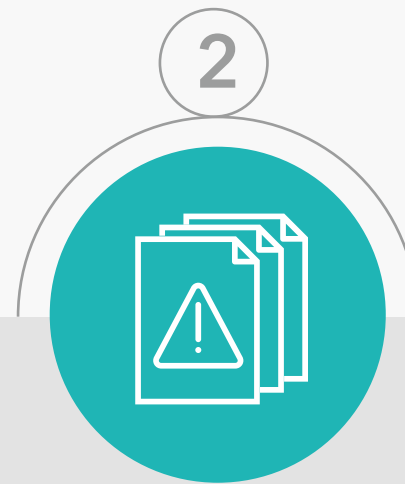
The most important datasets have priority

You must make a distinction between **must-have datasets** that will work towards your goal and **nice-to-have datasets** that are only loosely related.

Data may be a mix of structured, semi-structured and unstructured data. Pour it all in and look at what your analytics platform comes up with and whether the results are actionable. Consider if additional data management (e.g. data cleaning) is needed or whether you can already continue using the current datasets.
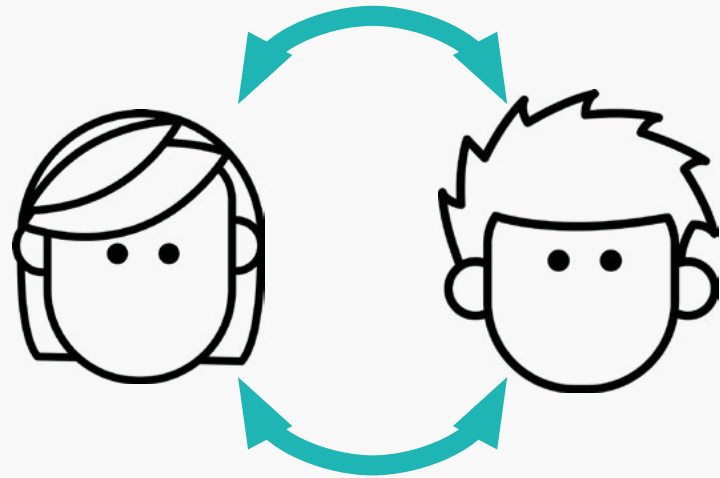
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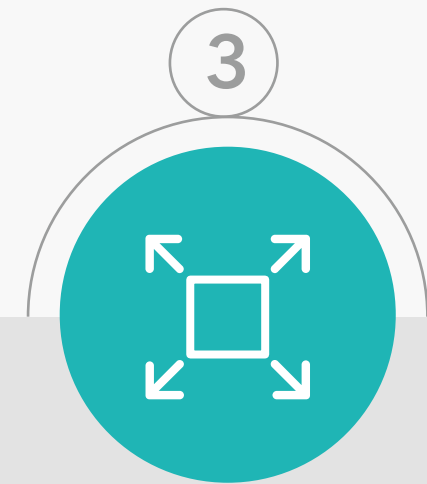
Expand the reach of the platform

Once you have value-added results, you can start **expanding the reach of the platform** within and across teams. This can happen in a series of waves that create more and more buy-in as the results begin to show more and more benefits.
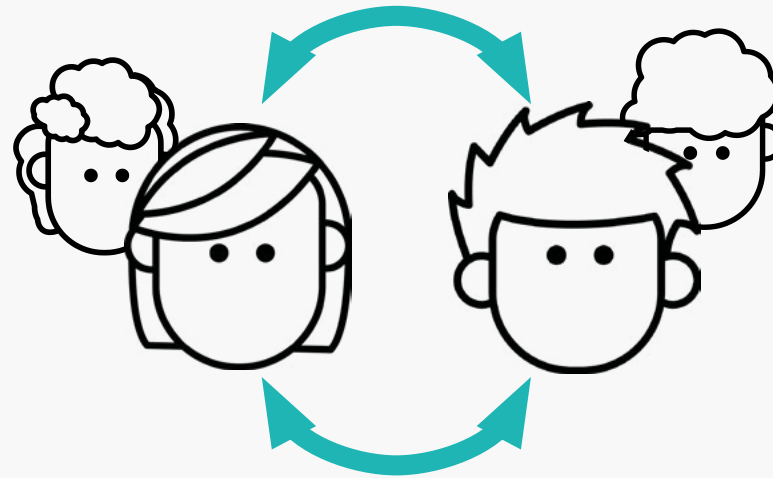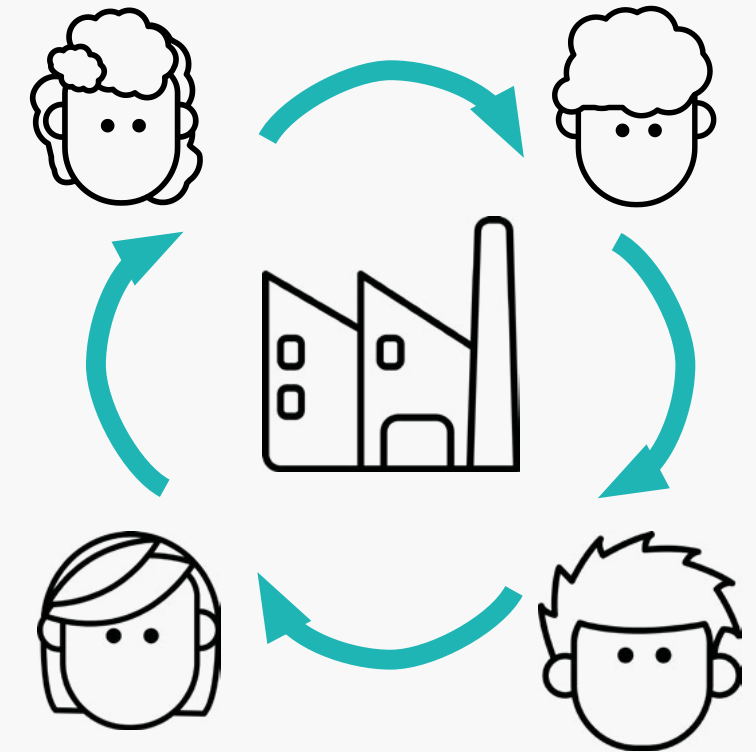
Start

expand
within the team

Scale

expand
beyond the team

Grow

get **the entire
organization** on-board

4

The data-driven organisation is born

Once you have moved from a limited number of data sources to an all-encompassing data management flow; you've extended the reach of data analytics from the few to the many and every key decision is backed by data, you've truly become a data-driven organisation. You'll find that, as you become better at analytics, you'll move from hindsight to insight to **foresight**. You'll **no longer simply look back** at 'what happened', but you'll **steer your gaze to the future**. Not only can you track ROI on all data-enabled projects, you can also run predictive analytics and simulate **'what-if' scenarios**. The backbone of your business strategy is now formed by undisputable facts.

ZOOM-IN ON
Eni

BELGIUM | ENERGY | MARKETING & OPERATIONS

a **360°** view on your customers

CUSTOMER CHURN AND RETENTION CAN NOW BE PREDICTED.

FUTURE PROFITABILITY OF PRODUCTS, CHANNELS AND SEGMENTS CAN BE BETTER EVALUATED UP FRONT.

Eni is an integrated energy company with operations on five continents. In the highly competitive energy market, it's crucial to build long-term relationships with clients. That's why the company continuously **monitors and analyses the behaviour** of its entire client base throughout the complete customer life cycle.

The company developed **a solid and trustworthy prediction model** using more than 700 parameters offering Eni's management:

» Valuable information about customers

» Help in evaluating the **future profitability** of the company's product portfolio, sales channels and customer segments

» **'What-if' scenarios**, allowing them to assess the impact of strategic decisions, such as changes in price or margin, reduced customer churn and more.

» **User-friendly dashboards** that help to keep an eye on the long-term profitability of the entire customer base.

"We calculate how much the customer will spend with us (revenues) and how long they will stay (retention). We also predict when we might experience payment issues (credit losses) with them and how much it will cost us to serve their needs (service costs)."

Zdravka Jevtimov
Customer Insights Manager at Eni

60%

Analyst firm Gartner estimates that over half of Big Data projects at companies fail. One big reason for this is that companies often want to do everything at once instead of focusing on smaller projects with a clear end goal or a quick win.

Source: Gartner

56%

According to CMO.com, best-in-class marketeers are 56% more likely to use data and analytics platforms. However, only 19% of marketers fully track all their marketing efforts with data.

Source: CMO.com

5

The next level in data-driven work

Being data-driven is not an end-state. It's the beginning of an exploration of exciting possibilities. As the pace of technology innovation keeps accelerating, yesterday's science fiction becomes today's reality. Here are some of the elements that will fuel the data-driven organisation of the future.

On the edge of Tomorrow

Edge analytics

Real-time on site analytics can track consumers' in-store behavior and pair it with the right kind of offer bundles to attract attention and capture the needs of the individual. This effectively creates the **segment of one.**

Transparency

Why not be transparent with consumers about the huge amounts of data that are collected? Some information will always remain sensitive, but offering transparency to your customers can be a big win in the branding department. According to recent surveys, over 80% of consumers say **ethics matter** when they buy. With the General Data Protection Regulation (GDPR), adhering to **privacy rules** has become an absolute must.

Security

Analytics can be put to work for data protection as well. With advanced pattern recognition and correlating behaviours, risks can be assessed better and **cyber attacks or real-life security threats** can be prevented before they even occur.

IoT

With the wealth of data generated by machines, your production lines could map out ways to become even more productive, discover hidden costs and unlikely sources of revenue. The Internet of Things (IoT) will **revolutionize production** as well as consumption patterns. And it's just around the corner.

AI

Artificial intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks. AI relies heavily on **deep learning and natural language processing.** Computers are 'trained' to accomplish specific tasks by processing large amounts of data and recognizing patterns in that data.

Supply chain

Experts can use Big Data to further optimize logistics. By taking into account circumstantial factors that influence delivery speed and reliability (e.g. traffic flows, accidents, weather patterns, rain storms), smarter logistics could even be used to operate more sustainably.

ZOOM-IN ON
INTERAMERICAN

GREECE | INSURANCE | COMPLIANCE

BE FULLY GDPR-COMPLIANT.
MAKE A BIG STEP TOWARDS BECOMING A DIGITAL-ONLY INSURER.

For INTERAMERICAN, a leading insurance provider in Greece, trust is crucial to **retaining loyal customers**. The company adopted a data analytics platform to be fully compliant with the EU General Data Protection Regulation (GDPR) while also supporting the company's strategic focus of transforming itself into a **digital-only insurer**.

Its data governance initiative improves the availability, completeness and accuracy of the information and data being managed. Topics covered are data ownership, data location, data access, data provenance, risk assessments and proper recovery procedures in case of breaches. All vital elements in helping give customers peace of mind that their personal data will be safe.

"Our organisation is working to transition to the new digital age and create long-term, trust-based relationships with our customers. SAS for Data Protection helps us work towards compliance with the requirements of the new regulation and foster customer trust."

Xenophon Liapakis
CIO at INTERAMERICAN

41%

According to a CFI Group survey, 41% of all consumers use mobile apps while shopping. For Millennials, this figure even rises to 67%. 51% of those polled said they would be likely to use apps if they made the shopping experience easier and faster.

Source: CFI Group

Over half of organisations surveyed by IDG say that they are already deploying analytics to detect cyber attacks, denial-of-service attacks and phishing. However, 59% among them still said they have been compromised at least once per month "because they were not able to keep up and fully analyse the data."

Source: IDG

According to Accenture research, using Big Data analytics had a net positive impact on customer service and demand fulfilment for nearly half of all supply chain experts polled. Other advantages listed included greater supply chain integration (36%), productivity improvements (33%) and improved cost to serve (28%).

Source: Accenture

46%

53%

6

Getting in
on the action

Becoming a data-driven organisation is now within reach of every company. **Cloud solutions** have made access to data analytics platforms much easier: software-as-a-service (SaaS) enables organisations to no longer build and maintain everything on premise but rent this for as long as needed. And with **Results-as-a-Service (RaaS)**, it becomes even possible to completely 'outsource' your analytics. If you do not have tools and expertise to turn data into insights, you can still get results.
Your organization provides the data and the business problem to be solved, and RaaS delivers results you can act on.

By starting **your data-driven journey** in one specific area of your company, clearly **defining your path** towards data analytics, adopting **the right mindset and technologies**, and gradually **extending the reach** and impact throughout your company, you too can become the type of data-driven company that is **ready for tomorrow's challenges**.
Start your data-driven journey now and, in no time, you'll find yourself wondering: 'How on earth did we run our business without analytics?'

Learn more about the what, why and how of
becoming a data-driven organisation

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Becoming a data-driven organization