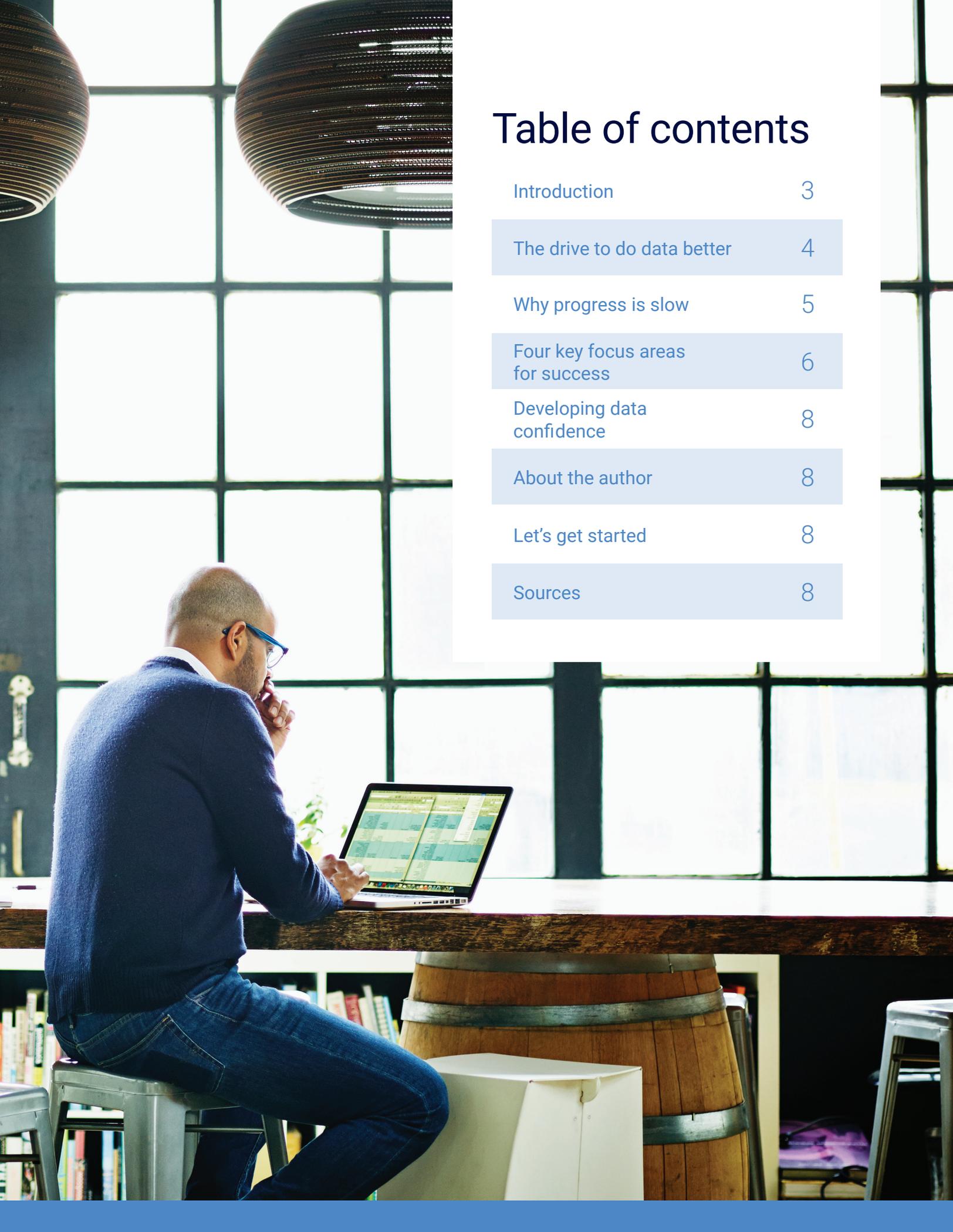


POINT OF VIEW | DATA MODERNIZATION

# Four Keys to Becoming a Data-Driven Organization

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# Introduction

Data will undoubtedly drive the future of business — and society in general. In our technology-centric, constantly connected world, every digital transaction imaginable is recorded and cataloged, producing an unfathomable amount of data waiting to be analyzed and understood. Every organization, from government agencies to startups and the largest global enterprises, can take advantage of data to improve everyday operations, innovate and make more informed business decisions to better serve employees, customers, citizens and stakeholders.

Although data is readily available to any organization, only a handful of industry leaders have mastered the craft of managing it (and even they have room for improvement).

The fact is: Collecting data is easy; accessing it across the enterprise, making sense of it, securing it and using insights derived from it are far more difficult.

The sheer volume of data produced, combined with the intricacies of deciphering, verifying, filtering, routing and securing that information, can create overwhelming complexity. And making decisions based on inaccurate or incomplete data may do more harm than good.

The challenge of data management is enough to make some organizations ignore the opportunity altogether. At best, those organizations are missing out on potentially game-changing business improvements. At worst, they could be sealing their own fate as advanced data management becomes critical to meeting customer expectations and keeping pace with competitors in every industry.

The good news is, while becoming a data-first organization is no easy transition, it's realistically achievable.



# The drive to do data better

The concept of data management is nothing new; in fact, the practice of gathering business intelligence is as old as business itself, and much of that information has been digital for decades. What has changed in recent years is the exponential growth in the amount of data available, due to a confluence of inputs, from search engines and social media to wearable technology, financial records, internet of things devices and countless online databases of public information.

The opportunities to mobilize this staggering amount of data are limitless.

And as companies take stock of the data landscape, they may feel like the proverbial kid in the world's largest candy store. With so many options, it's difficult to decide what to focus on and how to begin.

## Organizations that ramp up their data skills can achieve several positive outcomes:

- **Know your customer.** It's the golden rule of business for a reason, and today's constant influx of data gives organizations the ability to know customers better than ever before. Armed with detailed information about demographics, purchase history and browsing tendencies, among many other factors, businesses can understand motivations and offer tailor-made experiences that drive more revenue and increase loyalty. Customers experience this every day, through online retailers that seem to anticipate their every need. But data is just as useful for companies courting business-to-business customers or public sector agencies reaching out to private citizens. The same concept also applies when the customer is an employee, as organizations look to improve workplace IT or HR services.
- **Provide exceptional experiences.** The more powerful and ubiquitous technology becomes, the more people take it for granted. Data is no exception, as the internet has conditioned us to believe that virtually anything we want to know should be easily accessible in a few clicks or less. Today's customers, for example, expect to find their bank transaction history, healthcare test results or package delivery status on demand. Similarly, employees expect instant access to the information they need to do their jobs efficiently. This trend will only continue to intensify, making effective data management essential to customer satisfaction and employee retention.
- **Stay compliant.** As data about everything proliferates, so too do concerns about how that data is being used, and by whom. Companies are now facing increased scrutiny from statutes such as the General Data Protection Regulation in Europe and the California Consumer Privacy Act in the U.S. Firms that rely on data analysis (especially those in regulated industries) must maintain strict governance over their data management practices to avoid legal penalties and maintain customer trust.
- **Reduce risk.** Beyond regulatory compliance, organizations also have a strong financial incentive to prevent data breaches and crack down on fraud. As cybercrimes continue to become more prevalent and sophisticated, incidents routinely cost businesses millions of dollars to resolve. The stakes continue to increase as more data than ever flows through the organization, which makes sound data security more critical and a regular agenda item in corporate board discussions.
- **Make mergers and acquisitions (M&A) work.** The success of modern M&A depends on more than combining operations. Increasingly, realizing the synergies and growth potential of a merger requires seamlessly integrating each company's vast troves of data. That, too, calls for a highly capable data management function.
- **Keep up with the competition.** Aside from the abundance of other reasons to improve data skills, the strongest motivation of all may be "because everyone else is doing it." As many as 99% of Fortune 1,000 companies invest in data and artificial intelligence, according to one recent survey.<sup>1</sup> Data makes major industry players stronger and nimbler, while allowing fierce upstart competitors to become legitimate threats. If a company doesn't seize the same opportunities, it will inevitably feel the consequences.

# Why progress is slow

According to recent research from NTT DATA, most organizations recognize the promise data holds:

79% of executives said they understood the value of their data. But, strikingly, only 10% said they were effectively using their data to transform their organizations.<sup>2</sup>

## Why the gap between recognition and execution?

Common shortcomings that prevent organizations from making the most of their data include:

- **Lack of commitment.** While data management is a high priority for many technically minded executives, it may be difficult to get the necessary buy-in and support from senior leaders who have yet to embrace the opportunity. Even if upper management is enthusiastically on board, it takes more than lip service to achieve a robust data management capability. It requires a data-centric culture and a structured team dedicated to carrying out a comprehensive plan.
- **Information overload.** With so much data flowing from so many different sources, it's easy for organizations to become buried in an unmanageable mountain of information. They accumulate more data than they can possibly analyze and make use of, rather than defining key questions and selecting the appropriate data inputs to answer them.
- **Poor data quality.** To generate useful insights, organizations need more than raw data; they need data confidence – data they can understand and trust as reliable. But too often, it becomes “garbage in, garbage out.” Whether it's unstructured, inaccurate or incomplete data proving difficult to interpret, the result is the same: Bad data leads to bad outcomes (and, ultimately, bad data management).
- **Data silos.** Data tends to be collected and organized by different departments in an organization, such as finance, HR and marketing. The valuable information each amasses is often held in different data stores, be they on-premises or in the cloud – leaving them cut off from other groups who could be using the data to make important discoveries.
- **Skill shortages.** Processing, cleaning and analyzing data correctly requires special expertise, and not all companies have the resources they need to do the job in-house. In fact, with experienced data scientists currently in high demand, organizations are having a hard time filling these positions at a cost they can afford. Without those skilled workers and their ability to transform and manage data, then identifying, connecting, correlating and optimizing key use cases becomes even more challenging.
- **Unrealistic expectations.** Digital giants, such as Google and Amazon, tend to create the false impression that data analytics is the key to instant success. But it's taken these companies more than 20 years to achieve data domination. Most organizations, especially those in the early stages of digital transformation, should pursue data management aggressively, taking care not to abandon the effort when results don't materialize overnight.



# Four key focus areas for success

The sprawling range of possibilities associated with data management can be both positive and negative. While opportunities for business improvements abound, the complexity of connecting all the dots can create more questions than answers. For companies aspiring to become data driven, the value of an overarching vision and a well-defined, cohesive plan to achieve it can't be overstated. Organizations should focus time and resources on four areas.



## 1. Lay a solid foundation

As data becomes even more integral to the success of modern organizations, data management can no longer be seen as an experimental side project. It must be established as an essential business function alongside IT, operations, finance and others. Many large enterprises now employ a chief data officer who oversees a team of data scientists, data engineers and data architects dedicated to facilitating analytics.

That data office should create a data culture and lead the development of a data governance strategy that formalizes how the organization collects and processes data, and for what purposes. Documenting the strategy creates a system of ownership and accountability. This provides a foundation for consistent collaboration as more groups within the company approach data management.

The data management strategy should also cover the technical aspects of data architecture — how data will be acquired, transported, stored and accessed — as well as data modeling through taxonomies and ontologies. And it should establish a framework for data deployment, identifying the platform(s) that will put usable data insights into action.

Running throughout the plan should be an organizational commitment and a practical approach to data ethics, privacy, regulatory compliance and security. These interrelated and ever-present issues are fundamental to maintaining customer loyalty, preventing crippling data breaches and avoiding legal entanglements.

## 2. Insist on data quality and accessibility

With an official data management function and strategy in place, much of the data management work involves ensuring the data collected is reliable, usable and accessible. As mentioned earlier, the insights gleaned from data management are only as good as the data itself.

Data cleaning, the process of correcting or removing data that may be inaccurate, corrupt or redundant, isn't a one-time job; it's an ongoing process. Validating and streamlining data not only produces more dependable information but also accelerates business results, because people spend less time deciphering and second-guessing the data they've received.

To be of the most value, high-quality data must be accessible to the people who need it. In most organizations, that requires overcoming the common problem of data silos (also known as data islands). The data office can help facilitate the exchange of information between departments, ensuring valuable intelligence isn't locked away in a dark corner and is instead integrated with other data sources to maximize its usefulness.

Implementing a data fabric architecture eliminates data silos, syndicates data across the enterprise — improving data discovery and consumption — and enables smart decisions while maximizing data use across the value chain. Migrating the organization's data to the cloud, as opposed to storing it in legacy data centers, can give teams in any location fast and easy access to critical information.

### 3. Operationalize data intelligently

Once a system is in place to consistently disseminate clean, dependable data through the organization, the most exciting part of data management begins. Taking the lessons learned from data analysis and systematically applying them to real-life business situations, organizations can achieve notable improvements to virtually any targeted metric. It's just a matter of deciding which goals to address first.

From an internal perspective, data can help the organization understand what processes work best, what needs to be improved and what the solutions might be. For example, data can be used to identify bottlenecks in critical business processes, perhaps showing the company where automating certain tasks could save time and expense. Data can also reveal opportunities for internal service improvements, such as streamlining HR and IT processes to onboard new hires faster, which amounts to increased employee productivity. Operationally, companies can make more informed decisions about supply chain management, manufacturing processes, inventory, logistics and all points in between.

When it comes to customer-facing activities, data platforms can be deployed to give the company deep insights into customer behaviors and preferences, broken down by geographies and demographics. And these insights can prove invaluable for product development and innovation, targeted sales and marketing campaigns, and even creating entirely new business models.

As the data management function matures, the goal should be to evolve from reactive decision-making to more predictive and prescriptive capabilities. In other words, based on available data, companies can begin to anticipate the near future and test various actions that could help them capitalize on emerging trends or avoid costly missteps. Combined with artificial intelligence and machine learning, this type of forward-thinking data analysis can create a formidable advantage in any organizational setting.

### 4. Drive a data-centric culture

Data may be the lifeblood of the modern organization, but people are still its beating heart. Even a thorough data management strategy won't translate to business improvements if employees don't buy in to the value of data-based decision-making. In fact, research from NTT DATA found that leading data-first companies were much more likely to have a strong data governance culture compared to those lagging behind in digital transformation initiatives.<sup>2</sup>

Achieving this culture change starts with the data office, which requires a concerted effort to recruit and hire not only experienced data scientists and analysts but also influential leaders who can drive the data-first mindset throughout the organization.

Companies should consider investing in training programs to help raise the data literacy of non-technical employees and equipping these team members with the tools and technologies they need to use data in their jobs. The more people who can understand the purpose and potential of data, work with data and use data to support their everyday decisions, the closer the company will be to claiming a data-centric culture.

Taking this idea a step further, many companies are experimenting with the concept of democratizing data, making the organization's data stores more readily available to citizen data scientists outside the data office. Moves like this send the message that data is a resource to be utilized at all times, across every level of the organization, with or without the involvement of IT.



# Developing data confidence

No matter what data an organization chooses to collect and how it decides to use that information, it's clear that establishing a strong data capability and growing it to maturity should be a top priority. No longer a luxury reserved for the largest enterprises, data will be necessary for all companies to compete and win in the digital future.

While a sense of urgency is warranted, companies should also recognize that data competency isn't born of a single project. It's an amalgamation of various technical achievements that build on each other over time to reveal a complete picture of a company's strengths and weaknesses, challenges and opportunities. And as the organization acts on that intelligence to make more informed, strategic decisions, the tangible benefits of increased employee productivity, customer satisfaction and revenue gains, as well as lower costs, begin to materialize.



## About the author

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Shamlan leads our Data Advisory and Transformation group, which is responsible for supporting clients' data management, data science and advanced analytics, data integration, cloud data platforms and intelligent automation initiatives. A published author and speaker, Shamlan previously served as the CTO for Public Sector and leader of the Digital Experience practice. He is a results-oriented leader with an extensive track record developing and leading the implementation of innovative solutions and strategies that enable digital transformation in support of organizational objectives.

## Let's get started

[Get the insights](#) you need to become a data-driven organization.

## Sources

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