

Achieving a data-driven transformation

Challenges and approaches



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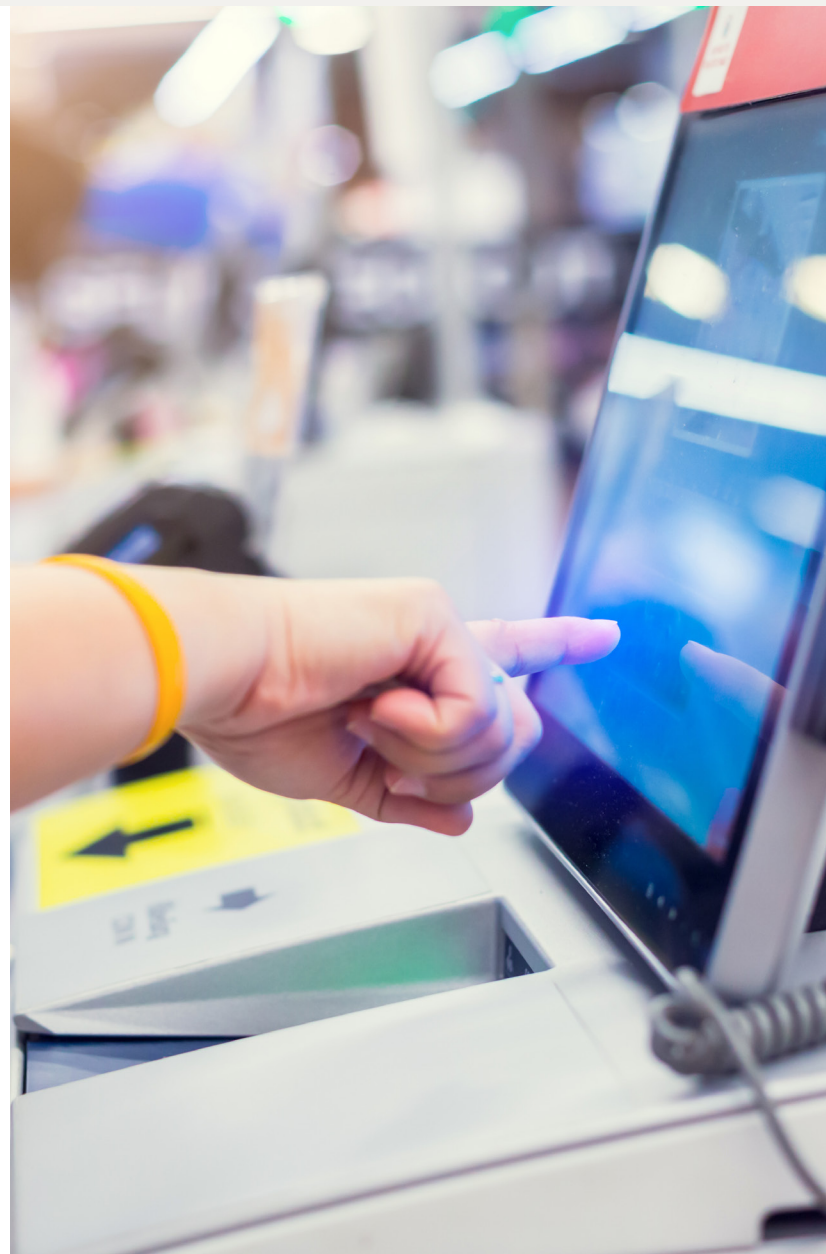
What is a data-driven enterprise?

McKinsey predicts that by 2025, data-driven enterprises will embed data in every decision, process it in real time, and have operating models that treat it as a product.¹

The benefits of such an approach are significant. For example, by making data management a strategic priority, retail store managers could provide differentiating shopping experiences and automated checkout processes; Telco operators could automatically spot sections of their network needing more bandwidth, in real time.

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... by making data management a strategic priority, retail store managers could provide differentiating shopping experiences and automated checkout processes...”



What are the difficulties in becoming data-driven?

Today, many organizations are a long way from being able to do this. Their data is in silos across data centers, clouds, and edge devices, and with no solutions and AI capabilities to analyze it across the enterprise, data quality is not up to scratch.

Data practitioners waste a lot of time manually exploring the data sets, establishing relationships between them, and joining them together. The operational management of the data platforms in place causes a strain on internal resources, diverting them from higher-value activities.

With fragmented data management, adding new data sources into a decision-making model can be a difficult process. The lineage of data through all the different systems may be hard to track. Consequently, the business team struggle to make decisions as they're not sure if they have the right data inputs.

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The business outcomes and technology requirements

Organizations transitioning to a datadriven approach, as we will highlight later, are already seeing significant business outcomes. They are more easily able to:



Improve the customer experience



Maximize operational efficiencies and reduce costs



Innovate for the future.

To achieve these outcomes, they must satisfy a range of technology and service requirements, including:



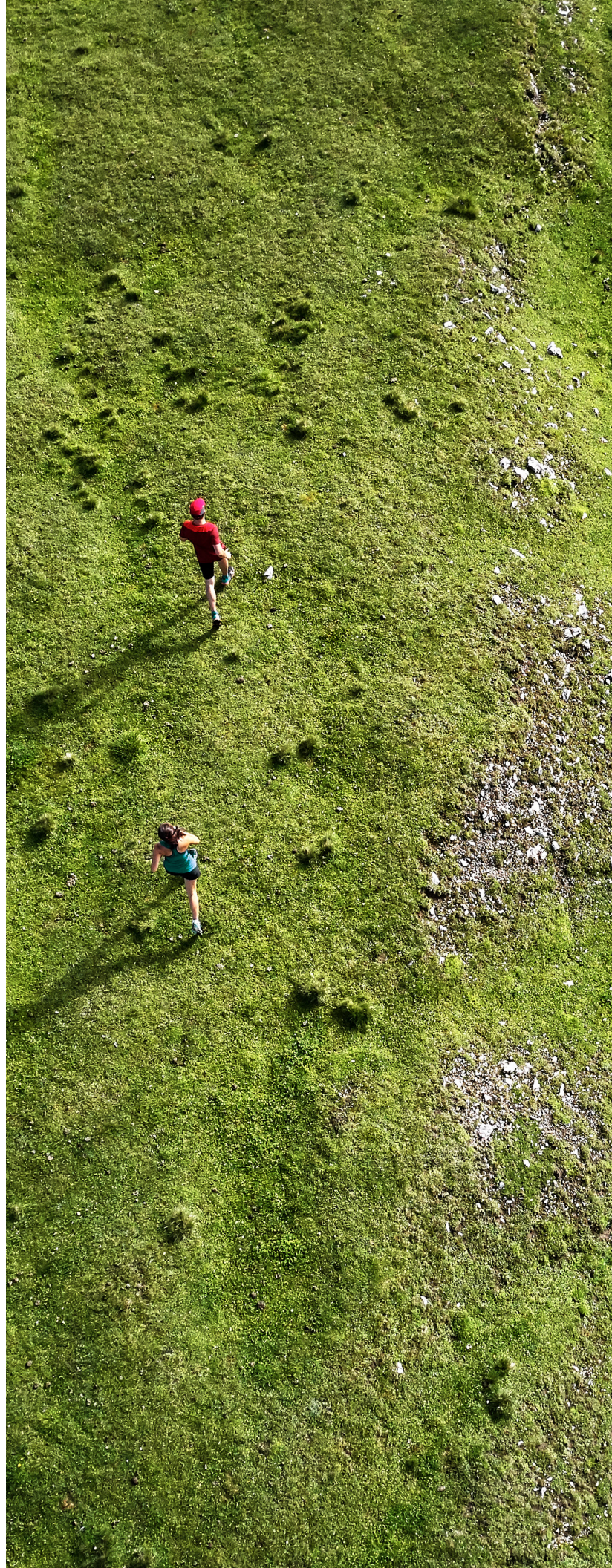
Improving the efficiency and productivity of their data operations by defining their data management strategy



Implementing and optimizing their data platform, surrounding it with the right governance framework



Operating their data platform with best-practices to ensure agility, reliability, and stability



Improving customer experience

The challenge

In many companies, data is currently housed in silos. This prevents them getting a full view of the customer hampering their decision making. Data is held in a variety of formats, so gathering, storing, and managing it is complex. Organizations struggle to fully understand their customers and deliver the differentiating experience they want.

Recommended approach

From our experience, around only 30 percent of customer experience improvement projects are successful. The usual reasons for failure are cost or time related. It's vital that each project is delivered correctly, using established frameworks, and ensuring delivery is on time and budget to produce the required outcomes.

It is also essential to acquire a comprehensive data platform spanning all data types and serving all business functions. Covering the whole data lifecycle (ingestion, transformation, real-time analytics, reporting, operations) and all Infrastructures (data center, clouds, and edge) in one single platform with a consistent fabric throughout.

An obvious outcome of the cloud-enabled environment is

numberly

Potential benefits

Cloudera provided a data management solution to power real-time customer relationship management at data marketing company Numberly. The solution has enabled them to help their clients in 50 countries improve ad click rates, optimize product placement, and achieve a 20 percent reduction in customer acquisition costs.

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Innovating for the future

The challenge

Organizations need insight into their customers' needs and their own business operations to spot opportunities, make improvements, and invent new products and services. The time taken to bring new ideas to market is often too long as organizations are struggling with disparate siloed data.

Complying with all data sovereignty guidelines is also difficult and expensive. There is a lack of skills, particularly needed for innovation: data scientists, data engineers, and developers. Resources are often drained just keeping the lights on, leaving no time to innovate.

Recommended approach

Your aim should be to reduce the complexity of getting business insight. This can be achieved by commissioning a data platform that can bring all different types of data together from numerous different sources (regardless of the speed, scale, and depth of data involved) and give you consistency across them.

To do this, you will need an abstraction layer to harmonize all your data, creating a degree of uniformity and a modern data architecture and platform. By applying role-based access management rules, you can ensure data sovereignty and compliance. We also recommend centralizing and standardizing data management policies, not just to ensure compliance, but simplify things too.



Potential benefits

Cloudera provided an enterprise data hub to BT Group, which accelerates data velocity and fast-tracks delivery of new offerings to customers. Using it helps BT to achieve sustainable profitable growth in a competitive market, innovating faster at lower cost—seeing 200-250 percent ROI in one year.

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Maximizing operational efficiencies and reducing costs

The challenge

Organizations need to minimize downtime for machines to avoid interruptions to operations. They also want to reduce overall maintenance costs and optimize efficiency of operational equipment by shifting to predictive maintenance.

There's a real-time aspect to this: organizations need to manage data from IoT/Edge in real time. Currently, they lack the visibility to address anomalies, or predict and pre-empt interruptions to operations.

Recommended approach

Addressing this challenge requires a combination of technology, process, and people. This combination will give you access to operational information in real time and allows you better control of the processes, to move to predictive maintenance, reducing downtime and cost.

You can apply digital twin solutions combining IT data, OT data, and business data replicating the entire operational process. Adding multimedia inspection enables you to reduce defect rates by triggering immediate remedial intervention. Analytics dashboards can be used to examine raw material consumption, inventory levels, etc.



FinOps Foundation

Potential benefits

Kyndryl helped a manufacturing client with a cloud-based data-fabric solution to enable significant cost savings and improved operational equipment efficiency. In addition, Kyndryl provided FinOps advisory services for a customer that was seeing worrying spikes in its spend with a hyperscale public cloud provider. Kyndryl identified the nine PaaS services that accounted for 80 percent of costs and shut down the unused services, making immediate savings.



Defining your data management strategy

The challenge

To improve your data operations' efficiency and productivity, you need a clearly defined data management strategy. Many organizations do not have the methodology, experience, or skills to define it themselves. Even the largest firms may need help determining the end-to-end data lifecycle and designing deployment methods for all the required data fabric capabilities.

Recommended approach

Start by identifying critical elements of data; determine where the data originates, travels to, and resides. The data needs to be collated, harmonized, and cleansed into a single source of truth. Then consider technology requirements, such as architecture, potential vendors/solutions, budget, regulatory, and security concerns.

Consider adopting modern data architectures such as data fabrics, data lakehouses, and data meshes. Build a data lake architecture with common security, governance, metadata, replication, and automation as an integrated system to ensure data lineage accuracy.

The architecture needs to be flexible to accelerate ingest of new data sources for discovery purposes.

Make sure that your methodology and any external consultants you engage are practical.

The output should not just be slideware, but a strategy that works, and once implemented will deliver the desired business outcomes. Take account of your cloud journey, workload placement issues, and regulatory and competitive environments; also use reference architectures and accelerators to jump start to day one.

Potential benefits

Kyndryl worked with a global manufacturer to create a data strategy for its smart factory program. The company had already made considerable investments but wasn't seeing ROI and couldn't work out why. The strategy we developed brought together data from disparate systems into one place. The insight gained meant cutting the lead times on production tasks to well below the industry benchmark.



Implementing and optimizing your data platform

The challenge

Many companies have fragmented data management tools, which are challenging to manage and need consolidating into an integrated platform. Others already use a best-practice platform, such as Cloudera, but aren't using the latest version and lack the skills or time to upgrade and optimize it.

Recommended approach

If you don't have a data platform at present, start by looking at your technology strategy. You may want to consider application refactoring and workload migration. If you have multiple fragmented data management tools, plan their consolidation onto a single new platform—taking into account the whole data lifecycle from ingestion to deletion. If you already have Cloudera Data Platform deployed, keep implementing the latest upgrades that add observability and identification of low/low performance. Shift to cloud-native data services to take advantage of the separation of compute and storage, and automatic scalability. Study your existing implementation, benchmark performance against industry standards, identify any problem areas, find the root cause, and use this insight to improve performance. Finally, optimize the performance of end-to-end data processes, ensuring that security, compliance, and governance are upheld.

RingCentral

Potential benefits

Cloudera optimized data collection and analysis for RingCentral's contact center operations. With a real-time, 360-degree view of call data, the company can now ensure call quality, analyze individual call costs, and eliminate fraud.

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Operating your data platform optimally

The challenge

Organizations need to operate their data platforms to achieve maximum stability, predictability, and reliability. But there is a skills shortage in data science², and organizations cannot afford for their scarce resources to be tied up in operational management. They need to devote their in-house people to interpreting insight and making improvements to the business.

Recommended approach

In most cases, the best way to achieve optimal operational efficiency is to consume data as a managed service. Choose a leading managed service provider who has deep knowledge of data management and a strong partnership with a leading data management technology vendor.

Managed services provide stability, observability, predictability, reliability, scalability, governance, and security for your data platform. They also transform Capex into Opex, relieving pressure on your capital budgets and balance sheet. Managed services ensure that the technology works optimally, and, with application of best practices, your organization maximizes ROI.

Potential benefits

Kyndryl provided a data-lake solution to a leading healthcare provider operating out of 760 locations. Our service resulted in a 66 percent reduction in outages at points of sale, and a 78 percent reduction in critical and high-priority incidents.

Summary and conclusions

In summary, there are two critical components to becoming a data-driven organization:

- 1 A single unified data platform across all infrastructure domains and data types.**
- 2 Advisory and operational services from a recognized managed service provider.**

Potential benefits

Kyndryl worked with a global manufacturer to create a data strategy for its smart factory program. The company had already made considerable investments but wasn't seeing ROI and couldn't work out why. The strategy we developed brought together data from disparate systems into one place. The insight gained meant cutting the lead times on production tasks to well below the industry benchmark.

The partnership of Cloudera and Kyndryl combines the platform and services which global enterprises need to achieve their data-driven transformation, as this independent review confirms:

“

Kyndryl and Cloudera working together makes perfect sense to our team, as Kyndryl's years of experience with mission-critical IT platforms and Cloudera's hybrid data cloud platform will work together nicely to help organizations modernize complex data ecosystems to ultimately reach their transformation goals.”

– Shelly Kramer, Futurum Research, March 2021



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Why Kyndryl

Kyndryl is the largest infrastructure implementation and managed services provider in Gartner's Market Share Analysis: IT Services, Worldwide, 2021. Kyndryl provides data advisory services on data strategy, governance, and operations, and operates data management systems reliably and optimally as a managed service.

Why Cloudera

Cloudera delivers an enterprise data cloud for any data, anywhere, from the edge to AI. It empowers people to transform complex data into clear and actionable insights and get value from all their data. Cloudera is one of only two Visionaries in the 2021 Gartner® Magic Quadrant™ for Cloud Database Management Systems.

For more information

To find out how to achieve data-driven transformation in your organization, start by booking a free 30-minute, no obligation chat with an expert. or visit kyndryl.com

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1. The Data-Driven Enterprise of 2025, McKinsey, 2022

2. "Why Is There a Shortage of Data Scientists?" Data Science Central, 2021

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