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Succeeding through the cloud ultimatum

Taking the first steps towards essential data migration

Succeeding through the cloud ultimatum

The need for data has never been more urgent

Doing more with your data is no longer an aspiration or a business "nice to have". It is essential.

No matter your industry, you need data that is accessible and actionable. You need to work your data harder, placing it as the foundation of your resilience, agility, and scalability. Your data needs to transform, so that your business can.

But for data transformation to happen, data needs to be in a place where it can be acted on. It needs to be brought out of dated legacy systems and into one unified place that creates complete visibility.

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Data migration can help you unlock data for your business

Data migration to the cloud can help your business to utilize data in more impactful ways.

Many businesses have adopted cloud in some form, driven in part by the need to react quickly to the COVID-19 pandemic. But there has been a drop off in adoption. Most enterprises have on average, only 20–40% of their workloads in the cloud.[1]

These businesses are being hindered by a complex landscape, with seemingly limitless options. They need to know that data migration will work for them. And they need it to happen without disrupting their critical day-to-day operations.

As we reach the time of the cloud ultimatum – where businesses decide whether they want to survive or thrive – it's clear that companies need the answer to one question: where should they start?

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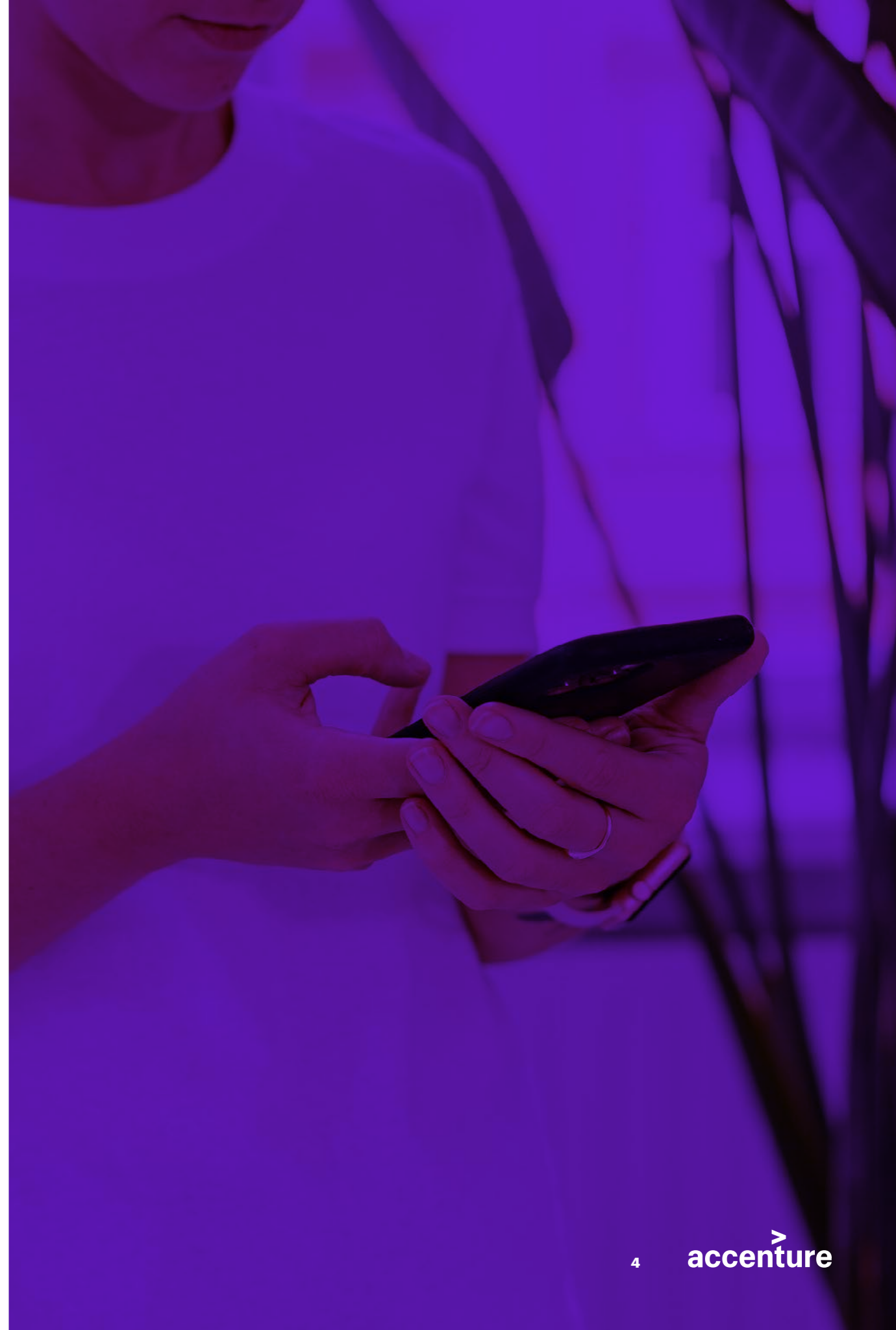
Challenges
to overcome

Full value is not being realized. Businesses need to adopt high velocity technology that can bring broad transformation across all their processes – mixing the native capabilities of cloud-based applications, niche technologies and artificial intelligence (AI).

But to gain the insights and agility that these technologies could bring, a business needs a strong data foundation. Having data that is trapped across different on-premises systems, clouds, or a combination of both, can render it inaccessible and unactionable.

Being weighed down by outdated technology and rigid legacy systems can result in critical challenges.

Wasted time
Different systems may have varying catalogues and processes, and few have operational metadata, business rules and feedback mechanisms for producers, meaning users waste a lot of time searching for relevant data.

Lack of centralized oversight and transparency
Disparate systems and processes for data management, lack of visibility into data usage and ad hoc solutions for data quality prevent true ownership and lead to a lack of centralized oversight and transparency.

Traversing numerous systems
DevOps, real-time pipeline, audit and monitoring, performance and cost management, dynamic provisioning, security and anomaly detection all require specialized functions. Users must hop between various systems to find what they're looking for.

Manual data pipelines with gaps
Everything from business rules to data onboarding, modeling, engineering, and provisioning is human-led, redundant, expensive to scale, and increases time to business outcomes. This expansive and manual data pipeline can make it difficult to get the full picture of your data.

Inflexible tools and technologies
Important platform components are tightly bound, increasing the technical debt of platform modernization, and preventing the introduction of new components.

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Unleashing the value of data

Traditionally, enterprise technology investments focus on delivering cost efficiencies and improving performance. These naturally remain important considerations, but they do not go far enough in achieving the transformational benefits of better technology and actionable data.

This has been borne out in the investment decisions we have seen during the pandemic. Many organizations have started moving at least some of their data estate to the cloud, but still don't have a solid data and analytics strategy in place. And just 17% of executives surveyed during the peak of the pandemic felt that they had access to the right insights to make strategic business decisions.

93% of IT leaders are moving at least some of their processes to the cloud.[2]

72% of organizations have no data and analytics strategy in place.[2]

17% of executives are confident they have the right insights to make informed business decisions.[2]

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Strategies for data migration

Building a modern data foundation

A strong and adaptable data foundation is vital to addressing unexpected change and solving critical challenges. Data siloes need to be eliminated, with data incorporated into a single, unified source. And from this foundation, enterprises can access deep insights and create new experiences for employees and customers.

Explore new capabilities
Removing the limitations of legacy systems to collect and use data in a more useful way.

Cross-project learnings
Unlock data's potential to inform projects across a business. Learnings from one department can be transferred to another.

Accurate predictions
By analyzing data from across your business in one single source, you can create predictive models that feed into an ongoing enterprise data strategy.

Freed resources
By moving your data foundation from on-premises to a cloud or hybrid solution, you can free money invested in CAPEX resources and redistribute it to address immediate business needs.

Data migration is the first step

But without the right strategy, and the right partner, data migration can be risky

Complexity of data
Without a thoughtfully considered migration and testing strategy, data can be lost, corrupted or unavailable, causing disruption to the business.

Lack of cloud-skilled talent
A successful data migration requires qualified cloud-skilled professionals. Most organizations don't have these skills in-house and need a partner to help guide their journey and train their workforce.

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Choosing your migration model

Re-host (lift and shift)
Transferring data and applications from a local on-premises datacenter to the public cloud.

Begin with the simplest items, with the fewest dependencies, low business impact, and no regulatory constraints, while moving to the most complex items as maturity increases.

Re-platform
Moving your total IT functionality to a wholly new, cloud-based operating system based on CNaaS Platform Standards.

This has the advantage of a reduction in operational expense, thanks to lowering the total count of enterprise supported platforms.

Re-factor
Upgrade individual components of an application to conform to new enterprise standards, functional needs, and security needs. This includes .Net, Java, and other upgrades.

Every migration is different, with its own complexities and challenges. It is vital that you understand exactly what you want to achieve, and the steps needed to get there.

For example, while a business might need to quickly migrate its SQL servers to the cloud, doing so without addressing underlying issues may lead to business disruption. What may seem like a relatively simple process can be complicated by old code that is unsuitable for the cloud environment.

The best way to find these potential tripwires and execute migrations that remediate and refresh old code is by using an expert partner.

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Get to the cloud faster and at lower cost with a Data Migration Factory

You need a methodical approach to succeed in data migration – one that is based on proven pathways, key enablers, and leading tools. Using a data migration factory is a way to ensure you benefit from continuous improvements throughout your migration process.

A data migration factory employs an industrial approach, packaging up all the experience and tools you need for your migration so you're confident that the job is done right.

For example, the Avanade Azure Data Migration Factory provides access to subject matter experts across multiple database technologies and Azure, as well as cutting-edge migration accelerators to reduce the time and cost of moving data to the cloud, or from a different cloud.

2x
Migrate twice as quickly*

*with Avanade, when compared to using your in-house resource.[3]

20%
Increase employee productivity by 20%.[3]

30%
Achieve up to 30% savings in IT spend.[3]

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The Accenture approach to migration

With any transformation project, it's important to know exactly what is involved.
With a project as impactful as migrating your datacenter to the cloud, it's essential.

An end-to-end look at your prospective journey is needed. We do this by looking
at the process as three key steps.

1 — Strategy and business case

Ask yourself: "What's the business value to be gained by moving our data to the cloud?"

Remember that cloud migration is not just about technology for technology's sake. It needs to address specific objectives the company wants to achieve. Knowing these objectives will shape your migration strategy and business case. It will determine what data and applications will be moved to the cloud, and to which type of cloud environment, as well as what the infrastructure ultimately should look like.

2 — Discovery and assessment

By scanning and assessing your existing infrastructure, application and data landscape, you can determine the most appropriate applications and data to migrate to cloud.

Through application discovery, dependency mapping, and risk assessments based on current usage, as well as optional pre-migration predictive analysis, the Cloud Migration Assessment enables migration planners to make informed decisions. That will help minimize risk while ensuring service level agreements are maintained after migration.

3 — Cloud migration

The final stage typically involves modernizing existing data and applications for the cloud, developing new cloud-native applications, and transforming the architecture and infrastructure.

Eventually, you'll have an entirely new data operating model and culture – enabling quicker innovation in the future.

Automated management and migration tools, teamed with specialized skills, are critical to executing a smooth migration. A robust management plan will keep the effort on track.

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Taking an industrialized approach

The different ways of migrating data to cloud shouldn't leave you feeling daunted. Taking an industrialized approach to your migration ensures you're migrating in the best way for you – unlocking cloud benefits faster and more effectively.

An industrialized approach uses a data migration factory to standardize every part of your migration, ensuring constant access to expertise, perpetual cost effectiveness, and closely aligned partner relationships. Dependent on your chosen pathway, your data migration factory will make use of key enablers built from previous migration success stories. From there, you'll have an execution engine that operates in a closed loop of continuous feedback – ensuring your migration is fast and built to last.

5+ Primary Migration Pathways

| Oracle	to PostgreSQL, Azure Synapse, Azure SQL MI
SQL Server	to SQL PaaS, Synapse, SQL MI
Netezza	to Azure Synapse
Teradata	to Azure Synapse
Hadoop	to Azure Synapse, Databricks, HDInsight

Key Enablers

- Migration Guides & Standards
- Automation and tools for Industrialization
- Migration Focused Solution Architects

Continuous Improvements

- Experienced people
- Migration Training Program
- Top Tools, Accelerators, Infra & Platform
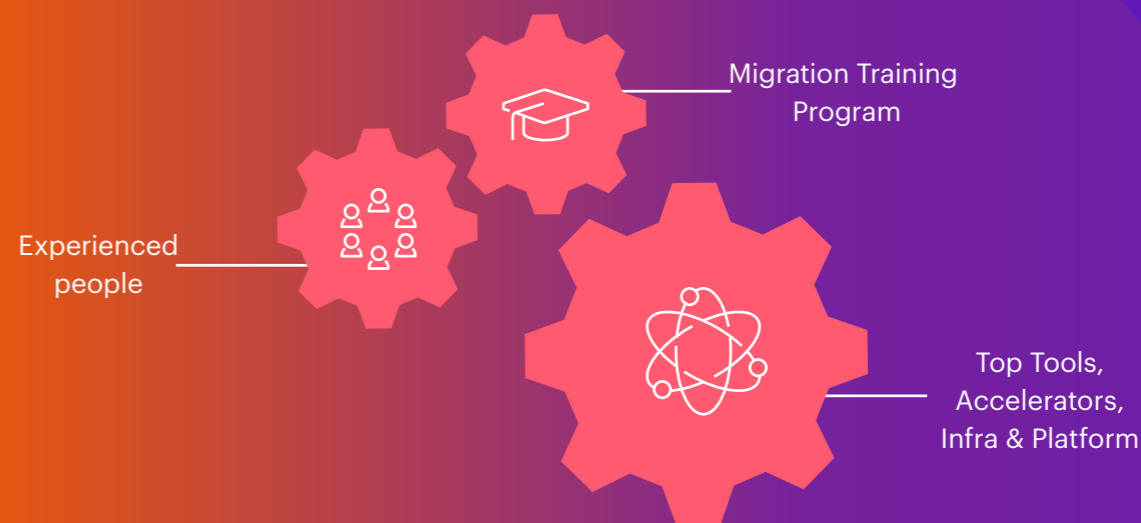
Finding immediate value from data

Data migrations are a unique digital transformation. Moving data to cloud creates long-term value in the form of reduced infrastructure costs (usually realized within three-to-five years). But it also creates immediate gains by bringing your data into a unified modern data foundation.

And that means you can start getting to work on unlocking new value across your business, straight away.

Business strategy
- Find new revenue streams.
- Build new business models.
- Spot ways to innovate and disrupt your industry.

Finance
- Transform the finance function.
- Use advanced analytics and reporting to accelerate decision-making.
- Realize greater financial efficiency and reduce CAPEX.

IT
- Build a modern on-demand technology infrastructure.
- Reduce IT costs.
- Enable the use of AI, ML and analytics to generate new insights.

Marketing
- Expand customer reach and increase retention.
- Deliver better omnichannel experiences and personalization.
- More accurate analysis of profitability by customer and audience demographics.

Operations
- Maximize productivity and efficiency.
- Incorporate automation and predictive analysis into processes.
- Find opportunities for increased sustainability.

Supply chain
- Improve visibility and traceability.
- Manage supplier risks and increase resilience.
- Build intelligent supply chains.

Research and development
- Use data to design products and services that customers need.
- Lower costs and time to market.
- Find new points of entry into different industries.

Human resources
- Create better virtual collaboration.
- Improve the employee experience and engagement.
- Improve digital skills and training.

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Migrating with
Accenture
and Avanade

Mitigating migration risk

There are risks when undergoing migration.

Legacy applications

Not every app can move easily. Which do you keep, and which do you rebuild?

Modernization

What are your options for data and application modernization?

Cloud management

What's the best way to manage your cloud-based datacenter?

Business support

Buy-in from stakeholders across the business is essential for migrating at scale.

Complexity of migrating

Understand the complexity you'll face when migrating and appropriately estimate the effort to get it done.

Key dependencies

Prioritizing applications and identifying necessary remediations helping you reduce risk, time and cost.

Facing these challenges head on, with a clear understanding of each of them, is the best way to mitigate any associated risk. Much of this will be done during the first two stages of your migration journey, but here are three things to keep in mind.

Apply an effort estimator

Don't get stuck with an unachievable migration plan that continuously gets pushed out. Use an effort estimator to get a realistic picture of the effort your migration will take, to set the right expectations up front.

Resolve key dependencies

Vet your dependencies to avoid leaving key data and applications behind in the legacy datacenter. Discovery tools will identify each application's interfaces—where applications are "talking" and what they are talking to. This dependency intelligence can drive the rest of the migration processes to ensure the components that must be in the cloud together actually get moved together.

Getting business support for migrating at scale

Migrating at scale needs full buy in from company leadership. That means defining the stage one business case in a way that is compelling and exciting—with a proven methodology that helps migration get done in a formal, structured, and disciplined way.
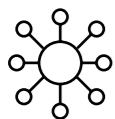
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Discovery and assessment with Accenture and Avanade

↑ Six-to-eight-week process
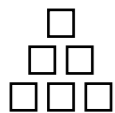
▢ Clearly defined business case

⬡ Transparent scope of migration

The discovery and assessment stage of data migration is crucial for its success, uncovering each business' unique circumstances and workloads.

The Avanade Azure Data Migration Factory will assess your systems (usually covering two or three systems, but often unearthing more), with support from local Accenture teams.

This is a thorough look at your network and assets. It discovers where your data is being held and how you are currently accessing and using it. We'll unearth the dependencies at play within your applications, so you have a comprehensive view of how your systems are communicating with each other.

From there, we'll create a business case that places your current operational and running costs against the savings you could make by moving to cloud (the CAPEX to OPEX shift usually brings a minimum cost saving of 20%).

After presenting this business case, we'll create the scope of your technical migration. After the eight-week assessment period is finished, you'll receive a detailed series of reports that articulates what we will migrate and when – putting you on track for a successful cloud migration.

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Migrating to Azure with confidence

For more than 20 years, Accenture and Microsoft have scaled migrations with unmatched speed and expertise for thousands of clients. Through Avanade, our joint venture, we operate a data migration factory that empowers you to define outcomes and use cases particular to your organization. We'll put you on the path to run your business in an entirely new way – powered by the leading Microsoft Azure cloud platform.

Why Azure?
More than 180 million business customers use Microsoft technologies every day, all over the world. And because it is a technology company that focuses purely on its technology – unlike competitors that are making prominent commercial plays in different sectors – you can be confident that there are no conflicts of interest.

Microsoft

Microsoft Azure is...

Faster
The myWizard integrated automation platform seamlessly integrates with Microsoft's Movere tool to accelerate migration at scale.

Greener
Azure is not only a greener cloud—running on 100% renewable energy—but is up to 98% more carbon efficient than a traditional, on-premises datacenter.[5]

More secure
Azure has built-in security and compliance that meets global standards, along with support from Accenture's 2,200+ dedicated security professionals.

Letting you do more with your data

Optimize your core data
With Azure, your datasets are managed and optimized to feed into analytics and machine learning that derive real business value from your data.

Empower all your decision-makers
Making data more widely accessible leads to insights that benefit the customer, speed your supply chain and improve how your people do their jobs.

Unlock new business models
Modernizing your data allows you to innovate new products and services, and bring them to market faster.

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Why data migration?

Cloud migration with built in security

The number one concern for CIOs when embarking on a data migration is security. They want to know that their data, applications, and systems will remain watertight throughout the process, with no chance of a damaging data breaches or downtime affecting day-to-day business practices.

It's essential for CIOs that their migration partners live and breathe security. It needs to be front and center of every part of the process, so they can have complete peace of mind.

Security benefits of the Avanade Azure Data Migration Factory

Incorporating experts from infrastructure, modern data and AI security into your business from the start of the migration process.

Undertaking tests using masked data. Working around your network if that is your InfoSec team's preference.

Working with full transparency, partnering with your internal teams without distracting them from their duties – typically asking for them to be available for just 5-10% of their time.

Rigorous testing that can be led by an internal testing team if preferred.

Migration cut over can occur with an Accenture onshore team, ensuring there are experts with you in your geography to flag issues and resolve problems with speed.

Migrations that result in zero downtime for legacy systems. Your teams won't even know that migration has happened.

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From migration to transformation

Ultimately, lasting value is not created by migration alone but by long-term transformation. That's why we build post-migration transformation into our data factory – with the aim of growing your business' top line.

If we were to take an overview of how we build up to this through the migration process, it could typically look like the below.

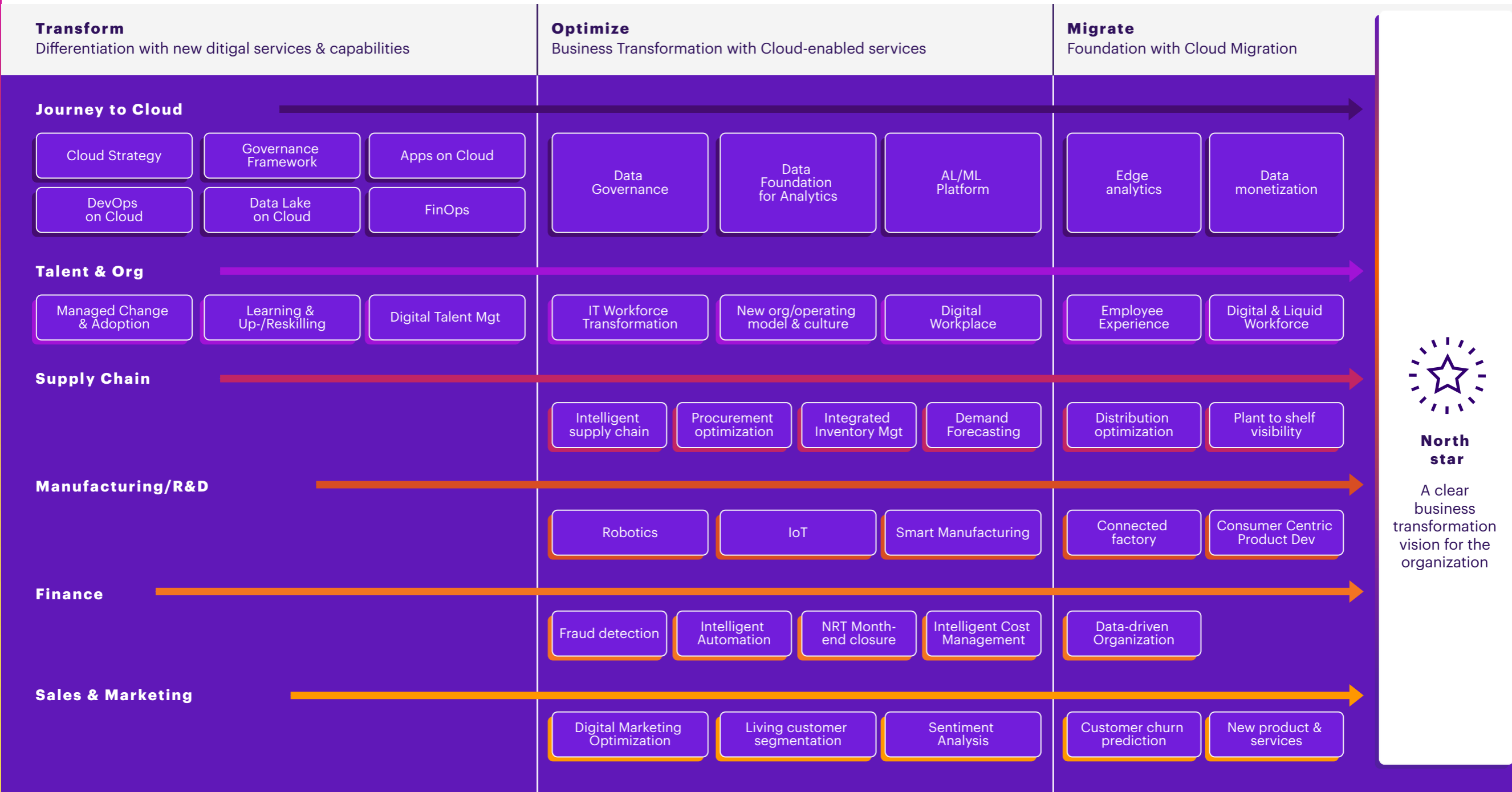| Migrate	Optimize	Transform
Establish cloud foundation and migrate the application landscape to cloud.	Pivot to a product-centric, agile operating model. Enable DataDevSecOps and modernize applications.	New and transformed business models, products and services.
Motivations Datacenter exit, business continuity, M&A, cost savings, shift to OPEX.	**Motivations** Agility, speed, scale.	**Motivations** Compelling experiences, market disruption, AI and data science.
Outcome: acceleration Accelerate the cloud transformation, exit datacenters and reduce CAPEX spend.	**Outcome: efficiency** Improved project delivery efficiency, faster time to value, enhanced quality outputs.	**Outcomes: net revenue growth and productivity** Enable strategic innovation across business units and corporate functions, leveraging partners' innovation capabilities.
Result 25% to 40% infrastructure savings.	**Result** 20 to 40% more operational efficiency.	**Result** 1 to 3% growth in business top line.

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Preparing your people for transformation

The key to lasting transformation is providing your people with the skills they need to embrace a new cloud culture. As part of our migration factory, we'll train your people along the registered Microsoft certification path so they're proficient and confident once the migration is complete. Training can be made bespoke to your future cloud vision. If you want to have ongoing skills in advanced AI, for instance, we'll show you how to achieve this after your core systems have migrated.

We offer ongoing managed service support to ensure that your people are embracing the new cloud tools that will achieve your transformation vision. This vision will look different to every business.

Below is an example of the kind of gains a company could achieve across different operations, at each stage of migration – all building towards total transformation.

Transform Differentiation with new ditigal services & capabilities			**Optimize** Business Transformation with Cloud-enabled services				**Migrate** Foundation with Cloud Migration	
Journey to Cloud								
Cloud Strategy	Governance Framework	Apps on Cloud	Data Governance	Data Foundation for Analytics		AL/ML Platform	Edge analytics	Data monetization
DevOps on Cloud	Data Lake on Cloud	FinOps						
Talent & Org								
Managed Change & Adoption	Learning & Up-/Reskilling	Digital Talent Mgt	IT Workforce Transformation	New org/operating model & culture		Digital Workplace	Employee Experience	Digital & Liquid Workforce
Supply Chain								
			Intelligent supply chain	Procurement optimization	Integrated Inventory Mgt	Demand Forecasting	Distribution optimization	Plant to shelf visibility
Manufacturing/R&D								
			Robotics	IoT		Smart Manufacturing	Connected factory	Consumer Centric Product Dev
Finance								
			Fraud detection	Intelligent Automation	NRT Month-end closure	Intelligent Cost Management	Data-driven Organization	
Sales & Marketing								
			Digital Marketing Optimization	Living customer segmentation		Sentiment Analysis	Customer churn prediction	New product & services

North star

A clear business transformation vision for the organization

‹DUPONT›

Case study:

Finding a formula for success in Azure Cloud

Moving DuPont's production quality systems to the cloud to drive operations, real-time monitoring, reduced costs and increased flexibility.

The challenge:
Following the separation of DowDuPont, DuPont needed to establish its own IT systems—including laboratory information management (LIMS) and Focus EMI®.

•

• Migrate LIMS to Azure
• Migrate Focus EMI® to Azure
• Integrate various systems, security provisions, performance testing, cross domain integration and numerous sites

The solution:
Accenture and Avanade were pivotal in an end-to-end migration that set up DuPont with a state-of-the-art Azure platform – containing necessary scalability, agility, security and governance.

• Migrated LIMS to Azure and integrated the platform with 10 laboratory systems used by 2,000 users
• Implemented Focus EMI® analytics dashboard on Azure, integrate with DuPont's AspenTech IP.21 process historian.
• Provided training sessions for the DuPont team, ensuring end users were aligned with the migration

Results

Full integration of LIMS in Azure, conforming to all security and performance standards

Focus EMI® solution in Azure is helping to:
• Maintain quality levels in production
• Establish automated alerts to minimize management oversight
• Identify trends more quickly
• Respond to problems faster (or even address future issues proactively)

Cost control by eliminating significant CAPEX

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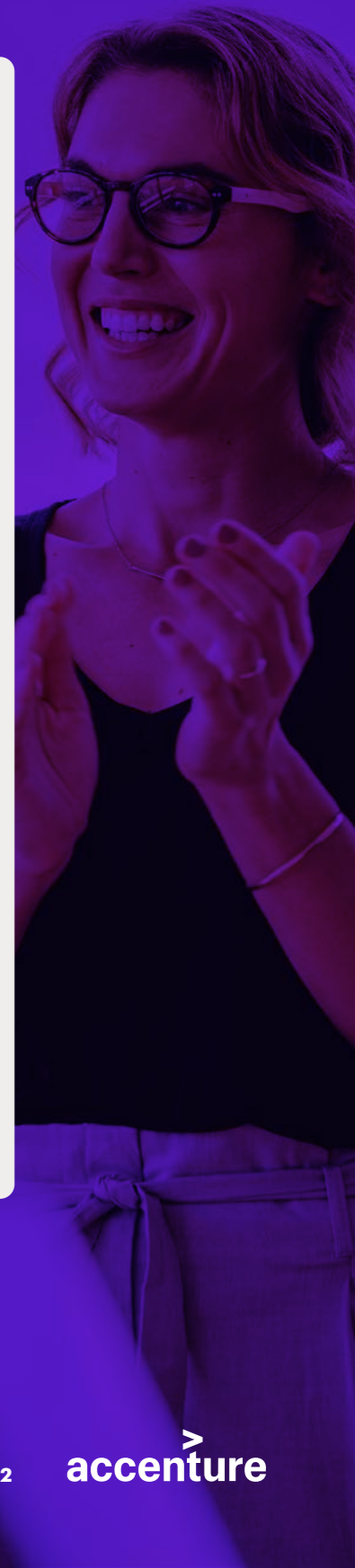
PANDORA

Case study:

Global jeweller Pandora: going for cloud

Pandora polished its digital experience by migrating to Microsoft Azure.

The challenge:
Pandora, the Danish jeweller, wanted to blend art and technology to launch new products and campaigns, and gain an edge in the hunt for market share.

- Build a business that is more agile and responsive
- Execute seamless consumer experience across digital channels
- Bring servers and applications onto the cloud

The solution:
Accenture worked with Pandora to outline a new cloud infrastructure for the company. Experts from Microsoft and Avanade laid the groundwork for the migration of infrastructure, data and applications.

- Automation scripts created for up and downscale capacity for critical applications on-demand.
- Full automation patching process created to cover 100% of infrastructure and plug significant gaps.
- Transitioned, transformed or decommissioned 2,400 serves and 350 applications over 14 months.

Results

70% of applications and infrastructure successfully transitioned to cloud.

Money and resources gained were redirected into investment in enhanced online shopping experiences.

Cost savings of DKK 200 million ($31.4 million USD)

Faster IT decisions

New services introduced in a few days, instead of four weeks

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Case study:

Global low-cost healthcare provider successfully modernizes their legacy platform to Microsoft Azure.

Delivering a modern platform that enhanced user experience and improved customer satisfaction.

The challenge:
A provider of market research and analytics on clinical data needed to cut down costs and modernize its legacy reporting platform.

- Free up their infrastructure, such as Netezza appliance and on-premises servers and migrate to Azure.
- Migrate the end-to-end reporting solution to Azure

The solution:
Avanade provided an end-to-end solution that unifies data from various systems, applies transformation and builds insights. This gives the client a comprehensive view of analytics and insights on health reports.

- Built a Data warehouse with Azure Synapse
- Migrated historical and transactional data from on-premises to Azure Synapse
- Migrated Netezza scripts to SQL stored procedures
- Created a low code/low maintenance scalable cloud platform with automated Azure DevOps and GIT

Results

Enhanced customer satisfaction

- Exceeded performance of reports execution by 20% in Azure (2.5 hrs) as compared to earlier on-premises (3.2 hrs)
- Reduced the reports execution failure rate to less than 1% in the modernized platform as compared to 5% on-premises

**High availability:** 99.99% application availability and auto-healing capability

High agility: delivered a low-code, low-maintenance, and scalable cloud platform with automated Azure DevOps and GIT

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The building blocks of reinvention

We've reached the moment of the cloud ultimatum.
But there is a clear path in which to proceed with success.

It is one that require deep thought, careful strategy, and honest questions. Once you have found the answers, there are a wealth of models and processes at your fingertips to enable migration that brings meaningful results.

Working partners such as Accenture, Avanade, and Microsoft, will help you to both transform your technology in the right way and reinvent your organization. With a solid cloud foundation, you can change your entire culture to one that is cloud-based and optimized for performance. Prepared to thrive through whatever comes next.
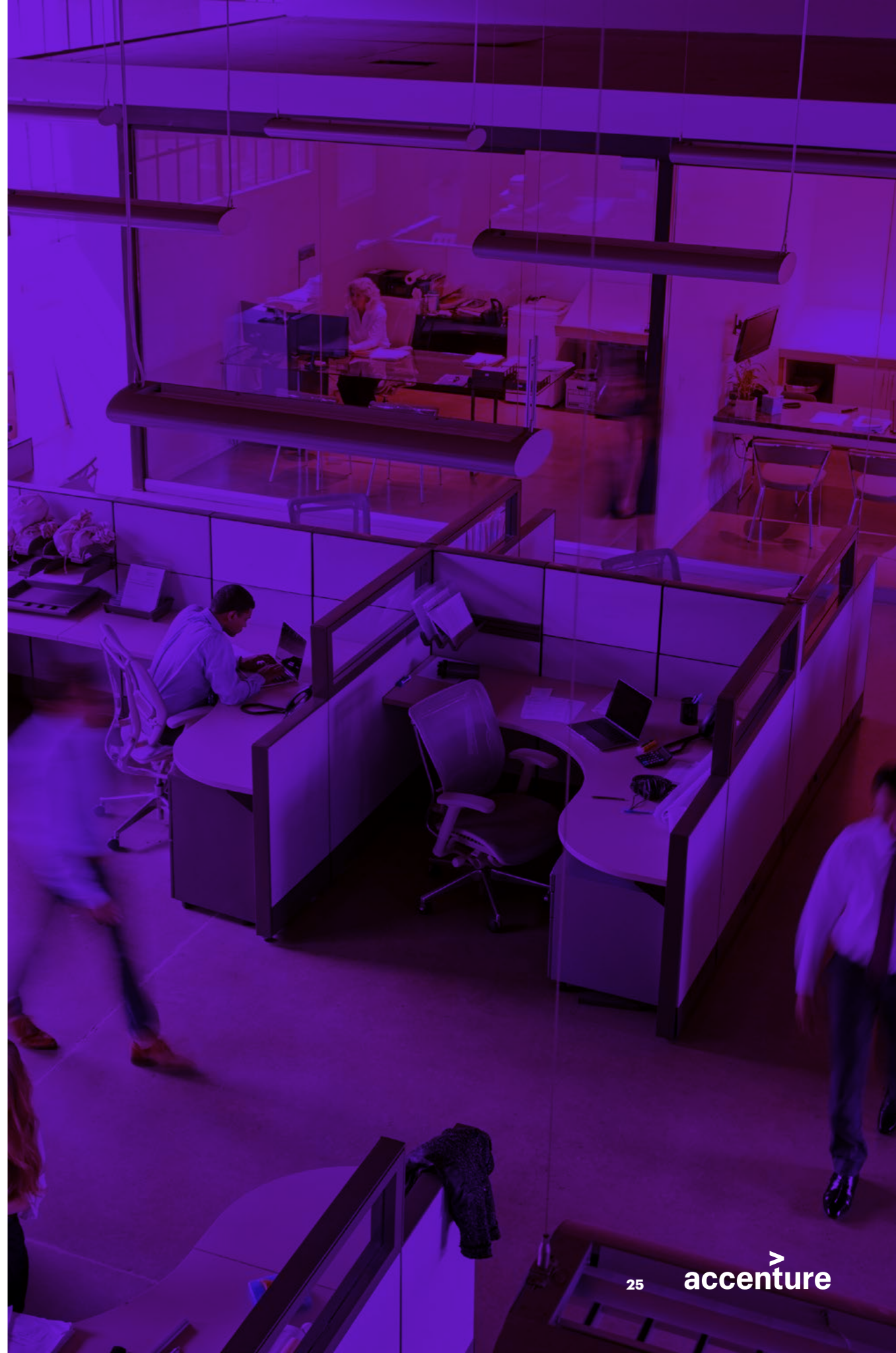
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Accenture empowers businesses to convert data into business value. We help them to not only transform their technology stack, but also align it with their business strategy, processes and people, so they can unlock the full power of their data and become a data-driven business.

Start your journey now.
www.accenture.com/MicrosoftModernFinance

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Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services — all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our 674,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities. Visit us at accenture.com.