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Business cloud is a foundation for business transformation, allowing organizations to become more digital and, as a result, more productive and efficient, better able to engage with customers, and better informed with data and insight.

However, cloud has become complicated.

Hybrid cloud and multicloud, hundreds if not thousands of cloud services and platforms to manage, cloud integration, cloud utilization and cost management are just some of the technical and operational challenges organizations face.

This guide shows how organizations can shift from cloud as technology to business cloud – cloud that's designed and optimized to power their business – with NTT DATA and AWS.

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## Optimizing cloud for business

To remain relevant and competitive, many organizations are evaluating existing and future technologies to support innovation at scale.

Cloud is one of those technologies. Cloud computing has become ubiquitous, delivering business efficiencies, cost benefits and competitive advantages. Users can scale services to fit their needs, customize applications and get them to market quickly, without worrying about underlying infrastructure costs or maintenance.

By providing the most innovative technology available, cloud can give organizations a competitive advantage. But realizing the value of cloud starts with truly understanding cloud.

The original value proposition for cloud was built on an opex-over-capex model, unlimited scalability, and the promise of cost savings. Then multicloud introduced additional complexity and overhead. And while the opex model and scalability remain relevant today, optimization and governance are necessary in order to balance performance, availability and cost.

Organizations that lack a high-level cloud strategy risk wasted investment and failure. Wherever you are on your cloud journey, understanding and navigating the next steps that make the most sense for your business can be hard. This is why planning is key to successfully reaping the benefits of cloud. Your cloud strategy should consider desired outcomes, competing priorities, security, cost and performance for the short, medium and long term. When you view technology as the enabler of business outcomes, the way forward is clearer.



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## Maximize your cloud investment

Before chasing cloud for business agility and other outcomes, you have to make sure that there's a return on investment. This means you need to first define your cloud economics, cloud technology and the services you're going to use for different use cases.

Historically, cloud strategies were developed and executed primarily by the IT department, which may not be aware of broader organizational objectives. The result was often a misalignment between the capabilities and priorities of cloud solutions and the needs of the organization.

For your cloud strategy to be a business enabler, you need to understand how cloud will affect not just your technology, but also people and processes.

By aligning cloud strategies with broader business objectives, you can tie cloud initiatives to enhancing operational efficiency, improving customer experience and sustainability, and driving revenue growth. Involving key stakeholders from different business units in developing your cloud strategy process fosters collaboration, crossfunctional insights and a shared vision.

Developing a business-driven decision framework and best-practice IT operational models helps standardize cloud strategy across the organization while still meeting the unique needs of different use cases and business units.

Determine what should move to the cloud and what should remain on-premises. Then navigate governance and optimization for the things that are moving to the cloud, and consider questions such as:

- Do you have the right level of computing and storage?
- Are you optimizing month over month?
- Is there adequate governance over when and how developers spin up environments and shut them down?
- Are environments spun up when they don't need to be?



Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud, offering over 200 fully featured services from data centers globally. Millions of customers — including the fastest-growing startups, largest enterprises and leading government agencies — are using AWS to lower costs, become more agile, and innovate faster.



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Business cloud is an approach that allows organizations to respond to emerging challenges by extending existing capabilities using either single- or multicloud approaches that simplify procurement, security and management.

Business transformation enabled by cloud is made up of building blocks.

#### The building blocks for business

Successful cloud transformation is usually a three-way play. The hyperscaler provides the cloud platform. Your organization and IT team have their operating context and needs, as well as IT and business pain points to address. Then service providers stitch it all together and create the use cases on top of that.

NTT DATA helps you choose cloud platforms that offer scale, global coverage, resilience, security, reliability and innovation capabilities to support your immediate and shifting business needs. Our outcomes-based consultancy speeds up time to value.

Infrastructure and data centers are in our DNA. With more than 30 years of production application experience and more than 1,300 implementations worldwide, we understand the cloud journey and have developed proven accelerators to help you on yours.

Our UniKix mainframe replatforming software helps businesses to reduce the costs and complexities associated with modernizing legacy systems and applications. Replatforming with UniKix allows you to maintain a competitive advantage by keeping pace with evolving business needs while extending the life of mission-critical workloads.

The applications, workloads and storage you move to the cloud will be based on what each major cloud provider offers and matching that to your transformation needs while making user tasks and access easier, more efficient, and more cost-effective, agile and fast. AWS offers a broad range of global cloud-based products, including compute, storage, databases, analytics, networking, mobile, developer tools, management tools, IoT, security and enterprise applications.

Cloud transformation needs to continue after you make it to the cloud. The cloud keeps evolving, so you need to keep reviewing and evolving your workloads, too. The dynamics of your multicloud environment have a profound impact on the interaction of people, processes and technology working in concert with applications, data and storage.

#### Zero-Trust security posturing, from discovery to managed care

The usage and access aspects of cloud transformation can be tied to the complexities of data and cloud security and the regulatory and compliance demands behind them.

You'll need a strong focus on security governance and regulatory compliance for the people, processes, applications, workloads and storage that will be part of your cloud transformation strategy.

As you evolve into a cloud environment, evaluate your security posture and controls and include them in your future planning. Applying on-premises security controls to the cloud rarely work; you need to take a bottom-up approach.

Zero trust security in the context of cloud computing begins with discovery, where all entities interacting with the cloud resources are identified. These include users, devices, networks and other cloud resources. The next step is continuous monitoring of these entities, scrutinizing every access request, whether it's from inside or outside the network. In the verification and approval stage, every access request is authenticated and authorized based on predefined policies.

The zero trust model doesn't stop at granting access. It continuously evaluates trust levels and adapts access controls accordingly. This dynamic and proactive approach creates a robust security posture for cloud services. It protects them from both external threats and potential internal vulnerabilities by ensuring that trust is never implicitly granted and is always verified.

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The cloud brings new types of vulnerability and considerably extends attack surfaces, while big data and compliance and regulatory requirements add to security challenges. NTT DATA can ensure you take a holistic, built-in approach to cloud security that addresses these challenges.

Our AWS-certified engineers and architects build safe cloud foundations that start with Center for Internet Security (CIS) rules dashboards, secure AWS accounts, monitoring, logging, alerts and best practices for corporate compliance. We achieve security-as-code with new elastic platforms such as immutable containers, infrastructure as code, and continuous integration and delivery. Security policies are automated for continuous, automated auditing. And we protect web applications, client data and intellectual property with AWS WAF security.

#### **Upgrading to a business cloud**

CCloud transformation is the big picture and your cloud migration strategy defines the what, when, how and where.

To ensure the success of your cloud journey, NTT DATA starts by understanding the business areas you are trying to impact. How is your current technology stack addressing business needs? Where are the gaps that need to be filled? What needs to be optimized? What needs to be built quickly? What needs to be renegotiated? Collecting and analyzing this information using both proprietary and industry-specific tools helps us identify how best to apply our proven framework to your environment.

One size does not fit all, so if somebody tries to sell you an out-of-the-box cloud product, that's a red flag. For a system to work, you need customization. So, you want a partner who takes the time to sit down with you to understand the problem and craft a solution that addresses it. You want to work with a thought leader who can challenge the norms and do more than just keep the system running, as this does not translate to long-term cloud success.

With the increasing adoption of cloud services, organizations often find themselves utilizing multiple cloud providers to meet various business needs and provide specialized services while they're still dealing with their legacy systems. Managing and integrating these diverse cloud environments can be complex and demanding.

Each cloud provider has its own set of tools, APIs and management interfaces, requiring businesses to develop expertise across different platforms. Ensuring seamless connectivity, data synchronization and security across a hybrid cloud environment can be challenging, and it requires expertise to select and deploy best-in-class solutions. Managing hybrid cloud complexity requires careful planning, robust governance frameworks and well-thought-out integration strategies to ensure interoperability and mitigate potential challenges.

A partner with an end-to-end stack can build end-to-end capability, and this is where NTT DATA is uniquely positioned. We stretch from public cloud, edge as a service and deploying physical hardware and network services, to cloud orchestration and physically constructing data centers, including for hyperscalers.

This allows us to build end-to-end use cases for our clients and take them from cloud potential to cloud performance.

#### **Complete cloud control**

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Migrating to the cloud has many benefits but also comes with complexities.

While the cloud offers scalability and cost-efficiency, improper management of cloud resources can easily lead to unexpected and escalating expenses. If you don't have a cloud strategy that defines governance policies about approving cloud spend, or have not put the right key performance indicators (KPIs) in place, you are likely to face an increase in costs and out-of-control resource consumption.

The ability to monitor your entire IT stack is essential to identifying and remediating performance issues before they affect your business. Performance monitoring and observability strengthen your ability to troubleshoot cloud-related performance concerns. Observability provides real-time insights on cloud health and enables proactive issue resolution before a problem occurs. By outsourcing these types of functions to cloud managed service providers, businesses can offload operational complexities and optimize their cloud environments for performance, security and compliance.

When proper governance and management are built-in, you can keep cloud costs from spiraling out of control. FinOps, a practice that combines financial management and cloud operations, fosters collaboration and enables organizations to optimize cloud spending, track costs and align cloud usage with business objectives as they transition from the traditional capex to opex model.

NTT DATA can help organizations with their cloud challenges by pairing technical expertise with in-depth industry and client knowledge. Our experience allows us to apply tailored strategies that address the specific needs and goals of each client. We provide insights into industry best practices, emerging trends and benchmarks, enabling businesses to make informed decisions.





#### A sustainable solution

Organizations are under increasing pressure from governments, regulators and customers to become more sustainable.

Moving to the cloud is seen by many decision-makers as being both financially and environmentally responsible. There is a widespread belief that cloud will make you both more profitable and greener, almost as a matter of course.

Sadly, cloud is not necessarily green. Traditional cloud, based on large groups of server farms networked together, uses a lot of energy. As the world moves toward more bandwidth-hungry applications, with exponential growth in storage so the demand for energy grows.

Choosing the right cloud provider, optimizing your operating model and effectively leveraging your application architecture are keys to maximizing economic and environmental sustainability.

AWS is the world's most comprehensive and broadly adopted cloud offering, with millions of global users depending on it every day. AWS data centers provide the efficient, resilient service organizations expect, while minimizing environmental footprint.

AWS's sustainability work includes enhancing energy efficiency, transitioning to renewable energy, reducing embodied carbon, using water responsibly, driving a circular economy and enabling sustainability for customers.



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## Business cloud from AWS and NTT DATA

With NTT DATA, you can unlock the full potential of AWS. We understand the complexities of AWS and the constant influx of new services. That's why we offer a secure foundation within 5 to 10 days, enabling you to seamlessly integrate cloud-native and third-party services.

Assess, plan or design your AWS cloud transformation with our experienced consultants, industry best practices, first-rate tools and automation. Build and deploy a secure AWS foundation, implement containers, automate your AWS pipelines or migrate your applications to AWS with our Unified Cloud Adoption Framework. Improve the resiliency of your applications by efficiently running your AWS operations with support from a world-class AWS Cloud Center of Excellence, while injecting innovation with site reliability engineering and Agile Product-Oriented Delivery models. Leverage security frameworks, data protection and security infrastructure for success, no matter where you are on your AWS journey.

With our expertise in FinOps best practices and intelligent automation, we help you optimize your cloud operations. Join forces with us to gain valuable skills, embrace agile DevOps principles and unlock the full potential of AWS for your business.



## How a Major Investment Firm Migrated 55 Apps and Data to the AWS Cloud

The urgency of technological transformation has gripped nearly every type of business in recent years, but none more than the financial services sector. Banks, investment firms, insurance companies and other institutions increasingly depend on fast and powerful internal systems to retrieve and process data, as well as consumer-facing innovations to bring convenience and security to their account holders. Financial services firms that fall behind technologically put themselves at risk of being overtaken by more aggressive competitors, including nimble digital natives disrupting the financial space.

Understanding the stakes, a major U.S.-based investment company sought help in modernizing its expansive applications portfolio and data platforms by migrating them to the cloud. NTT DATA and Amazon Web Services (AWS) answered the call.

Learn more





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## NTT DATA and AWS: accelerating business transformation

NTT DATA is an AWS Premier Consulting Partner with extensive cloud competencies, global reach and deep expertise.

#### Why clients choose us for AWS:

• NTT DATA and AWS have a successful global partnership, delivering powerful digital experiences that drive transformation and success for organizations worldwide.

#### NTT DATA is an:

- AWS Premier-tier partner
- AWS Migration Acceleration Program partner
- Marketplace partner
- AWS reseller
- AWS Managed Services Provider
- Amazon Connect partner
- AWS Direct Connect partner

- NTT DATA has 16 AWS competencies, including Migration, Modernization, Data & Analytics, Security, Networking, Storage, Resilience, DevOps, Machine Learning, SAP, Mainframe Mod Services, Mainframe Mod Software, Financial Services, Government, MSP and Telco.
- We are the second company globally to hold both AWS Services and Software competencies for Mainframe Modernization with AWS.
- We foster a culture of continuous certification and have more than 10,000 certified and accredited engineers.
- We offer a direct partnership for SAP on AWS, enabling seamless integration and support. We facilitate the smooth migration and management of SAP workloads on AWS while providing proprietary SAP security solutions developed by ControlPanelGRC for robust protection.
- With a global footprint of 150 data centers linked by our own secure high-speed network, we can deliver wherever our clients are located and at every stage of their journey to digital transformation.

NTT DATA integrates our proven UniKix solution into the AWS Mainframe Modernization service.

We have a track record for solving some of the most challenging legacy infrastructure problems that keep IT leaders up at night. Together, we've helped clients across the globe transform their IT landscapes by leveraging hyperscaler clouds and managing their multicloud environments and we can do the same for you.



# Five questions to assess your business cloud capabilities.

- 1. Do you have a cloud strategy for the short, medium and long term?
- 2. Are you measuring the sustainability impact of moving to the cloud?
- 3. Are you using multiple cloud providers to meet various business needs?
- 4. Do you know your cloud economics?
- 5. Can you achieve AWS security with agility?

If you have more questions than answers about your business cloud, we can help. We work closely and collaboratively with you to execute a business, technology and cloud strategy that considers desired outcomes, competing priorities, security, cost and performance, helping you to stay relevant and competitive.

The early adoption of new strategies and technologies can yield significant benefits. The sooner you start your cloud journey, the sooner you will realize the value, whether it's in the form of cost reductions, enhanced performance or the adoption of innovative practices. And this value grows over time.

Learn more

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