Accelerate your digital transformation with the power of cloud

Cloud Consulting
Client Presentation

kyndryl

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Addressing cloud challenges

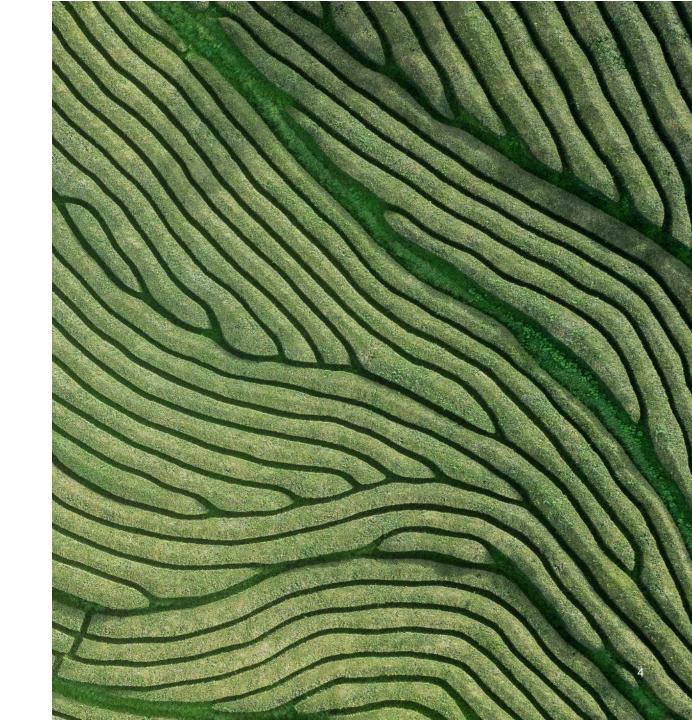
Organizations are embracing digitalization using digital platforms combining hybrid multicloud, Al and data

The move from traditional operating models to digital platforms is driving IT to cloud native and hybrid multicloud.

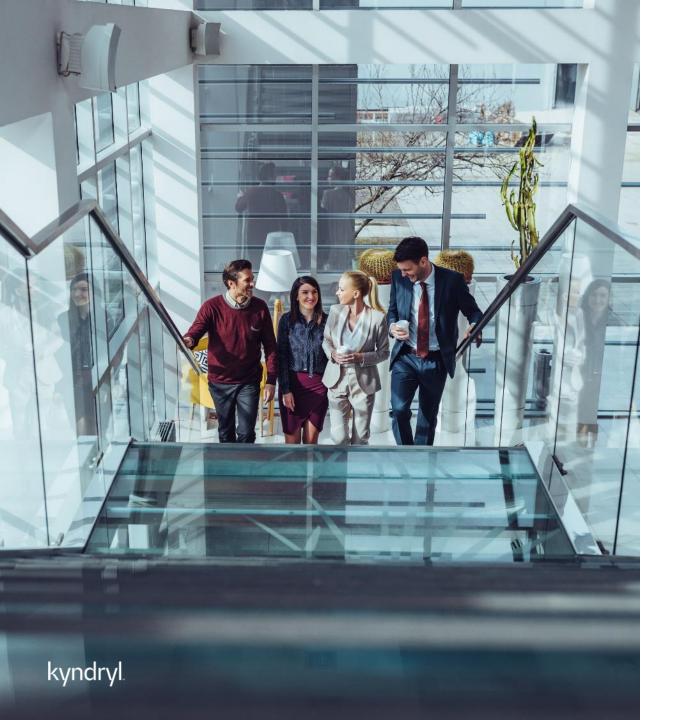
Adopting digital platforms means you must align your platforms and services to your business objectives with a unifying cloud strategy.

Leveraging digital platforms requires transforming complex enterprise workloads; a holistic approach ensures maximization of value¹.

Increasing complexity can further slow momentum and create unintended risk.







7/49//

of IT leaders with a cloud architecture design completely agreed that it had positively impacted the success of their organization's digitalization program.

"How cloud architecture design accelerates cloud deployments". March 2020.

That's because numerous cloud platforms aren't easily integrated.

To be successful, you need a unifying cloud strategy and architecture.

Articulate a strategy to align hyperscaler, hybrid and multicloud services to your business goals

Drive cloud technology choices

- Define your architecture vision
- Evaluate gaps between "as is" and "to be"
- Define a systematic approach to make workload transformation decisions
- Deliver the right-fit service layers and deployments for your workloads

Design security, reliability, performance, efficiency, cost optimization and operational excellence into your solution

Produce implementable designs with infrastructure as code (IaC)

Structure a compelling business case

Outline a roadmap for transformation kyndryl.

"It is a daunting task to move to the cloud as the infrastructure and concept are both gigantic. A formal cloud architecture design helps to reign in the fear that goes with moving to the cloud."

Financial services industry CIO

Create a cloud strategy and architecture that meets your functional and business needs.

Challenges

How can I quickly and more effectively deal with changing priorities, and evolving IT estates? – VP, IT

How do I select a hyperscaler platform and determine workload fit priorities? - CIO

How can I overcome unanticipated complications due to different providers, platforms and tools? – CIO

How should I handle the design for mixed platform workloads? – VP, IT

How do I optimise my use of Azure environments and services? – CIO

kyndryl.

Capabilities

Design fit-for-purpose infrastructure for enterprise workloads.

Determine platform selection and prioritize workloads.

Define target-state architecture for Azure, hybrid, and multicloud environments.

Integrate operational excellence and reliability models.

Embody business value and governance in your technology selections.

Design modernization platforms for hybridized workloads.

Deliver implementable designs – enable infrastructure as code.

Outcomes

Articulate the vision for your Azure-centric, connected architecture.

Exploit the flexibility of a variety of technologies where you want them.

Make consistent and accurate technology decisions based on a single, trusted data source.

Define an optimized cloud spend model enabling core business excellence.

Understand the impact of modern cloud practices on organization and governance practices.



Focus on rapidly delivering a provable MVP implementation in 8 – 12 weeks.

Setting out with intention to design a minimum viable product (MVP) solution delivers tangible outcomes culminating in a proven implementation in as little as 8-12 weeks.

Prioritize your requirements

Create your cloud blueprint

Turn architecture into implementation

Outcomes

- IT strategy and roadmap with clear alignment to business objectives
- Target architecture for digital platforms and workload transformation
 - High-level target operating model for IT
 - · Compelling business case for transformation
 - Structured implementation roadmap

"Having a blueprint provides us with a business and technology framework upon which to make key strategic and operational decisions, set priorities, maintain standards and to have an **agile path** from today's architecture to a future one, which more extensively embraces digital platforms and cloud solutions."

CTO of a large media and entertainment enterprise



This enables you to realize business objectives.

A global energy company achieved 40% services savings from modernizing with PaaS and deploying a strategic, fully integrated offshore global delivery model.

A global manufacturing company migrated major SAP and non-SAP applications to a target AWS and Azure multicloud solution for company transformation and unification of services.

An <u>outsourcing and</u> <u>energy services</u> <u>company</u> removed critical workloads from its data center and achieved standardization of new operating models at pace, ensuring secure governance and assurance on Azure.

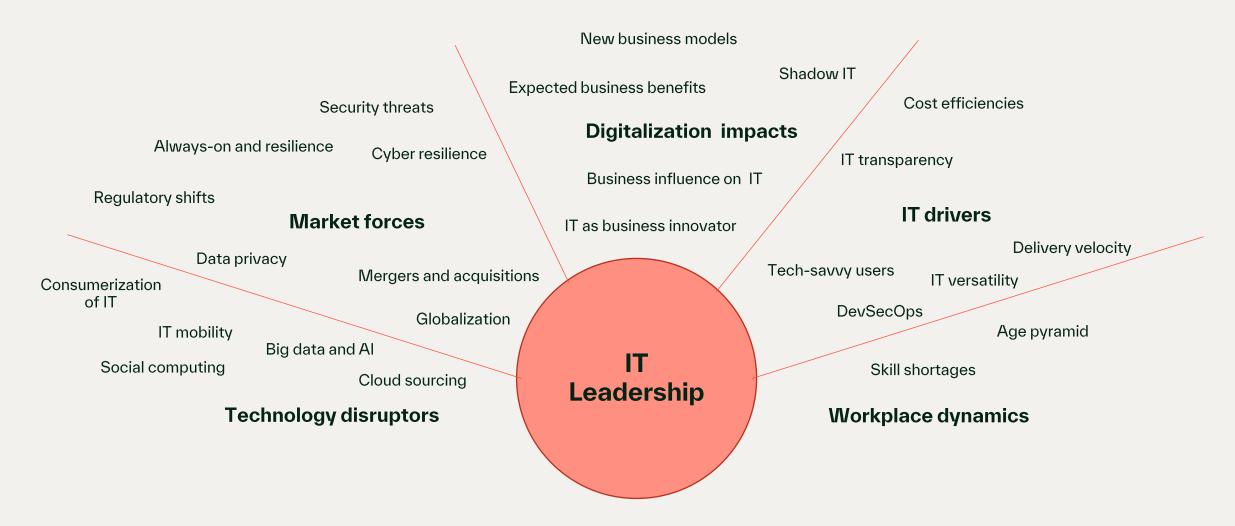
A large insurance and reinsurance company achieved 20% savings for strategic reinvestment into value-add SaaS solutions and modernization.

A global retailer migrated a major logistics application portfolio to Azure to quickly enter and show force as a global online retailer and be competitive in a space dominated by Amazon.

A startup company met business objective of building a web application (from scratch) on Azure to provide dealers with capital and advanced technology to help all consumers buy the cars they need and make car buying better for everyone.

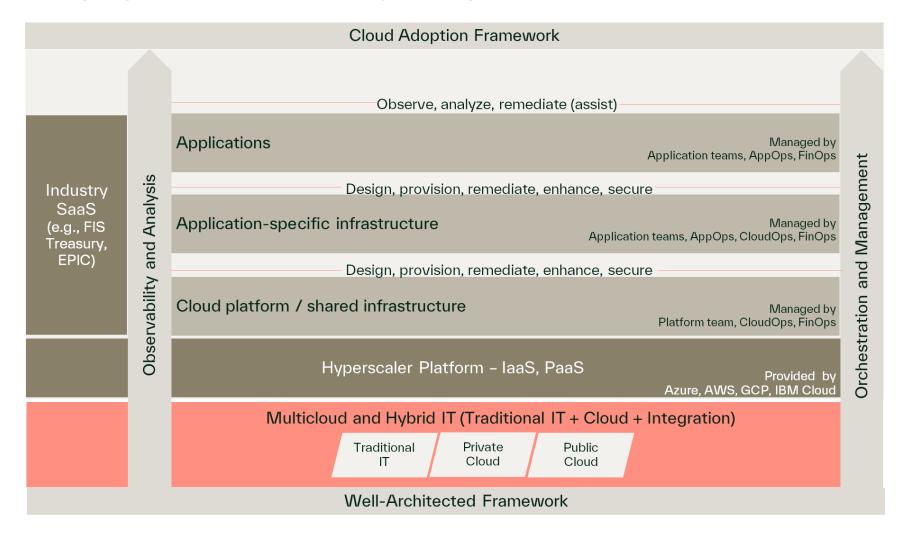
02 How we deliver value

Enabling digitalization introduces multiple converging challenges to IT.



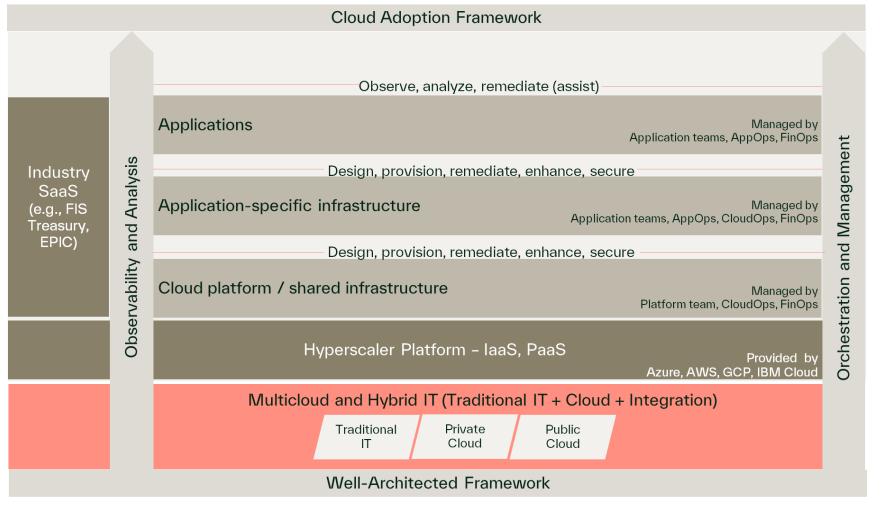


Examining these challenges through a 'cloud-centric lens' helps you shape your transformation journey.





The cloud-centric lens highlights core cloud infrastructure, hyperscaler, multicloud, and hybrid IT environments.



Applications

- Custom, packaged applications
- Microservices e.g., booking engine, card processing

Application-specific infrastructure examples

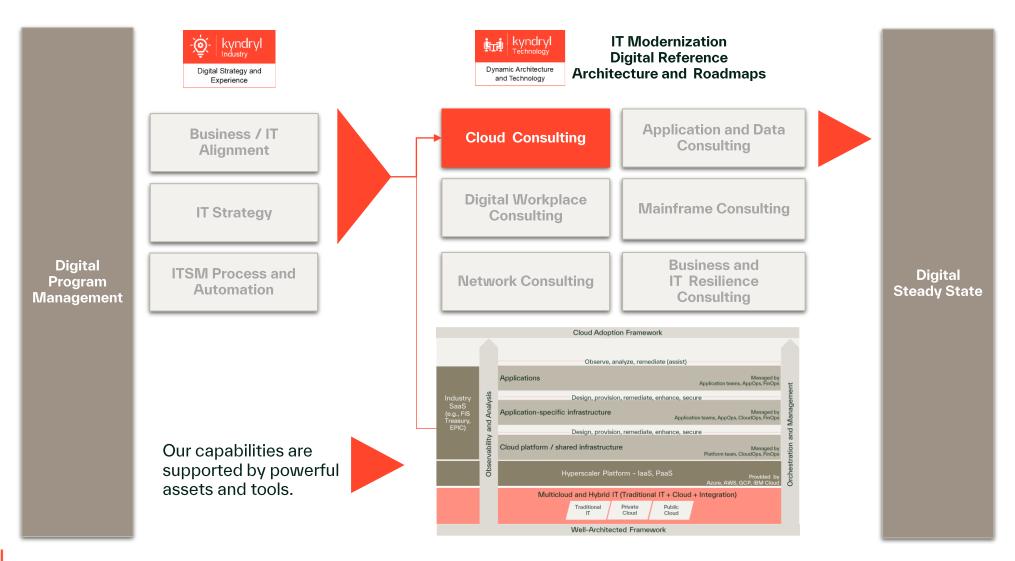
- Azure VM, Azure SQL DB
- AWS Lambda, AWS EC2, AWS Dynamo DB

Cloud platform / shared infrastructure examples

- Azure AD, AWS Control Tower, Kubernetes, subscription and logging
- VMware Tanzu, Red Hat OpenShift



Our strategy and transformation services guide and accelerate your transformation journey.





Our approach aligns Kyndryl enterprise experience with the Azure cloud adoption framework to drive value for new and existing application workloads.

Kyndryl Cloud Consulting capabilities aligned to the Microsoft Cloud Adoption Framework for Azure

Strategy

Articulate your vision of the future state and expected benefits of realizing that vision.

Define the financial justification – business benefits and cost reduction – to support initiatives.

Adopt - Migration and Innovation

Develop a systematic approach to determine workload placement for noncloud native workloads and new cloudnative to expand business capabilities.

Plan

Create your technical baseline to make fact-based decisions in defining modernization initiatives.

Define your journey to future state and what the intermediate states look like.

Govern

A shared service architecture and well-managed landing zones employing governance guardrails, make the most of the Azure cloud platform capabilities.

Ready

Define your architecture vision for futurestate.

Create your landing zone design and build with infrastructure as code (IaC).

Manage

The ongoing operation of the digital assets delivers tangible business outcomes and requires a plan for reliable, well-managed operations to yield expected value.



Likewise, our Landing Zone designs are founded on Azure well-architected framework tenets.

Azure Well-Architected Framework pillars integrated with Kyndryl Cloud Consulting capabilities

Strategic technology planning

Detail your plan and architecture for successful workloads on Azure, accelerate cloud adoption, maximize the value of your investment, deliver business and technical outcomes sooner.

Performance and cost optimization

Deliver a blueprint by our Microsoft Certified Azure Solution Architects to design and operate workloads that are reliable, secure, efficient and costeffective while avoiding anti-patterns.

Modern operations

Drive operational excellence by enabling cloud management through automation, data driven intelligent operations, DevSecOps and other modern service management practices.

Resiliency

Protect critical workloads with guidance on implementing IT resilience strategies, achieving reliability pillar goals through automation and analytics to proactively avoid disruptions.

Security

Employ a layered security approach to protect information and systems and improve controls to ensure proper operation of the cloud environment.



03 Our capabilities

Our cloud capabilities summarized

Cloud Strategy and Optimization

Align your platforms and services to your business strategy with a unifying Azure, hybrid, or multicloud strategy and roadmap.

- Clarify baseline workload requirements and modernization options (Azure 5R's)
- Outline organization, governance and process alignment needs for successful transformation
- Define the business case for cloud according to your values.
- Optimize your Azure landscape for performance, capacity and cost

performance, capacity and cost

Cloud and Landing Zone Design

Design a unifying cloud solution architecture that meets your requirements for your target hybrid, cloud or multicloud estate.

- Define or improve governance of technology use and workload deployment decisions
- Design your landing zone(s) and establish guardrails for your selected hybrid and hyperscaler cloud platforms
- Address automation and software-defined environment gaps and opportunities; deliver infrastructure as code

Platform and Infrastructure Modernisation

Create the blueprint for your platform and infrastructure modernisation -- aligned to value chains and transformation goals.

- Rationalize, modernize, and unify technologies to meet digital business need for speed
- Support engineering teams' investment in DevSecOps approaches and modern architectures
- Define common target platform and tools to bring closer collaboration between developers and IT operations

Modern Operations and Management

Establish a solid foundation for management of cloud platforms via DevSecOps, automation and AlOps initiatives.

- Enhance the way you operate while introducing modern technologies as strategic assets
- Leverage data-driven decisionmaking, reducing errors and risk.
- Embrace new techniques including automation, AlOps, DevSecOps, and SRE to improve operations and performance

Enterprise Transformation

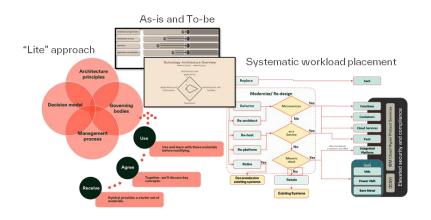
Kyndryl consulting services are designed to be delivered in an integrated engagement to accelerate your cloud transformation. Our cloud consulting services are frequently combined with network and resiliency consulting to drive deeper into those domains and deliver broader operational changes. Similarly, our application and data consulting capabilities can be integrated to fully modernize your portfolio. Architecture engagements are designed for easy integration with Kyndryl implementation services and can be supported by Kyndryl managed services.

Cloud Strategy and Optimization (adoption)

Create a cohesive strategy, approach, and plan to make IT modernization decisions for workloads not yet migrated to cloud.

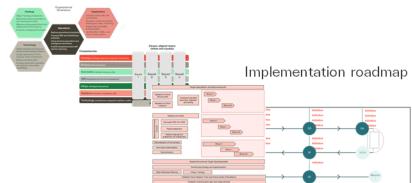
- Make fact-based decisions in defining modernization initiatives.
- Embody business value and governance in your technology selections.
- Accelerate your journey with an agreed path forward.

Establish governance guardrails



Define the target state strategy and implementation roadmap

Organization alignment



Create the technical baseline

Trust matrix

Data sources are reviewed against trust levels based on age of data and data source (automated tooling, human derived).

Where required data is standardized and cleaned to aid our analysis. The data treatment includes:

- Data cleaning: duplication, erroneous line
- Data aggregation and closing gaps
- Site identification and classification

Domain	Platform	Trust Level (0 - 10)	Devices
	AJX (HMC Scans)	9	45
	Linux/Oracle DB (Manual)	4	7
Data Centre	SuperMicro (Manual)	4	17
	Triton (System export)	10	654
	VMware (RVTools)	9	454

Technical baseline

The technical baseline shows application and infrastructure relationships and to detail the asis, transformation recommendations / treatments, and the to-be that meets your business objectives.

The technical baselines includes fields such as applications, server role, environment, operating system, CPU, memory, storage, SLA's, site, resiliency, status and highlights technical debt risks.



Landscape diagram

The landscape diagram lists the supporting Infrastructure tools and services used to support your IT organisation and allows us to highlight potential gaps or transformation focus areas.

groups tools into seven pillars: Virtualisation, External Network Services, Internal Network Services, Operations and Management, Infrastructure Services, Monitoring, Security Management.



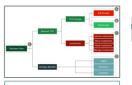
Verify the financial case

A financial perspective provides another perspective in a cohesive cloud strategy.

ROI for tactical objectives (like platform modernization) help define expectations and gauge progress.

Business case

Holistic approach with an emphasis on strategic benefits and cost reduction



The business case (E) equals the strategic benefits (D) plus the TCO savings (B minus A) minus the investment (C = sum of all investments

Strategic benefits

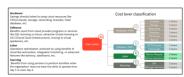
Strategic benefits include quantifiable benefits like productivity gains to help determine the overall cost-benefit results.



Cost levers

32 cost levers found in most business cases have been identified.

We adapt these as required to your specific strategic goals.

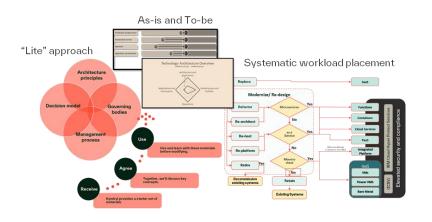


Cloud Strategy and Optimization (optimization)

Create a cohesive strategy, approach, and plan to optimize workloads already in the cloud as well as new workloads..

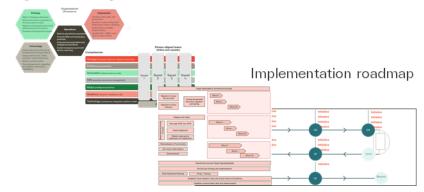
- Evaluate the cloud landscape to identify opportunities to improve landing-zone performance
- Analyze subscriptions and tooling output to embody business value and governance in your selections.
- Accelerate your journey with an agreed path forward.

Establish governance guardrails



Define the target state strategy and implementation roadmap

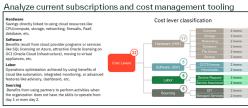
Organization alignment



Identify opportunities to improve capacity and performance

Identify opportunities to tune platform for optimal performance





Verify the financial case

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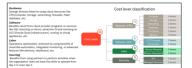
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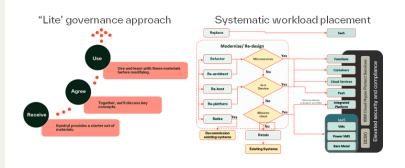


Cloud and Landing Zone Design

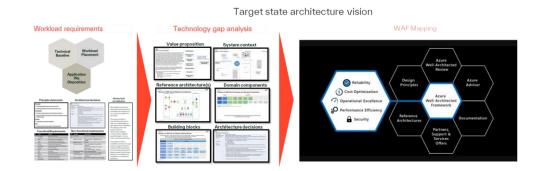
Design a unifying cloud solution architecture that meets your requirements for your target Azure, hybrid, or multicloud estate.

- Define the Azure architecture to meet "right fit for right workload" needs
- Embed CAF and WAF requirements and tenets into the solution architecture.
- Develop infrastructure as code (IaC) designs for build-ready implementation.

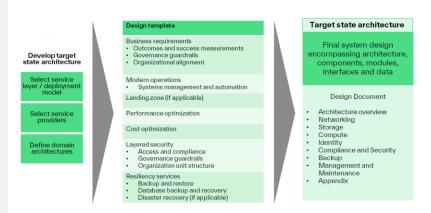
Establish governance guardrails



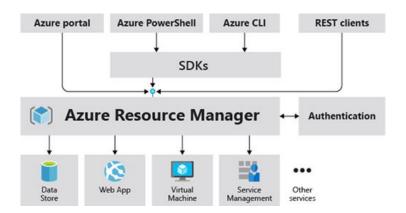
Create the Azure architecture baseline



Create the Azure landing zone solution architecture



Develop infrastructure as code (IAC) designs





Platform and Infrastructure Modernization

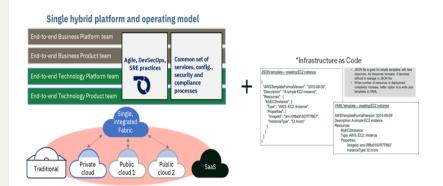
IT platforms and operations are transforming through microservices, containers, Kubernetes, agile, DevSecOps – hybridizing existing VM based workloads.

These needs can be addressed by a single platform and IT operations approach.

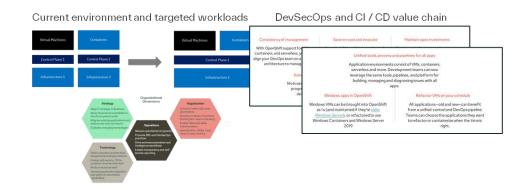
- Consistent developer experience across VMs, containers and serverless
- Preserve familiar controls for engineering and operations teams

"Lite" governance guardrails "Lite" governance approach "Lite" governance approach Use and learn with these materials before modifying. Agree Together, we'll discuss key concepts.

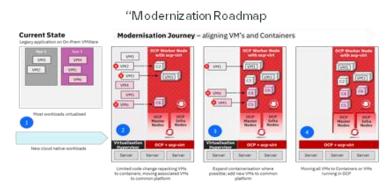
Create the integrated platform architecture and designs



Assess existing cloud services and deployments value chain



Develop your modernization roadmap





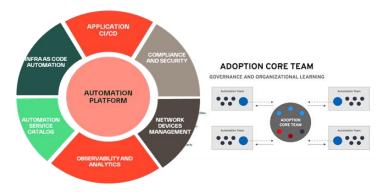
Modern Operations and Management

Now that you have implemented a cloud platform, how do you manage it to support engineering and operations?

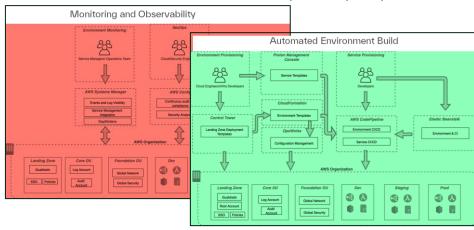
Recommended use cases bring the most value across industries and help you establish the foundation to jump-start future needs.

- Fundamentals of where to start and how to extend
- Focus on workflows to support DevSecOps, SRE, AlOps, and CloudOps.

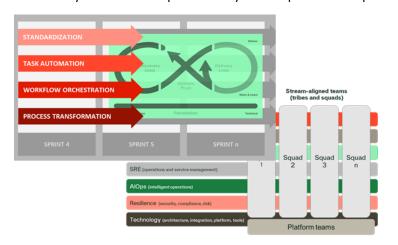
Define the team, use case, and platform environment



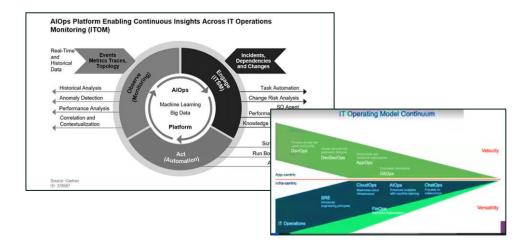
Build the foundation with a minimum viable product (MVP)



Establish your DevSecOps maturity and improvement plan



Create dashboards and AlOps use case workflows to support SRE analytics





Our modular method allows us to address your specific needs.

Strategic approach

Enhance developer productivity while modernizing operations and management practices.

Optimize your cloud environment to drive consistent adoption across platforms and systems.

Modernize platforms for closer developer and operations collaboration.

Design your landing zones, hybrid, and multicloud architectures.

Tactical approach

Plan and implement solutions for roadmap priorities.

Determine how to leverage cloud provider services for platform modernization.

Assess your cloud architecture from a technical and operational perspective.



O4 Why Kyndryl?

With proven methodologies, skills and expertise, Kyndryl can be the trusted partner for your cloud transformation.

Kyndryl Method for Cloud

A proven framework that accelerates your cloud journey and digital transformation

Cloud by design

Ability to design hybrid cloud environments with cloud platform-native toolkits or open platforms, or both

40,000+ cloud consultants and certified experts globally across AWS, Azure and IBM competencies and next generation technologies (containers, microservices, serverless, open-source platforms)

Integrated cloud offerings

Pre-integrated offerings across Kyndryl services that cover all of your transformation needs strategy, migration, modernization and management

Kyndryl's accelerators, packages and platform ecosystem

Industry-specific modernization platforms (banking, insurance, telco, retail, travel and transportation)

Accelerators, using automation for efficiency and deeper analytical insights, for improved decision-making ability

Our own transformation

2700+ contracts across Microsoft Azure, AWS, IBM Cloud® and more

Successfully enabling our own transformation as well as helping clients through their transformations—while embedding automation everywhere



Is it time to develop a formal cloud technology architecture and realize the benefits?

Organizations with a formal plan enjoy greater success against objectives.

Designing intentionally for function helps you to realize business goals and is critical to exploit the value of multicloud.

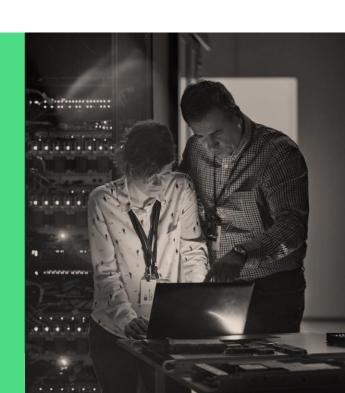
Engage us to help accelerate your cloud journey. We will collaborate with your key stakeholders to agree the scope of service which addresses your requirements and satisfies your expected outcomes.

Mobilize the team: your stakeholders plus our SMEs.

Complete data collection templates. Schedule kick-off meeting and key workshops.

In as little as 4 weeks* receive your deliverable.

*dependent on scop



05 Case studies

Case study A major global energy company

Multicloud migration

Kyndryl was engaged to help the client transform the IT environment as they plan to move 80% of their workloads across 2500+ servers to an Azure and AWS global cloud and needed a new way to manage a multicloud ecosystem.

It was vital for Kyndryl to focus on a fully integrated offshore global delivery model and target operating model as a part of the migration activities along with unified global toolsets and an effective global governance model. This strategic approach generated 40% savings from modernizing with PaaS services in the cloud.







35%

25%

Saving attributed to servers migrated to the cloud

Saving due to alleviating financial cost pressures

Case study A global manufacturing company

Migration of SAP to hybrid multicloud

A global manufacturing company had embarked on a companywide journey for unification and business processes and transformation. As an integral part and key enabler of this program, Kyndryl was engaged to:

- Advise on the cloud platform strategy as well as the resiliency approach, define DR plans and conduct test
- Migrate workloads running primarily on VMWare, Windows and RHEL to defined target hybrid multicloud environment
- Build and manage the hybrid multicloud cloud environment









Transformation and Unification

Target environment consisting of AWS, Azure and local DC

Hyperscaler/CSP adoption model

Rationalization and standardization process

Enterprise architecture definition and governance

Cloud data lake architecture design and implementation



Case study

An outsourcing and energy services company

Migration to Azure Cloud

The company is on a journey to exit the data center space and utilize cloud technologies for migrations, transformation and on boarding newly purchased companies. Kyndryl was engaged to:

- Design the Azure Cloud infrastructure and advise on the cloud migration and transformation strategy.
- Migrate workloads running on VMWare and legacy Windows and RHEL to Azure.







Transforms workloads at pace

Target environment consisting of Azure

Hyperscaler/CSP adoption model

Rationalization and standardization process

Management of the new infrastructure

Enterprise architecture definition and governance



Case study

A large insurance and reinsurance company

Multicloud transformation business case

Challenged by a high degree of COTS, SaaS, and managed services in their existing portfolio, the client came to Kyndryl to assess their legacy environments for multicloud opportunities.

The goal was to support speed to market and accelerate transformation while finding opportunities to remove operating cost to reinvest in strategic areas for innovation. Kyndryl was engaged to:

- Deliver a strategic cloud roadmap and target operating model
- Establish a factory based modular approach to migration purposefully fit to the cloud adoption needs
- Refactor the existing reinsurance platform leveraging crosscloud alliances to build flexible hybrid cloud solutions.







90% 20%

Migration of applications across the US and UK serving global business to Azure

Savings for reinvestment into value-add SaaS solutions and modernization

Case study A global retailer

Migration from physical DC to Azure Cloud

A global retailer was eager to enter and show force as a global online retailer and be competitive in a space dominated by Amazon. The client secured a major logistics application portfolio and requested rapid migration from a physical datacenter to Azure and further integration of the logistics intellectual property into its existing operations.

Kyndryl was engaged to:

- Provide overall technology leadership, focusing on modern security tools and practices.
- Identify the Azure Enterprise Architecture and Landing Zones
- Establish and build out an Automation Strategy
- Establish and build out a DevSecOps Strategy
- Establish and build out DR/BC (Azure Recover)





90 days + 90 days

To setup infrastructure

To migrate applications

Case study A start-up company

Architecture and design for Azure Cloud

A startup company was founded to provide car dealers with capital and advanced technology to help all consumers buy the cars they need and make car buying better for everyone.

The client wanted to build a web application on Azure – starting from scratch. Kyndryl was engaged to advise and architect an end-to-end design of the target architecture for growth and scalability:

- Environments: development, testing, quality assurance and production
- Design elements: security, networking, code deployment, databases and API management for the Azure platform
- Develop automation for deployment of all components.







Define baseline architecture and document architectural decisions.

Develop Azure Cloud Solution Architecture.

Produce associated implementable designs with automation / infrastructure as code.



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Thank You

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