



IBM Consulting

G-Cloud 15 IBM - Migrate and Modernise to Azure

Service Definition Document

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Context

The voice of our clients

How do we **exploit Cloud for business transformation** and innovation & what's the best way to **assess TCO & business benefits** from a hybrid multi-cloud world?

We want to **create new business models** through **adoption of exponential technologies (AI, Blockchain, IOT)** by consuming Cloud platform services and architectures.

We need to **build digital capabilities at scale** with speed and agility while tackling the complexity as we **integrate the old with new**.

How do we address **application supportability risk** created by an ageing workforce?

We need **consistent governance and service management** across multiple clouds that delivers **high availability, resiliency & security**.

How do we anticipate changes and keep the business moving in disruptive situations (e.g. pandemic).

Key solution trends

→ **Azure Target Operating Model** helps organisations to best leverage hybrid multi-cloud.

→ Institutionalized **co-creation models with Azure Adoption Framework** create new business capabilities and more efficient ways of working.

→ **Continuous modernisation** of applications through **Azure compute & containerization** or reengineering as cloud-native app.

→ Drive efficiency from **tech debt removal & automation** with **Azure DevOps**.

→ **Azure Multi-cloud Management & Governance** to orchestrate management, compliance and security aspects of enterprise services on hybrid multi-cloud.

→ Dynamic Delivery with **Azure Well-Architected Framework** to address changes in operating environment.

Azure Transformations Benefits

A Finnish state-owned global energy major transforms their application portfolio through an Azure hybrid multicloud strategy

- **Digital journey** led portfolio simplification, multicloud platform enablement and governance
- **Technical debt reduction**
- **Ease of support and flexible** portfolio

A global oil and gas company is modernising their on-premises IT portfolio with Azure

- Biz **accelerations, cost savings**, migration factory for onboarding future apps into Azure
- Reduced **time-to-market**, increase **flexibility** and **scale**
- Address ageing workforce and **supportability** risk

A global logistics, freight and SCM service company is transforming their development & delivery model with Azure

- Build **digital capabilities at scale** for agility supporting a rapidly changing market
- High **availability and resiliency**
- A flexible, continuous deployment, integration and **delivery model**

A European cosmetics company driving significant automation to operate their Azure platform

- **Exploit cloud for business transformation**
- DevSecOps **reduce time-to-market**
- Increase **global system availability**
- Improved **scalability and stability**

Generative AI Is Changing The Game

Application Migration & Modernization

Advent of AI and Generative AI has fundamentally altered how clients approach and consume Application Modernization Services

Enterprises are increasingly focusing on **AI-enabled transformations, automation, and advanced analytics** as part of their broader digital transformation journey.

Accelerated Shift from Traditional to AI-Driven Solutions

Adoption of AI-Powered Platforms

Hybrid Consumption & Workforce Models

Focus on Cost Optimization & Efficiency

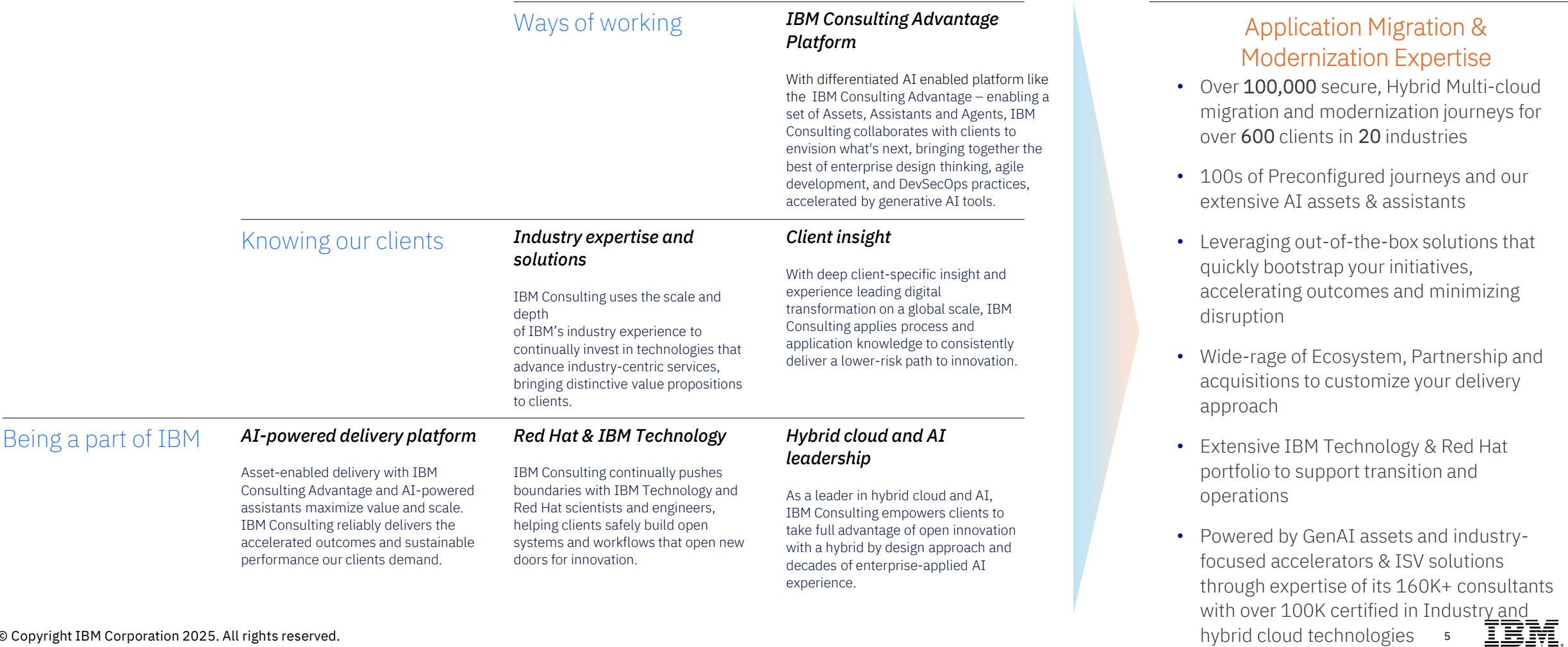
Ease of Integration and Fast Deployment

AI as a Service

IBM Is Uniquely Positioned to Accelerate Our Clients Hybrid Journey

Application Migration & Modernization

IBM Consulting leverages IBM ecosystem & AI to Fuel Delivery



What makes IBM services unique for Microsoft Azure?

Innovative Engagement Model	Pre-built Solution Offering Components	Speed of Delivery	Skills, Capabilities, and Capacity	Credentials
Strong alliance and joint engagement with MSFT/Red Hat	• Azure Hybrid Multicloud Journeys • Incorporation with Sustainability offering • Azure Reference Architectures • Azure Reference Implementations • Azure Industry Solutions	• Experiential Squads for Azure Solutions • Assets, Accelerators, and Tools from IBM and Azure • Continuous modernisation	• Cloud centre of Competence • Certified Azure Professionals • Large Pool of Azure Delivery Practitioners	• Azure Certified Solution Experts (Advanced) ~ 1,300+ • Azure Expert MSP Certification • Azure Advanced Specialisations (Kubernetes) • MS Gold Cloud Platform Partner • MS Gold Application Platform • MS Gold DevOps
Garage Method (GM4C) for Azure Dynamic Delivery Model for Azure		DevSecOps Services for Azure		
Azure Hybrid Cloud SME Acquisitions (NordCloud, Taos)				
Strong Client Engagement Experience on Azure				

IBM Solution Offering Breadth

1: IBM Services for Cloud Strategy

(Advise)

- Help clients to **connect their Azure strategies to their business strategies**.
- We advise clients on **right Azure solution for business needs**.
- We **advise on the best ways to ensure security and compliance** across hybrid infrastructures.
- We **leverage Azure Services capabilities and architecture best practices** for enhanced portability, security & open source adoption.

2: IBM Services for Cloud Migration

(Migrate, modernise)

- We help our clients in **identifying, migrating or modernising** application portfolios to **Azure using Azure Migrate Framework** in combination with IBM migration factory, framework and toolkits.
- We **leverage our IBM Garage Method for Cloud for Azure**, IBM's proven cloud services delivery and rich set of **Azure Specific Migration tools** and **accelerators** combined with Microsoft recommended tools.
- We **leverage Azure Reference Implementations** to expedite adoption of services and client use cases implementations.

3: IBM Services for Cloud Development

(Build)

- We help our clients in **building digital capabilities through co-creation model delivery** via us code.
- **Build cloud-native apps at scale** using Azure service catalogue.
- **Build hybrid cloud infrastructure** based on Azure Stack.
- **Establish enterprise wide Azure DevSecOps** framework and help accelerate adoption.
- We **leverage our IBM Garage Method for Cloud for Azure**, IBM's proven cloud services delivery and rich set of **Azure Specific accelerators**.
- We **leverage Azure Reference Implementations** to expedite adoption of services and client use cases.

4: IBM Services for Cloud Management

(Manage)

- **Manage their new multi cloud environments** with Azure Arc as they build & scale them.
- **Establish Azure AI based Services Control Tower** for visibility into end-to-end application operations.
- We **monitor and manage applications and infrastructure** leveraging principles and practices for Azure DevSecOps, Azure SIEM, Azure Monitor, Azure Health Service
- We **leverage Azure specific service management & operations** best practices & toolchains.

Advise, Move, Build & Manage offerings are enabled with **Dynamic Delivery model**

Focus of this solution description

IBM Services for Cloud Migration and Modernisation



Migrate & Modernize

IBM Services - [Application Migration on Azure](#)

Migrate applications to Azure and Accelerate the containerization of legacy applications on Azure / Azure Stack / ARO

- Optimize IT portfolio for improved cost and agility
- Upgrade applications for security / maintainability

IBM Services - [Application Modernization on Azure](#)

Re-engineering of legacy applications (based on COBOL, RPG, monolithic .Net / JEE etc.) to Cloud Native on Azure / ARO

- Re-write of enterprise integration (for e.g. SOA Services) using Azure Integration services

How we do it

Powered by Accelerators

- Discovery and Insights for deeper source system (s) analysis using a combination of IBM tools and Azure specific tools such as Azure Migration Assistant for Apps & DB AMT, ASR, Azure Migrate, etc.
- Azure Reference Implementations
- Azure Code Analytics Guidance and Tooling
- Fastpath Modernization to Containers (Ansible / ARM for Azure) or Azure Red Hat OpenShift
- DevOps (Provision configurable toolchains & Self-service models by leveraging Azure DevOps)

Dynamic Delivery

- Virtual First model enabling real-time network of innovation micro-centers with access to virtual global talent pools for uninterrupted, portable rapid cloud platform-based application migration & modernization

Azure value prop for clients

- Improved enterprise agility , faster time to market (40 to 50%), improved user experience
- Reduced Risk & Improved quality through analytics-led, structured re-engineering approach
- Improve portfolio availability and resiliency by 20-30%
- Ensure application portability through containerization
- Up to 30% reduction of operational costs of IT portfolio
- Improved time to market by 40-45%
- Ability to transform culture and skills through new ways of working with IBM's approach: Virtual First model, Modernization framework, Azure Adoption Framework, Azure Well-Architected Framework, etc.

Key Differentiators

Faster “**Container led modernization at Scale**” across Application and Data by combining **Azure offerings, Azure Managed Services** (like, ARO) with **pre-built Services assets**

Azure Reference Implementations (ex. Azure RH OpenShift) to expedite adoption of Azure services and client use cases implementations

Deeper **end-to-end DevSecOps** adoption by combining IBM **DevOps accelerators, Azure DevOps Services, Azure Automation** and IBM's security capabilities

Underpinned by **IBM's industry expertise**, hybrid Multicloud assets with **Azure** and **Journey to Cloud services**

IBM's **Garage Method for Cloud** is powered by **Azure specific Accelerators**

Continuous & uninterrupted modernization using **Anytime-Anywhere-Delivery (AAD)** framework

Hybrid Cloud Journeys on Azure

Migrate applications / database to Azure

- Migrate VMware workloads to Azure**
Migrate on-premises VMware-based Workloads to Azure VMware Solution, using VMware HCX (and how to plan ahead including disaster recovery, backup, capacity, and NSX-T)
- Rehost workloads to Azure (V2)**
Migrate (re-host / lift-n-shift)- Windows and Linux server workload using ASR
- Migrate Windows apps to Azure (Windows) VM**
Migrate Windows (.NET) Application to Azure (Windows) VM including disaster recovery, backup and capacity
- Migrate Linux (RHEL) apps to Azure (Linux) VM**
Migrate Linux (RHEL) applications to Azure (Linux) VM, including resiliency/HA/DR options
- Migrate desktop to Azure Virtual Desktop (AVD)**
Migrate desktop to a modern cloud-based virtual desktop infrastructure (VDI) on Azure (AVD) for performance, security and cost-benefits
- Migrate SQL DB to Azure VM (IaaS)**
Migrate (re-host) SQL to Azure Self-Managed IaaS (SQL Server on Azure VM) and Azure (IaaS/Managed) and SQL Managed Instance)
- Migrate Oracle DB to Azure VM (IaaS)**
Migrate (re-host) Oracle DB to Azure Self-Managed Oracle VM
- Migrate SQL to Azure Managed Azure SQL DB**
Migrate (re-platform) SQL to Azure Managed PaaS (Azure SQL DB)
- Migrate PostgreSQL to Azure Managed PostgreSQL DB**
Migrate (re-platform) PostgreSQL to Azure Managed PostgreSQL DB

Modernise applications / database to Azure

- Containerize apps with Azure container services (AKS)**
Containerize existing application and deploy on AKS
- modernise monolithic apps into microservices on AKS**
modernise monolithic apps into microservices v/d deploy on AKS
- modernise monolithic apps into microservices on ARD**
modernise monolithic apps into microservices v/d deploy on ARD (Redhat) on & for Cloud (EC2 or AKS)
- modernise apps with Azure PaaS (App Service)**
Modernise entire application using App Service (formerly containerization app)
- modernise apps with WebSphere Hybrid Edition on Azure**
modernise apps with WebSphere Hybrid Edition (formerly CP4A) on Azure (AKS)
- Migrate MariaDB to Azure Managed Maria DB**
Migrate (re-platform) MariaDB to Azure Managed Maria DB
- Migrate MySQL to Azure Managed MySQL DB**
Migrate (re-platform) MySQL to Azure Managed MySQL DB
- Migrate MongoDB to Azure Managed Cosmos DB**
Migrate (re-platform) MongoDB to Azure Managed Cosmos DB

Build cloud native applications, and mobile application, DevOps on Azure

- Build cloud-native apps using Azure serverless services**
Build cloud-native apps using Azure Serverless Services (Azure Functions, Azure Logic Apps as well as Azure APIs and API Management Service)
- Build microservices apps on AKS**
Build (new) cloud-native microservices application on AKS
- Build microservices apps on ARD**
Build new apps with microservice & container on AKS / ARD
- Build apps with Azure PaaS (App Service)**
Build new applications using Azure PaaS (App Service), primarily with containerization
- Hybrid integration with CP4I on Azure**
Integrate apps and API on Azure using IBM Cloud Pak for Integration (CP4I)
- Integrate apps on Azure using Azure integration services**
Integrate apps on Azure using Azure integration services (Azure Service Bus, Logic Apps)
- DevSecOps adoption**
Build Secure and DevOps implementation on Azure
- API Enablement on Azure**
Enable / modernise existing application features/data as APIs using Azure API Management PaaS Services

Cross Offerings – across Migrate, modernise, Build portfolios

- High Availability on Azure**
Build Azure solutions for high availability of critical applications
- Migrate Storage on Azure**
Online Migration of Object, block and File level Storage (NAS/SAN to Azure, Offline Migration of Object and File-level Data using Azure Data Box)
- Hybrid Cloud Solutions with Azure Arc**
Run containers in a hybrid environment (on-prem, Kubernetes, k-AKS) and optimize administration of SQL Server instances in on-premises and multicloud environments
- Hybrid Cloud Solutions with Azure Stack Hub**
Deliver an optimized approach to backup and restore of files and applications at On-premise (on/ containers) between Azure Private Cloud and Azure Public Cloud
- Hybrid Cloud Solutions with Azure Stack HCI**
Enable running highly available virtualized and containerised workloads in Remote Office/Branch Office (ROBO) scenarios and support disaster recovery and file share
- Hybrid Cloud Solutions with Azure Stack Edge**
Deploy containerised applications and VMs (or AI and ML computing) from on-premises to the Cloud or Edge locations where data is created and collected

Re-host/Migrate Apps

Re-platform / Re-architect apps

Build apps

Cross-Portfolio / Industry Solutions

Focus of this solution description



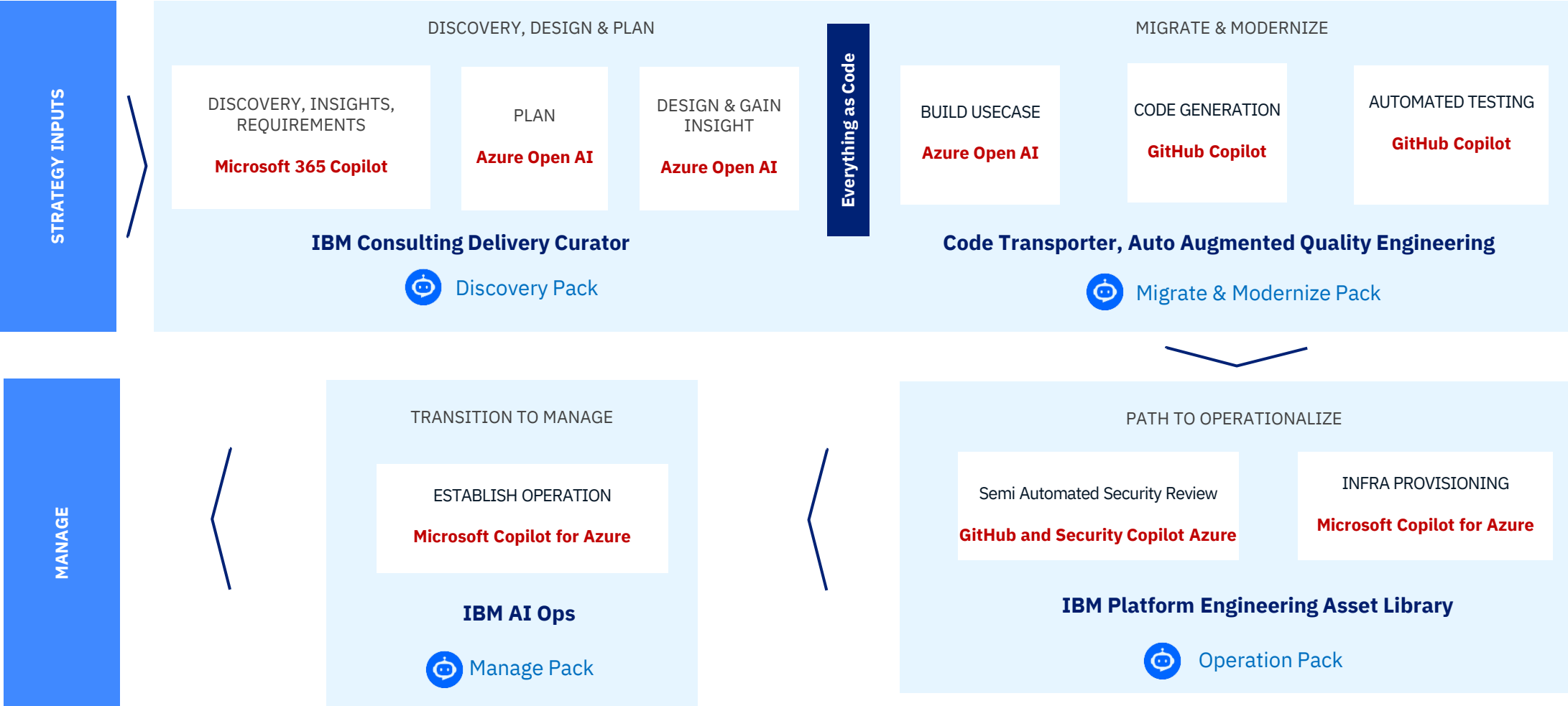
We Accelerate cloud transformation Using Assets & assistants infused with Microsoft Gen AI

Our Migration & Modernization approach embeds Microsoft Gen AI applications & Tools in every step

 IBM Assets

 Microsoft Gen AI

 IBM Assistants

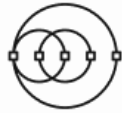


Azure - Cloud Foundation – Corner Stone for Every Cloud Transformation

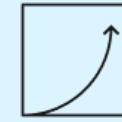
Catalyst



Decrease mitigation risk and speed project timelines



Reliable and Scalable Infrastructure



Accelerate and optimize Azure deployments



Focus on Cost Optimization & Efficiency

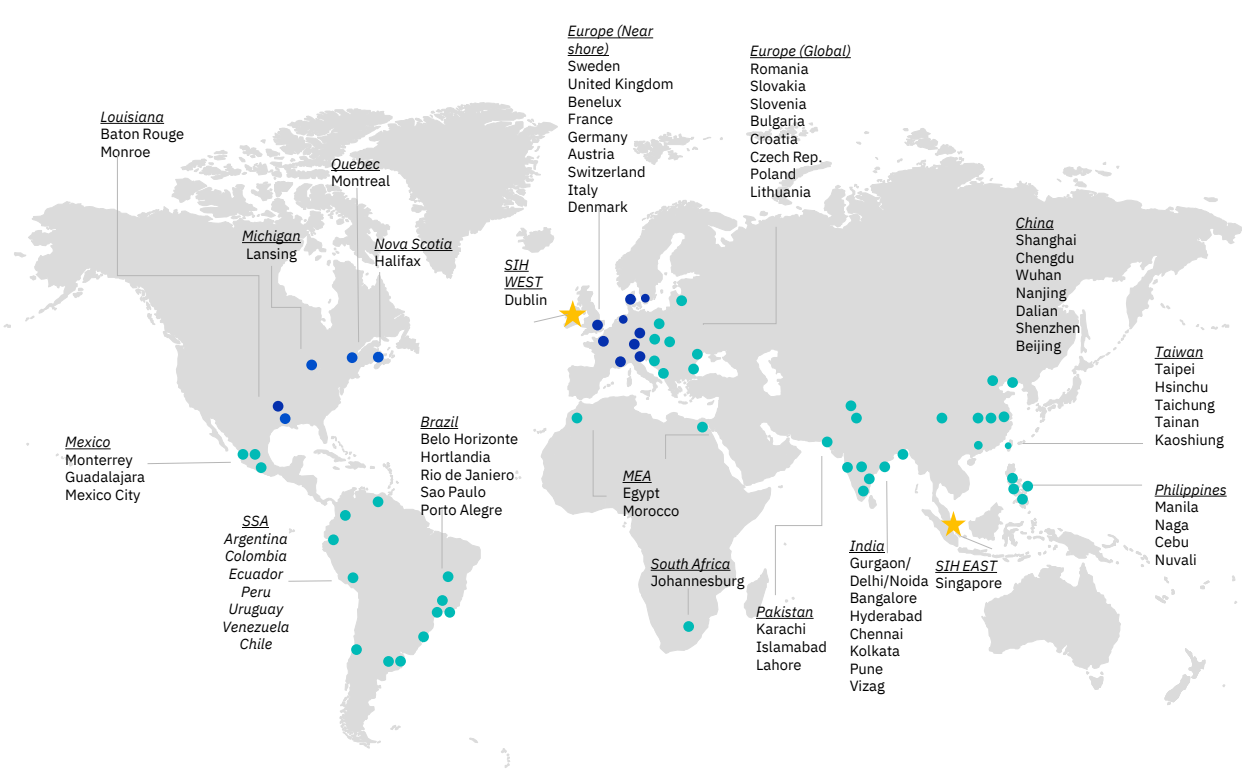


Centralized Governance



Ease of Integration and Fast Deployment with Flexible Deployment Models

We partner with clients on their IT Transformation and Application Modernization journey through our Global network of 213 centers



- IBM Client Innovation Centers – Global
- IBM Client Innovation Centers – Near shore
- ★ Services Integration Hub (SIH)

Centers of Competence

- Automotive
- Banking & Financial
- Chemicals & Petroleum
- Consumer Products
- Electronics
- Energy & Utilities
- Government
- Healthcare / Life Sciences
- Insurance
- Mobile and Smarter Process
- Network Cloud, 3G & Edge
- Project Management
- Enterprise Architecture
- Oracle
- Retail
- Risk, Fraud and Finance
- SAP
- Smarter Analytics
- Smarter Commerce
- Social & People
- Strategy & Transformation
- Technology and Data
- Telco, Media & Entertainment
- Travel & Transportation

160K+
Technology and Industry consultants

61,000+
Multi cloud Practitioners

75+
Languages available to serve clients across 100 countries

CMMI Level 5
one of a few at the enterprise level

54%
Practitioners with Industry Badges across 12 industries

425K hrs
Training in cloud technologies in 2024

Certified Practitioner Mix across Multicloud Platforms

Premier Consulting Partner

- Top 2 Ranked GSI
- 24,000+ Certifications
- GSI Partner of the Year (Japan, UKI, Nordics)

Gold Partner

- Top 5 Ranked GSI
- 37,000+ Azure Certifications
- 2024 Americas Partner of the Year

Premier Partner

- 3,600+ Certifications
- Google designates Red Hat as Platform Partner of Year 2023

World's largest practice

- 3000+ Certifications
- Multiple certified solutions and assets

IBM Cloud for Regulated Industries

- 8000+ Certifications
- Kubernetes, P-series, Middleware specialization

Leadership in GenAI

- 65,000+ certifications
- IBM (watsonX), Azure, AWS, Google

IBM and Microsoft enjoy a great partnership for decades



The IBM-Microsoft partnership is grounded in a shared vision, with all of IBM's Hybrid Cloud and AI strategy integrated with the entire Microsoft cloud, for the benefit of our clients.

39,000+

Certifications in IBM Consulting

Investing in market leading capabilities

Acquisition of Neudesic, Nordcloud and Taos to strengthen our cloud-native and managed services capabilities.

Delivering end-to-end transformation

Combining deep industry experience, with IBM's Hybrid Cloud and AI strategy, to deliver transformational client experiences.

Accelerating adoption

Modernize@Scale by automating and accelerating the move to cloud as well as the adoption of AI, analytics, and machine learning at scale, to deliver insights to your business and to your customers.

Awards and Distinctions

- 2023 U.S. Partner of the Year Winner for GSI Growth Champion
- 2023 World-Wide Finalist for the GSI Growth Champion
- 2023 U.S. Finalist in Government for the Connect 360 Solution
- 2023 World-Wide Finalist as the GSI Growth Champion
- 2023 Japan Partner of the Year in Manufacturing
- Azure Expert Managed Services Provider (AE MSP) status
- SAP on Azure Advanced Specialization
- Microsoft Advanced Specialization "Analytics on Azure"
- Partner of the Year Award (India) for Digital Transformation

Co-creation

- AI@Scale for Azure—Accelerate adoption of AI on Azure to build, deploy, and manage analytics and machine learning models at scale
- Data modernization for Azure—Radically accelerate the move of on-premise or the build of data and analytics estates to Azure
- Azure Red Hat OpenShift (ARO) Fully managed Red Hat service on Microsoft Azure to run containers in the cloud. Jointly engineered, managed, and supported
- SAP on Azure—Accelerating the move to Azure cloud for SAP workloads is a top priority
- Dynamics—Accelerate delivery and speed to solution with Dynamics

IBM Supporting Government

We help government organisations in the UK and worldwide deliver and transform essential public services – our teams are passionate and proud about helping you to make a real difference to people's lives.

The problems we solve for clients are complex and cannot be satisfied with technology alone. They require a partner that can also offer deep industry expertise and a relationship of trust.

IBM combines the portfolio, people and sense of purpose necessary to meet today's enterprise demands. Every day, we support and manage complex delivery for government clients where the impact of delivery has wide-reaching impact on citizens and national services.

We bring access to the industry experience, insight and technology capability to deliver and operate secure, scalable, optimised and available services for government. We support you by bringing:

- **Industry expertise** – Professionals who understand and are passionate about delivering quality public services and can bring industry insights and apply innovation to your business processes
- **Trust and security capabilities** – Protecting valuable data and insights and deploying new innovations responsibly
- **Innovative technology** – Expertise in areas such as AI, blockchain, 5G, Automation, IoT, cybersecurity and quantum, delivered in a Hybrid Cloud environment
- **Experienced Services professionals** to support strategy, innovation and deliver transformation and change to processes, applications, and cloud infrastructure
- **Global alliances** – valuable partnerships with the world's leading vendors

Government Services Supported by IBM



Defence and Intelligence



Public Safety and Policing



Healthcare



Life Sciences



Tax and Revenue Management



National Infrastructure



Social Care



Education



Works and Pensions

