

# Cloud Modernization and Transformation Services

Accelerating and future-proofing IT  
modernization through strategic use of cloud

**CGI**



Today's organizations require agility and innovation to deliver seamless digital experiences—anytime, anywhere. Cloud solutions are essential enablers of agile operating models that adapt to constant change. While cloud technology has matured, many organizations are not yet harnessing its full transformational potential. Years into modernization efforts, challenges range from inflexible cloud strategies, overly simplistic modernization efforts, and immature cloud-native practices, to sprawling, poorly governed and integrated SaaS solutions and governance and operational models not designed for the velocity and connectedness of the cloud age. Overcoming these challenges is key to becoming an adaptive, resilient and sustainable enterprise.

How will you harness the cloud more strategically to enable your adaptive, resilient and sustainable enterprise?

# Building a future-fit technology foundation for your adaptive enterprise

Cloud is the “new normal” for how we work and an essential enabler of agile operating models that adapt continuously to constant change.

Some say cloud is the new operating model, especially in a digital world of anywhere operations.

Over nearly two decades, cloud services have become mass-adopted and pervasive. Cloud service providers—ranging from AI start-ups to independent software vendors to hyper-scalers—continue to innovate new services at a breakneck pace. The combination of cloud and other technologies, such as Internet of Things, advanced analytics, artificial intelligence, automation, 5G and edge computing, form the key ingredients of modern digital business solutions.

Today’s enterprise cloud challenges often stem from inflexible cloud strategies, overly simplistic modernization efforts, immature cloud-native practices, poorly governed and integrated yet sprawling SaaS solutions, and governance, management and operational models that were not designed for the velocity, connectedness and dynamism of the cloud age.

By now it’s clear—IT modernization requires continuous evolution to enable more adaptive, resilient and sustainable enterprises. Strategic use of the cloud is a key pillar of this transformation.

## Top 3

IT priority is modernizing applications and IT environments.  
(Source: 2021 CGI Voice of Our Clients)

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## 3<sup>rd</sup>

highest innovation priority is investing in IT agility in the coming 3 years.  
(Source: 2021 CGI Voice of Our Clients)

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## 3 in 4

enterprises do not have a purpose-fit cloud strategy.  
(Source: Gartner®)

# Transforming to an adaptive, resilient, sustainable enterprise

Despite the central role of cloud in IT modernization, digital leaders source less and less for cloud services, preferring instead to use strategic partners who can co-create, deliver and manage innovation and value across their digital value chain. Our approach relies on an end-to-end service portfolio designed to deliver such value. Wherever you are on your modernization journey, we can bring the right combination of cloud services to help you accelerate business outcomes. We work with you to:

- **Future-proof your technology and cloud strategy**, architecture and roadmaps by treating them as ongoing, cross-functional strategic planning processes
- **Accelerate the modernization of your application and data environments**, as well as your critical IT foundations (e.g., API management, container orchestration, cloud security, etc.) with our smart, agile and scalable modernization factory model. We carefully resolve your technical debt along the way.
- **Propel your product and service innovation** with our cloud-native development and DevSecOps factory
- Tackle the daunting task of **modernizing your complex legacy core systems** with our agile SaaS integration and configuration or an agile domain-driven rebuild, while ensuring your business continuity and minimal risk
- **Govern, manage, run and optimize it all, securely and compliantly** using our full-stack site reliability engineering (SRE) and CloudOps / AIOps managed services for multi and hybrid cloud environments
- **Harness cloud to realize your sustainability goals**



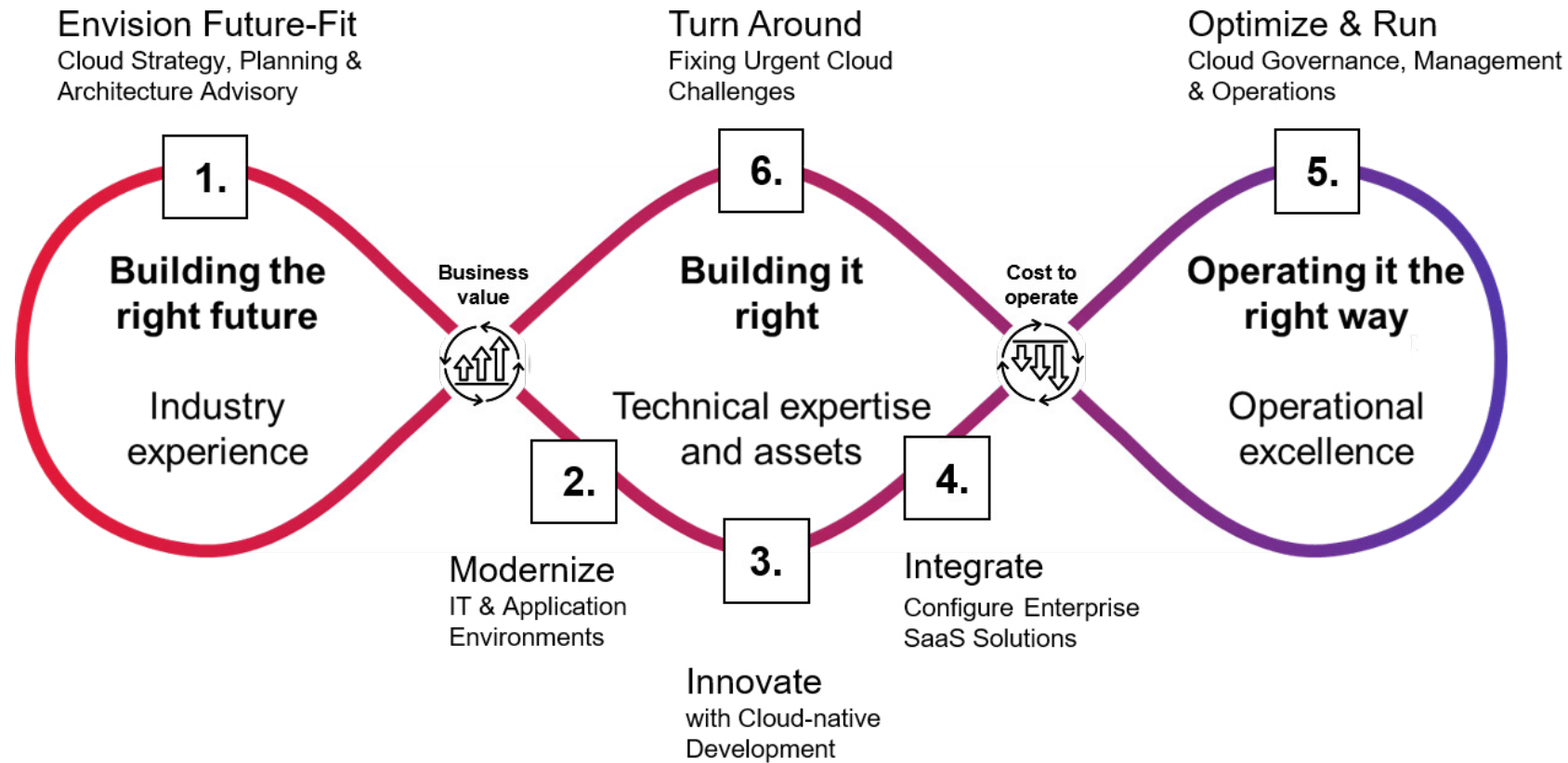
With CGI's end-to-end Cloud Modernization and Transformation services, we help you envision, build, operate and optimize your future-fit agile technology environment to enable your adaptive enterprise, no matter where you are on your cloud journey.

# What success looks like



- You have **effective cloud strategy, architecture and planning processes** that align and evolve with your changing business, technology and operational needs.
- The bulk of your application portfolio, including your core systems, has been **rationalized, streamlined and cloud-modernized**, following composability and event flow architecture principles.
- Your monolithic core applications are **replaced by modern, evergreen SaaS solutions** with smart configuration, minimal customization, and full API integration.
- You benefit from both a cloud-first and SaaS-first modernization approach that delivers **higher user satisfaction, adoption, productivity and innovation**.
- You have mastered the cloud-native software development factory model, with experience in low/no code development, agile DevSecOps and SRE. **Rapid release times and frequency allow for innovation and new functionality at pace and scale** to support your adaptive “sense and respond” operating model.
- You operate sustainably with strong and flexible cloud governance, optimized cloud performance and cost, **AI-powered CloudOps, and confident cloud security and compliance**.

# CGI Cloud Modernization and Transformation Services





## Accelerating transformation towards a model of continuous change while optimizing operations – with six imperatives:

1. Envision your future fit
2. Accelerate smart cloud modernization
3. Innovate cloud-natively at pace
4. Achieve evergreen core functionality with SaaS
5. Continuously adapt and optimize CloudOps
6. Quickly fix urgent cloud challenges

# 1. Cloud Strategy, Planning and Architecture Advisory Services

## Envision your future-fit

- **Cloud Strategy & Business Alignment:** Facilitating how to strategically use cloud to further your key business imperatives with a living strategy and alignment process
- **Cloud Assessments:** Assessing status quo, fit-for-purpose and maturity, including application portfolio, architecture, foundations, API, data, compliance and security, sustainability, governance and operating model
- **Cloud Adoption & Implementation Planning:** Developing clear roadmaps and implementation plans for your prioritized cloud initiatives with a living strategic planning process
- **Technology, Architecture, Platform, Security Advisory:** Advising on cloud innovations, key architecture tenets, platforms, compliance and security
- **Cloud Competence Center Design & Setup:** Advising on design and setup of a Cloud Competence Center – organizational model, operating model, best practices





# Case in point

## Hybrid Cloud Competence Center for a top 20 world bank

CGI is a key partner in a leading bank's digitization program. Under the program, the bank developed a hybrid cloud strategy to use SaaS, PaaS and IaaS services and avoid owning and managing its own infrastructure wherever possible.

Our experts played a key role in planning, implementing and managing the bank's hybrid, multi-cloud platform. Services ranged from architecture design and technology evaluation to establishing a joint Cloud Center of Excellence (CCoE). We worked with the client to stand up all governance around the cloud journey and cloud operation, ensure platform and process compliance, conduct risk assessments and mitigate risks. We also developed the cloud infrastructure, including infrastructure as code scripts for automated provisioning and security controls validation.

The CCoE was setup as a shared operation between bank employees and CGI experts. As the client's maturity increased, they took the lead. We quickly adapted our best practices, frameworks and reusable assets for the full breadth of a modern CCoE, with all documentation easily accessible in an intuitive Wiki.

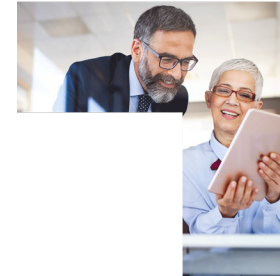
The bank now has a highly secure, reliable and automated enterprise-wide cloud platform for agile innovation, development and production in a DevSecOps model. Additional benefits include: standardization, enforcement of cloud principles and policies, risk mitigation (including exit strategies), upskilling and organizational maturity, and accelerated implementation of new cloud projects.



## 2. IT and Application Cloud Modernization Services

### Accelerate modernization

- **Cloud Foundations:** Establishing modern cloud foundations, including infrastructure (hybrid, distributed, edge, etc.), development platforms, containers, API service mesh, DevSecOps and SRE
- **Cloud Migrations:** Moving your infrastructure, data, applications and accounts, to, from, or in-between clouds—cost effectively, with minimal disruptions and risks
- **Application Portfolio Strategic Modernization:** Modernizing your portfolio strategically (with xR: Retain, Retire, Replace, Rehost, Replatform, Refactor, etc.) at scale with a modern factory approach – beyond cost-driven “lift and shifts”
- **Core Business Systems Modernization:** Domain-driven, systematic rebuilding of your critical monolithic core business systems, including mainframe, with modern composable architecture
- **Data, Analytics & AI Modernization:** Building modern data capabilities, responsible use of data science and AI, driving productivity and experience with intelligent automation



# Case in point

## Cloud-native rebuild of monolithic core systems for a UK energy trading firm

Our client needed to modernize its monolithic core applications. Their vision was to build a modern, scalable, data-driven, cloud-native platform to help the company quickly adapt to evolving market needs. Because the client's technology was proprietary, SaaS was not an option.

Using a blended delivery model involving a client-facing team in London and nearshore CGI teams in Portugal, CGI built a cloud-native software factory with five parallel Scrum and testing teams. At its peak, the factory scaled to 60 members.

In a multi-year initiative, CGI and the client jointly decomposed 10 legacy systems and, following a domain-driven design approach, methodically rebuilt them into composable, micro-services-based,

decoupled cloud-native applications. We configured the factory in Microsoft Azure with automated CI/CD DevOps pipelines, and built the micro-services architecture using .NET core and Docker. Further, we delivered runtime container orchestration using the Azure Kubernetes Service.

The client achieved a future-fit, adaptive and composable cloud-native application built and secured 100% in the Azure public cloud. The company can now develop, test and deploy new functionality rapidly through automated DevOps pipelines, delivering faster speed-to-market and increased responsiveness and business agility.



# 3. Cloud Cloud-native Development Services

## Innovate at pace

- **Experience & Design:** Designing human-centered products, services and experiences, using design thinking sprints and rapid prototyping
- **Dynamic Product Development Sprint:** Building new minimum viable products (MVPs) in the cloud as fast as possible, realizing cloud's full potential by using cloud-native technologies and 12-factor method
- **Cloud-native Platform Set-up:** Implementing, configuring and operating a modern cloud development and run-time platform, on-premises or PaaS, enabling DevSecOps and SRE
- **Lean Agile DevOps @ Scale:** Our Lean Agile DevOps (LADx) pivot framework drives the behavior and high performance needed to deliver high-fidelity, scalable change
- **Cloud-native Software Factory:** Accelerating product and service innovation with a globally scalable and blended software factory – keeping pace with business change



# Case in point

## Cloud-native sprint digitizes and automates COVID-19 information for citizens

When the COVID-19 pandemic first reached a Canadian province, the government's 8-1-1 helpline saw a spike in calls, creating long wait times for constituents to get advice.

In discussing how to manage the call volume, the idea was to develop a digital assistant to triage questions, direct callers to the right services and answer pressing questions in a matter of seconds.

In an agile, human-centered design and development sprint, the team of government and CGI experts developed a digital agent MVP in just 7 days using a public cloud-native platform—Google Dialogflow on Google Cloud Platform. They also

used natural language processing to refine the digital assistant's ability to understand questions and respond appropriately.

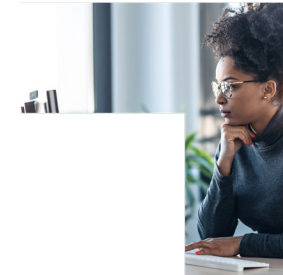
The digitization, rapid migration and staging of critical information has allowed the digital assistant to field hundreds of thousands of data requests, providing immediate responses to inquiries. In the early critical stages of the pandemic, the digital assistant also helped answer healthcare workers' vital questions, including how to best wear and remove personal protective equipment.



# 4. Enterprise SaaS Solution Integration Services

## Evergreen core systems modernization

- **Enterprise SaaS Value Stream Assessment:** Diagnosing pains and opportunities through a value-stream-focus; and envisioning SaaS proofs of concept considering flow, experience, architecture, API integration, data and analytics and security
- **Enterprise SaaS Solution Design & Planning:** Designing human-centered experiences and flows; and developing gap designs, architecture, integration, migration, legacy decommission and agile backlog
- **Enterprise SaaS Agile Commissioning:** Agile sprints implementing the SaaS solution into the enterprise technology, data and analytics, security and operational environment, API integration, data and user migrations
- **Enterprise SaaS Change Management:** Supporting the deployment and go-live, bake-in, scale-up, adoption, and legacy decommissioning with planning, communication, training and user support
- **Enterprise SaaS Managed Services:** Providing service management, systems administration, analytics, ongoing support and maintenance, and continuous improvement



# Case in point

## Enabling a streamlined and integrated customer service experience for an electric equipment manufacturer, with Salesforce Communities

Grappling with siloed services across business units and fragmented sales and support functions, a major North American equipment manufacturer struggled to provide a superior and integrated customer experience to its B2B utilities customers. This fragmentation also resulted in poorly targeted and missed sales opportunities.

The company turned to CGI to modernize their support portal and integrate Salesforce Communities to create an integrated state-of-the-art sales and support customer experience. Our human-centered

design experts teamed up with our Salesforce experts to deliver a modern customer experience in record time, leveraging our agile enterprise SaaS integration methodology.

Customers can now log cases, search a knowledge base for increased self-service, and submit ideas for product enhancements. The manufacturer also can track customers' current assets and asset history to make more informed selling decisions.



# 5. Cloud Governance, Management and Operations

## Continuously adapt and optimize your cloud operations

- **Cloud Optimization & FinOps:** Continuously improving your governance, management and usage of cloud services for cost, efficiency, quality, scale, sustainability and optimization
- **Cloud Compliance & Security:** Protecting identities, privacy, data, workloads and networks across multi-cloud environments in zero-trust settings, with advisory, SecOps and managed services
- **Cloud Management Services with AIOps:** Providing operational excellence with dynamic CloudOps, AIOps and DevOps (vs. static ITOps) that are data-driven, AI-powered, automated and full-stack
- **Cloud Management Accelerators & Solutions:** Deploying and tuning CGI, cloud-native and third-party tooling and accelerators for CloudOps and AIOps; enabling continuous integration/continuous delivery (CI/CD), DevSecOps and SRE
- **Cloud Competence Center:** Developing and seeding critical cloud capabilities enterprise-wide, including: skills, architecture, cloud platform expertise, best practices, technology guidance and adoption





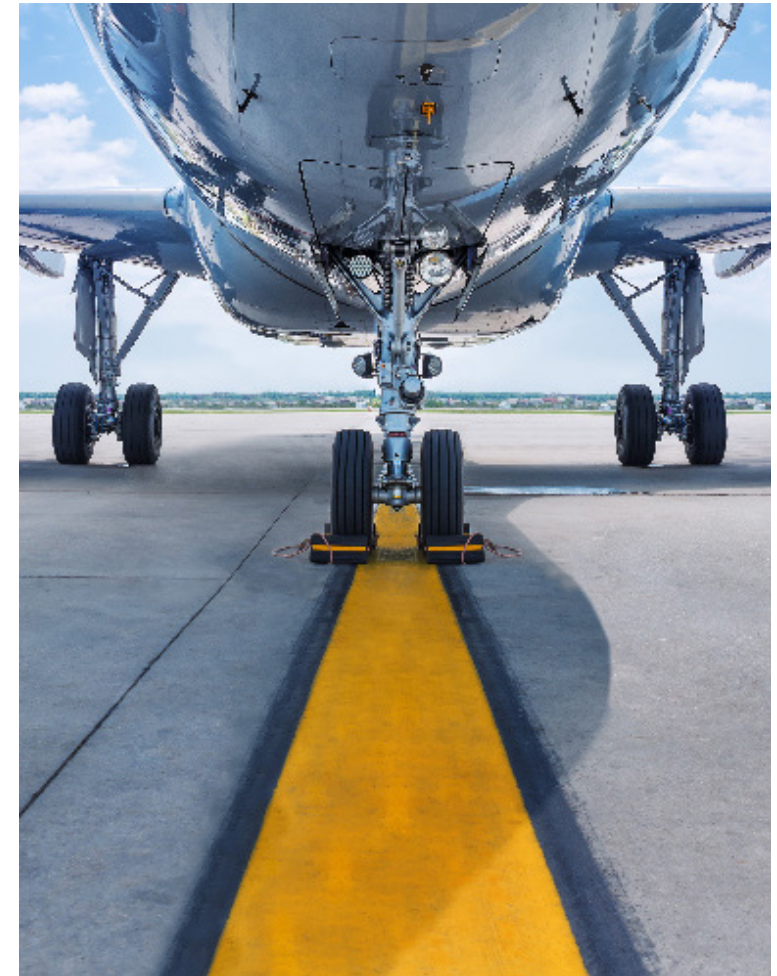
# Case in point

## Accelerating business transformation for a global airline through optimized hybrid IT and cloud operations

One of the world's largest airlines wanted to reduce costs, increase agility and business value delivered, and accelerate their business transformation. CGI helped the client advance their transformation goals by improving application and infrastructure management and cloud operations for the entire airline group across several countries and multiple subsidiaries.

Our experts designed, ramped up and operate the client's Microsoft Azure environment. We

deliver 24/7 hybrid IT operations through a blended global delivery model with onsite accountability. In addition to realizing the desired cost optimizations, the client's scalable and flexible cloud environments are complemented by CGI's scalable talent and resource availability for transformation initiatives.



# 6. Cloud Intervention and Turn-around Services

## Quickly fix urgent cloud challenges

- **Quick Look Assessment:** Situation-specific cloud intervention team conducting assessment to discover, diagnose and frame the cloud emergency and context
- **Corrective Action Plan:** Intervention team, jointly with key affected internal and external constituents, developing decisive corrective course of action
- **Rapid Turn-around Execution:** Assisting with the rapid execution of corrective actions and organizational change management



# Case in point

## With a rapid intervention, a Canadian Energy Company reasserts control over their public cloud estate

Through organic growth, a Canadian utility had built up more than 30 cloud subscriptions and 1,000 cloud users. Their leadership felt a lack of control in monitoring and managing this sprawling cloud estate and governing its use and evolution. The situation had become untenable, with unacceptable risk.

CGI fielded an intervention team of seasoned cloud experts and joined the utility in an initial two-week assessment. Together, we quickly diagnosed the root cause as the lack of effective cloud governance. In a series of joint workshops, we devised a two-pronged course of action:

- Joint design of a best-practices cloud governance structure with clear policies, rules, roles and responsibilities
- Rapid “clean-up” operation in close collaboration with current subscription owners

During a five-week period, we worked with all subscription owners to validate, rationalize and clean up their subscriptions. This included removing, renaming and remapping subscriptions, validating users with the active directory, removing users, and even shifting cloud workloads to the proper subscriptions.

In parallel, we helped establish the new, best-practice governance function, transferring knowledge so the client took over the function at the end of the five weeks.

In less than two months, an out-of-control, untenable situation turned around. The client felt confident in their newly baselined cloud estate, as well as its future strategic use.



# We combine industry, regulatory, technology and operations expertise to provide operational excellence

When it comes to using cloud strategically to become an adaptive, resilient and sustainable enterprise, our broad experience and end-to-end services will help you future-proof and accelerate your journey.

We combine local and global industry, market and regulatory knowledge with a deep understanding of technology trends and a track record of envisioning, building, testing and operating mission-critical solutions for our clients' most complex challenges. We are an unbiased, trusted advisor with a strong ecosystem of innovation partners, including key cloud service providers. We leverage:

- **Digital industry blueprints** to help you stay abreast of strategic shifts
- Global **emerging technology practice** that continuously scans the technology landscape to provide salient advice
- 12 **Innovation Labs** where we experiment with new technologies to solve your business challenges
- **Global cloud practice of 7,000+** strategists, architects, developers and operators to support your cloud journey
- **Global architecture practice with 1,500** certified architects and our Responsive, Collaborative Approach to Digital Architecture (RCDA)
- Advisory role for cloud regulatory and security frameworks in Europe and North America
- **Experience migrating 60+ data centers and 250,000 users** to the cloud while modernizing thousands of applications
- **CGI Management Foundation** to drive operational excellence for the new realities of CloudOps and cloud security

When it comes to modernizing your technology and operations with strategic use of the cloud, we are the partner of choice for our clients around the world. Let us help you chart, build and operate your IT modernization future with our broad cloud services and expertise.

**We stand ready to help you accelerate and future proof your cloud modernization journey**

With end-to-end services including: strategy, architecture, and planning; modernization of applications and core systems; cloud-native innovation, SaaS integration, data and IT foundations; and dynamic CloudOps and AIOps operations and optimizations.

Contact us at [info@cgi.com](mailto:info@cgi.com) or learn more at [cgi.com/cloud](https://cgi.com/cloud).



# About CGI

## Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 80,000 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

For more information,

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<sup>1</sup>Gartner® “Infographic: Cloud Strategy Cookbook,” David Smith, Milind Govekar, 4 May 2021

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