

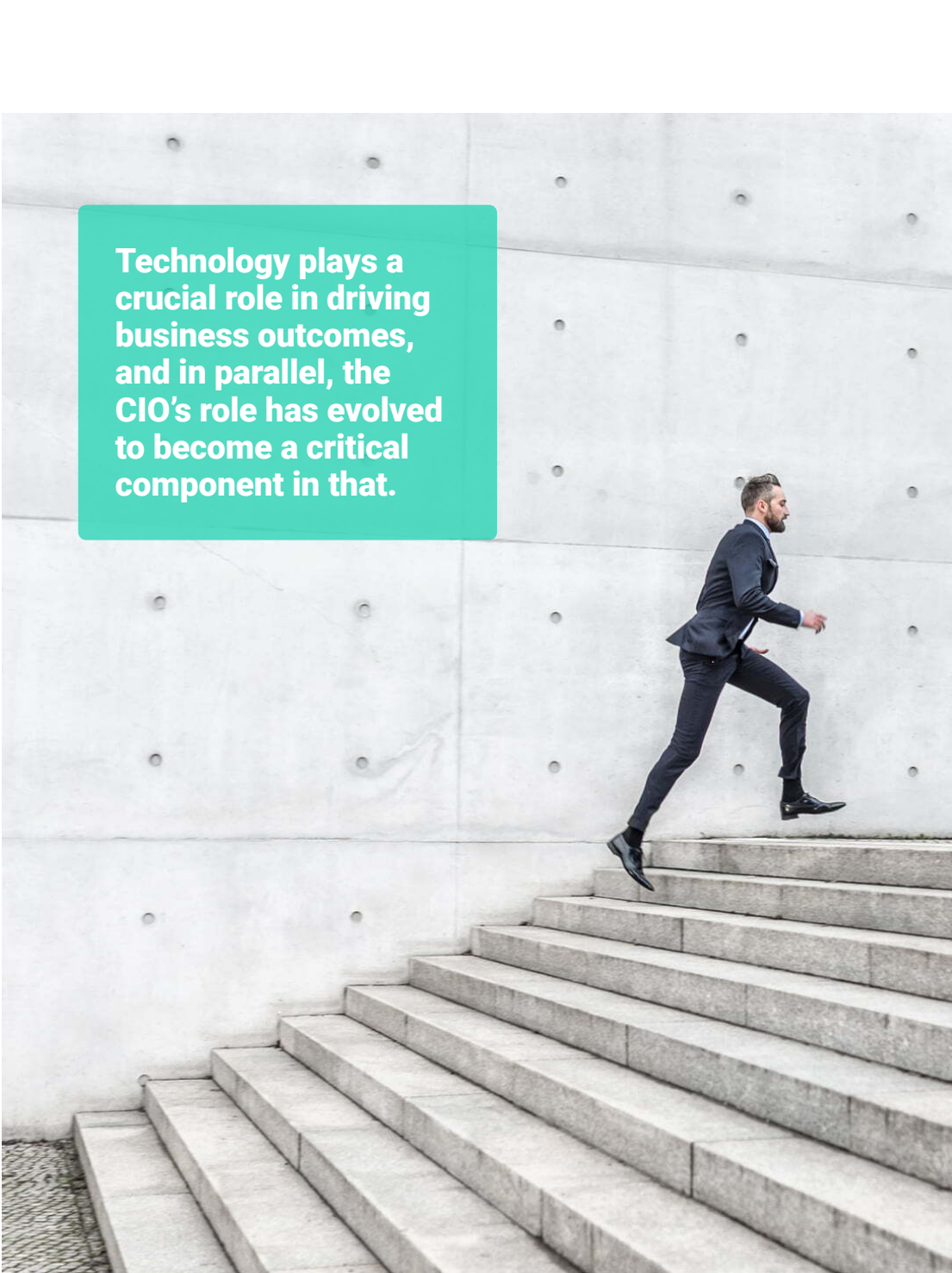


The CIO's guide to Hybrid Cloud

How to leverage technology to drive revenue and provide greater business value



**The role of the CIO is
constantly evolving**



Technology plays a crucial role in driving business outcomes, and in parallel, the CIO's role has evolved to become a critical component in that.

Previously seen as the gatekeeper of ICT infrastructure, as a CIO today you're very much now the enabler. A revenue generator, driving business strategy and overseeing vast and increasingly innovative and complex ICT estates.

Transformation has accelerated even faster in recent times, with organizations forced to react to the challenges of a major global pandemic. Business operations and even entire models have been questioned and altered, in what for some has been an attempt to remain viable. The push towards utilizing cloud platforms to transform and meet both customer and end-user demands has never been so apparent.

This all adds to the pressure. As well as innovating and demonstrating strong business acumen among your stakeholders, you're expected to keep costs under control, while also maintaining an ICT infrastructure that meets business demands.

To answer these challenges and stay ahead of the curve, hybrid cloud comprising of a mix of on-premises, private cloud and, public cloud services with seamless, coordinated, and automated tasks between the various platforms is gaining popularity. When the enterprise's very own on-premises infrastructure and assets are coupled with cloud we arrive at hybrid IT. And the statistics don't lie. Nearly two-thirds (61%) of organizations have hybrid cloud either in production or at the proof-of-concept stage.



**The big 5 business
roles CIOs need to fill**

CIOs today must step out of their traditional role as the custodians of IT and actively journey through emerging technologies to drive revenue and provide more business value than ever before.

Here are the top five roles you'll likely identify with to take your business forward on your transformation journey and beyond:

1. Accelerator

The challenge: Doing things faster, better and more cost-effectively has never been so critical, as customers and your employees demand more. IT can no longer afford to just be an operational cog in the business wheel.

The hybrid opportunity: Hybrid cloud provides a way to accelerate your business. Speed up processes, encourage collaboration, and provide cost-effective solutions to free up IT budget for innovative, revenue-generating projects with technology at the heart.

2. Cost controller

The challenge: Previously, the IT budget was taken up by maintenance and integration. Large on-premises infrastructure needed to be looked after, and that's not to mention the significant resource required internally to help manage it.

The hybrid opportunity: Hybrid cloud provides a way for you to reduce operating and capital costs while improving performance, productivity, and business agility via a flexible, scalable solution.

3. Risk mitigator

The challenge: The traditional on-premises IT environment can be a security nightmare, with so many disparate parts and security protocols.

The hybrid opportunity: With hybrid cloud, you can mitigate risk with a single, unified, cybersecurity solution, guarded over by the cloud vendor. However, remember public cloud configurations still need your complete attention to be secure, and is a growing area of concern in the boardroom.

4. Integrator

The challenge: We live in a data-driven, 24/7 digital world. Every day we create 2.5 quintillion bytes of data and by 2025, 463 exabytes of data will be generated by humans each day.

The hybrid opportunity: To tame this complexity, you need to demand high levels of integration from your service providers. Integrating and consolidating your data sets, to provide a structured platform, enabling insight-led business decision making.

5. Transformer

The challenge: Enterprises are going through digital transformation to varying degrees, particularly in light of the global pandemic and an increased focus on end-user enablement. Transitioning from legacy systems remains a huge challenge. And the journey isn't just about technology. This calls for a significant focus on change management, requiring the consideration of people, processes, and the role of service partners.


The hybrid opportunity: You have an important role to play, given you have a holistic view of the entire business infrastructure and IT estate, helping to define new business models and processes. Ensure your role is seen as an important cog in the change process.

'By moving to a hybrid model, we were able to focus on strategic initiatives while still delivering on current business needs.'

Glenn Vade, Chief Information Officer at Tower Insurance



Overcoming your challenges with Hybrid Cloud



As an innovative CIO, you have an opportunity to bring together cloud, new on-premises IT and legacy environments to deliver a compelling value proposition for your business, exceeding on performance and flexibility.

Why? Because Hybrid Cloud directly addresses some of the challenges facing you today.

- Hybrid Cloud enables you to run non-cloud corporate infrastructures alongside public cloud and run a full migration path to the cloud. This is far more cost-effective than having to re-architecture systems.
- Mixing public and private cloud enterprises can leverage the best of both worlds; cost-effective public cloud for non-sensitive data and private cloud for sensitive, business-critical information. Cloud can also be leveraged to achieve higher levels of security and compliance around sensitive data, which is a big opportunity driven by the General Data Protection Regulation (GDPR), and other data protection regulations across the globe.
- Hybrid cloud is an extremely powerful and economical way of delivering IT services against traditional on-premises.
- Rather than replacing legacy systems, hybrid Cloud can bridge the gap between legacy and new, providing major cost savings.
- Hybrid Cloud also delivers on innovation, which creates higher value returns in the long run.
- A hybrid environment isn't just about delivering cost savings. It's about shifting an entire way of working to become more agile, efficient, productive, and in many ways, compliant.

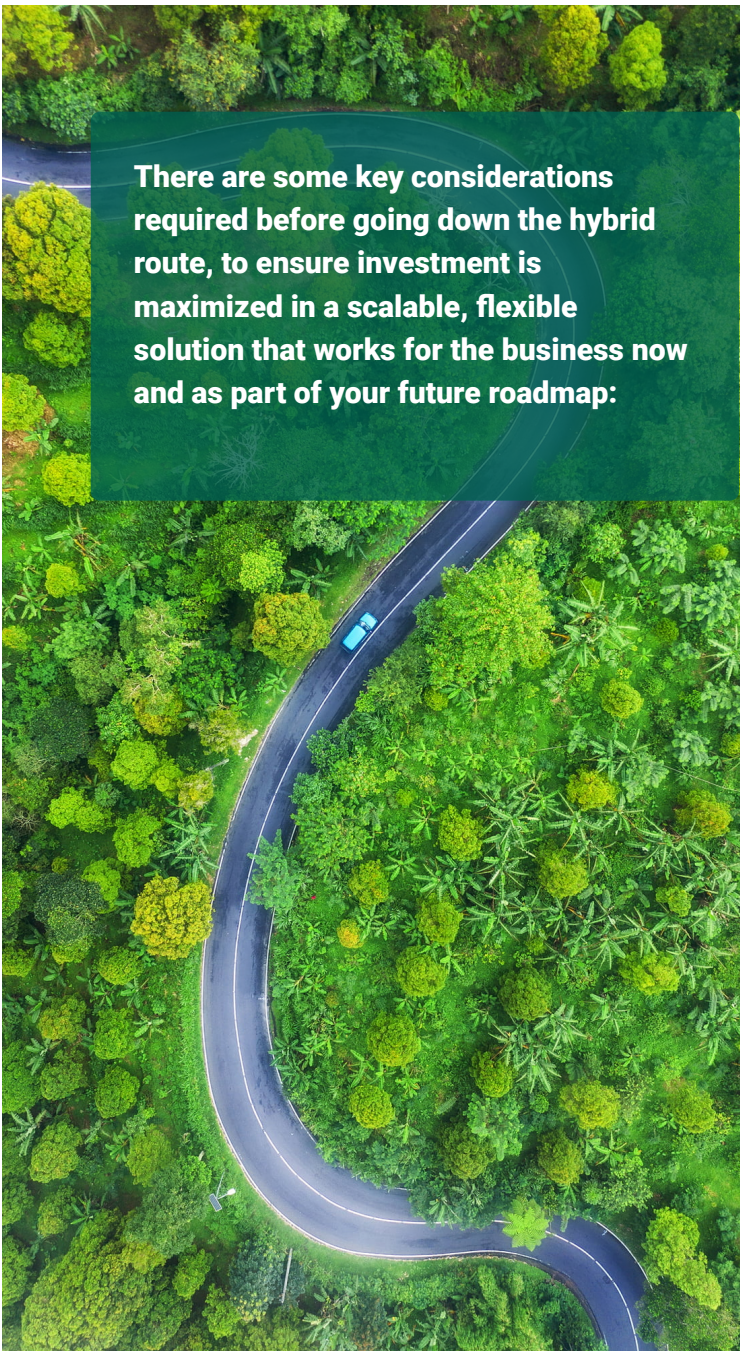
'After years of growth in cloud services, organizations are realizing that they must manage a hybrid of cloud and traditional infrastructure services for the indefinite future. Sourcing managers can use this research to select which infrastructure services to invest in and which to retire.'

The hybrid cloud market is expected to grow from USD 44.6 billion in 2018 to USD 97.6 billion by 2023, at a Compound Annual Growth Rate (CAGR) of 17.0% during the forecast period.

Source: [Markets and Markets](#)

Key considerations for adopting hybrid cloud





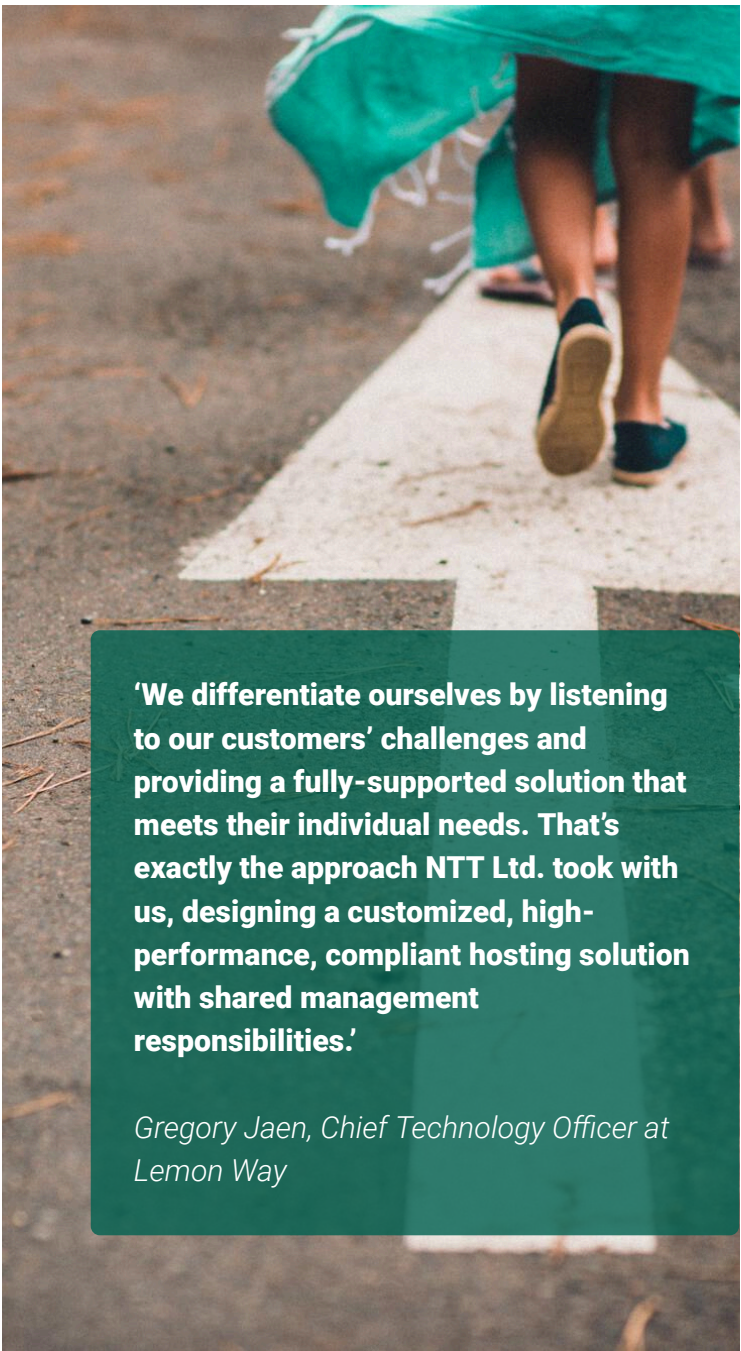
There are some key considerations required before going down the hybrid route, to ensure investment is maximized in a scalable, flexible solution that works for the business now and as part of your future roadmap:

- Hybrid Cloud offers major benefits, but building, controlling, and sustaining a hybrid infrastructure can be complex. However, market experiences and tools now mean this is more easily achievable than the early adopters found.
- On-premises, hosted, cloud services, IoT and **Bimodal IT**, across multiple providers and networks, are by their very nature a complex mix of legacy systems and new IT that need to be managed and monitored effectively.
- In light of managing multiple environments in your hybrid infrastructure, due consideration should be given to talent management and resourcing. Global IT staffing shortages are well known, so making sure you've got the right talent in the right place doing the right job is crucial to retention. This is where the services of a Managed Services Provider can be extremely useful, taking the load off some of the day to day work, and freeing up your team for value-based tasks.
- **Cloud security** typically tops enterprises' worry lists as cybercriminals become more sophisticated. **The 2020 Global Managed Service Report** found 'reducing security risks' is not only the top challenge organizations deal with, but it's also what they turn to most in terms of help from MSPs. It is vital to carefully address security during hybrid

cloud planning. This should include tools and policies to check back in the event of unauthorized data access, data leakage, or cybersecurity threats. Yet, it's not just external threats that pose a challenge. In fact, public cloud misconfiguration presents a much larger challenge for organizations. According to Gartner, by 2023, 99% of cloud security failures will be the customer's fault. And, 'through 2024, organizations implementing a cloud security posture management (CSPM) offering and extending this into development, will reduce cloud-related security incidents due to misconfiguration by 80% '.

- Latency is a pain point for hybrid Cloud, so ensure infrastructure is architected properly from the onset for a hybrid environment.
- Interoperability can also be a problem, so make sure applications are seamlessly integrated across your hybrid solution. Including automation in your hybrid cloud strategy can reduce risks.
- The issue of data control always comes up when using third-party public cloud services. Take time to understand how your provider looks after data and be safe in the knowledge that you have the same level of control over your cloud data center for example, as you do for data stored on-premises.
- As part of ensuring employees are fully briefed, a change management plan is drawn up and acted upon too. Often

²Gartner – IT Market Clock for Hybrid Infrastructure Services.



'We differentiate ourselves by listening to our customers' challenges and providing a fully-supported solution that meets their individual needs. That's exactly the approach NTT Ltd. took with us, designing a customized, high-performance, compliant hosting solution with shared management responsibilities.'

Gregory Jaen, Chief Technology Officer at Lemon Way

technology is implemented without due regard for how people will interact with it and use it. This is why the CIO has such a broad remit with other C-level stakeholders in delivering technology across the business.

- The complexity of a hybrid cloud environment makes the design and management of the network important as part of any transformation strategy. Optimizing performance across the various clouds and on-premises' infrastructure you're running is a delicate balance; as is ensuring compliance along every step of the way.
- Integrating legacy systems does not need to be any more challenging than moving your other applications into the cloud. Cloud computing has a key role to play running alongside legacy systems. It offers flexibility and scalable capacity during spikes in demand, generating additional value from a legacy infrastructure that is slowly being replaced. Services can be added as and when required, allowing you to manage your move to cloud without over-committing capital expenditure.

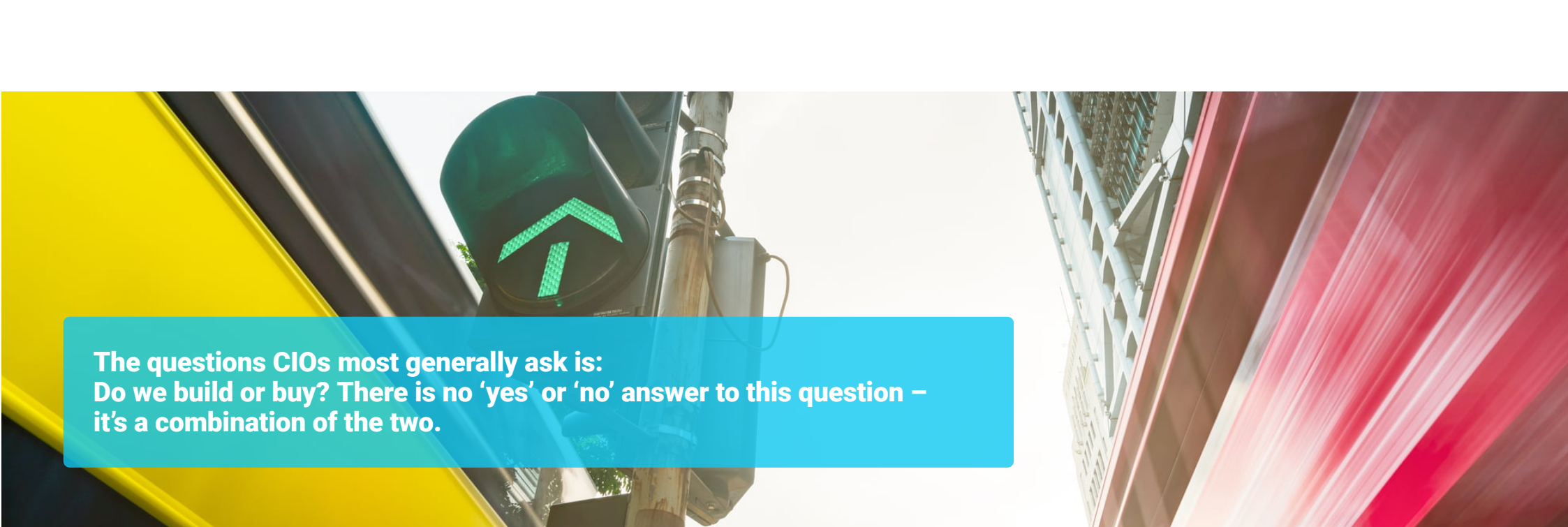
Technology leaders increasingly look to third-party vendors to help them address these challenges – implementing, managing, and delivering a hybrid cloud. Research carried out for our [2020 Global Managed Services report](#) found 73% of organizations already outsource cloud infrastructure to an MSP, which will rise to 77% within 18 months. It is the leading form of technology outsourced to MSPs.

³Neil MacDonald, "Innovation Insight for Cloud Security Posture Management," Gartner.com, January 25, 2019



The big question for CIOs

Buy or build?



**The questions CIOs most generally ask is:
Do we build or buy? There is no 'yes' or 'no' answer to this question –
it's a combination of the two.**

Blending a complete and integrated hybrid cloud solution, with a self-built hybrid cloud procurement and integration process, ensures the solution fits the enterprise's demands.

Bear in mind that although build-your-own offers customization options, it will require intensive resource input and specialized skills from the IT team.

Don't feel compelled to leap off at the deep end; hybrid can be a step-by-step approach. Your service provider should be there to help you through the process. First and foremost, they should understand your required business outcomes, your current infrastructure, and what processes and commercial

framework needs to be put in place to support this and realize your outcomes, all while future-proofing your roadmap.

Looking at performance, cost, accessibility, and security, your provider and IT department can help you work out which applications and workloads work best on or off premises – what works best bespoke, and what should be brought in.

Whichever route you choose in your move to the hybrid cloud consumption model from your traditional applications, you are enhancing your IT operations and making a major step in your journey towards digital transformation.

95% of enterprises identify hybrid cloud as a nearly universal imperative, currently in production, pilot, or plan.

Source: 451 Research NTT Hybrid Cloud Study 2020

⁴Source: IDG Connect



**Managed Service
Providers - taking the
complexity out of
PaaS**

Today, many cloud-native applications take advantage of platform-as-a-service (PaaS) capabilities within tier one technologies from hyperscale cloud providers, such as Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform.

PaaS provides a comfortable environment, enabling developers to build applications on the internet and leverage complex services. PaaS services are hosted in the cloud and users access them through their web browsers (SaaS). PaaS can reduce costs and speed up development, test, and deployment.

However, these PaaS offerings are largely highly complex and feature-rich and require expertise to get maximum optimization. Many IT organizations do not have a sufficiently deep understanding of best practices in cloud-native architecture and DevOps-style operations for these platforms, which if carried out successfully can reduce time to market and cut operating costs. This is where Managed Service Providers (MSPs) come in – beyond giving enterprises the environment they want; it puts a team of experts in place who will maintain infrastructure as it evolves and priorities change.

Leaving the task of platform administration to your MSP enables you to focus on the agile software development process. PaaS delivers a very strong framework on which to build your analytics assets and implement enterprise strategies.

NTT's Cloud PaaS, for example, includes built-in services for rapid development. These embedded services run autonomously.

By using a MSP with the pedigree and expertise of NTT Ltd., enterprises can be sure they're getting best of breed technology to deliver services, utilizing a highly scalable, secure, robust, and resilient infrastructure. This is all backed up by full disaster recovery.

Managed services offer the very best enterprise and carrier-grade solutions available. At the same time, enterprises pay for what they consume, which means there are no unforeseen charges.

The background of the entire image is an aerial, top-down view of a large crowd of people walking on a light-colored, tiled floor. The floor has a grid pattern of small white dots. The people are scattered across the frame, and their shadows are cast on the floor. The overall color palette is a gradient from light beige on the left to a deep blue on the right. The text 'How Managed Service Providers can help you succeed' is centered in the middle of the image in a white, bold, sans-serif font.

How Managed Service Providers can help you succeed



In a bid to get a handle on the bigger picture, transformational CIOs are turning to MSPs for a different type of service – smart sourcing. At its simplest, smart sourcing is an approach to the selection and prioritization of those service providers that go above and beyond the delivery of tactical IT solutions. It's about nurturing long-lasting relationships with providers who can deliver business outcomes aligned to the business goals of the organization.

A smart sourcing relationship ensures the MSP looks after not only the day-to-day management responsibilities and operations but also helps the IT department focus its energy on R&D, new products, and better customer service – all of which can boost the bottom line and speed up innovation.

One of the best places to start your MSP relationship is via consulting. Here you can establish your current 'as is' state and then identify your 'to be' state, producing a roadmap outlining how you will get there.

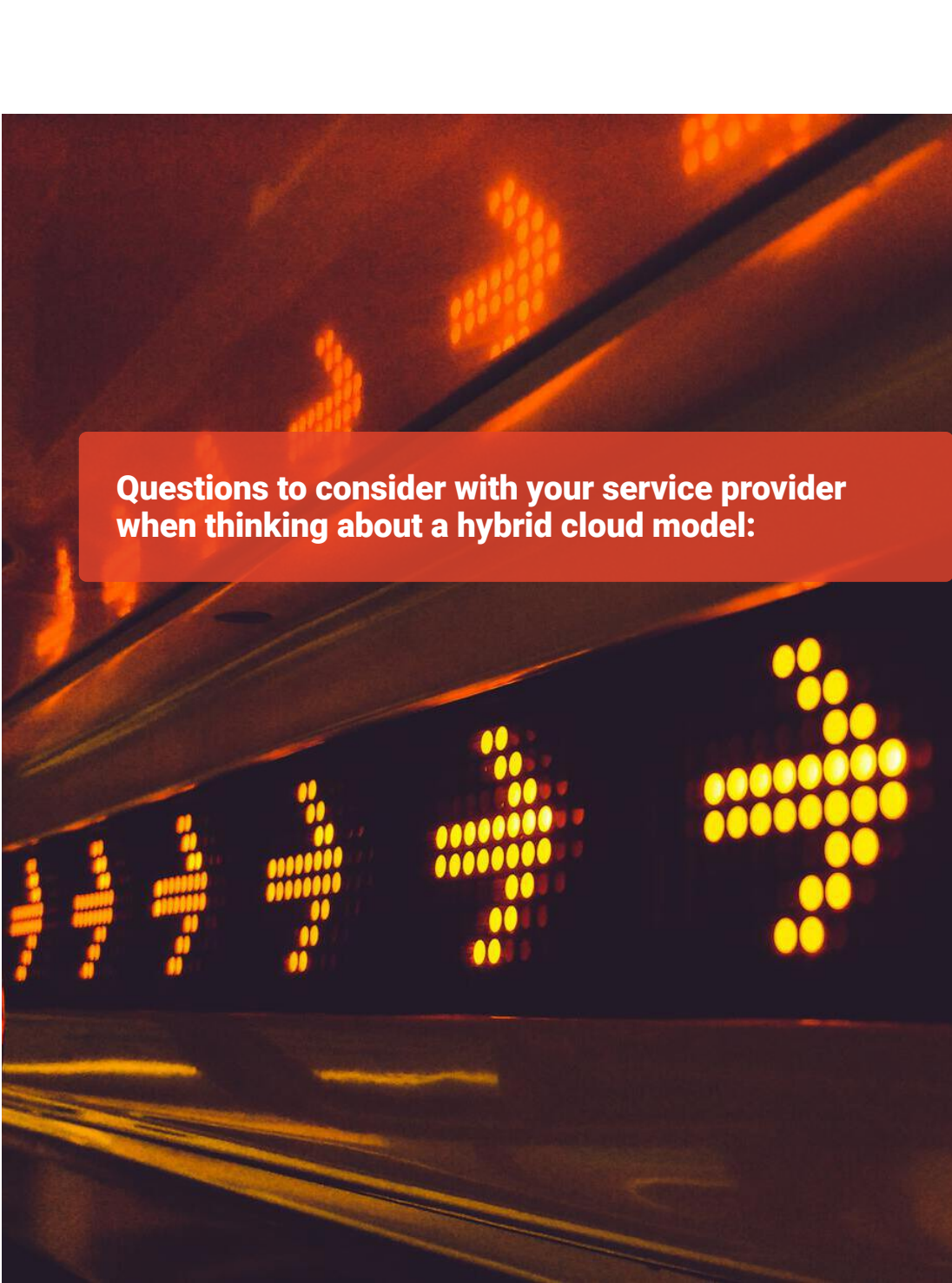
Managed services enable you to tap into external expert resources to bolster or complement existing skill sets in the company, especially for complex IT implementations such as hybrid Cloud. All the while improving the predictability of IT spend, making budget planning easier.

It is no secret cloud technologies are bringing the benefits of business agility, consolidation and cost reduction to enterprises. Server, network, storage, and application virtualization can seem like a maze. Managed services make the way ahead clear. They help ensure the success of cloud deployments and manage difficult and irregular heterogeneous environments that are sometimes an offshoot of virtualization.

Enterprises need to be able to change ICT infrastructure fast enough to keep pace with technology and market evolutions. Hybrid infrastructure models and the right MSP can help you innovate, gain a competitive advantage, achieve your current goals, and deliver on digital transformation.



How your service provider can help



Questions to consider with your service provider when thinking about a hybrid cloud model:

- Do we have the right business culture internally to embrace rapid change?
 - What value will a hybrid infrastructure bring to our business?
 - Will it help our enterprise to lower costs, improve processes and better manage cybersecurity threats?
 - How can our enterprise best manage a hybrid cloud infrastructure?
 - How do we deal with change management in moving to a hybrid cloud infrastructure while maintaining business continuity?
 - Can our enterprise manage a new service model?
 - In which areas do we need outside help and what process do we need to go through to better understand that?
-
- Offers the right tools to truly manage a complex hybrid environment and provide a 360-degree view of your assets and ICT environment.
 - Next-generation automation capabilities with access to comprehensive analytics, service

MSPs provide constant management of all your assets while ensuring that performance is optimized for reliability, security, and compliance, minimizing downtime and helping keep your business ahead of the curve.



An ideal profile for an MSP partner:

- delivery, and process development.
- Cross-technology expertise that leverages strong global partnerships with leading technology vendors.
- The right people who understand your roadmap and business goals and can see where vulnerabilities might appear.
- The ability to pay for what you consume while ensuring your hybrid environment is truly optimized.
- Not only running your daily business, but also taking you forward on your IT transformation journey to deliver business agility.

Financial stability, plus a global footprint of ICT infrastructure and being secure by design.

How NTT Ltd. helps

Whatever combination of people, processes, tools, and platforms you need,
we'll help you turn your IT challenges into business opportunities.

We focus on making sure stakeholders from across the organization are brought together to deliver outcomes that benefit the organization as a whole.

CONTACT US —

Complete the self-assessment

Do your current service provider relationships help you unlock the power of Hybrid Cloud within your organization? We've developed the Managed Services Landscape assessment tool. It will help you get a sense of where you and your provider stand across the three themes identified in the research and what action you might need to take.

TAKE THE SHORT ASSESSMENT HERE

Let us know

**how we can help
you do great things**