CIONET
What's next.

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Inspire the Next

NEXT GENERATION INFRASTRUCTURE

Seven key steps towards a flexible platform for digital business

Summary

Executive summary

CIONET and Hitachi Vantara research highlights how pioneering digital leaders are building the cloud-based foundations now for the digital business of the future.

We are entering a period of unprecedented change. If you think the pace of business and technology change is fast today, wait until you see what's coming next. From data-led innovations to fast-changing customer requirements, digital leaders and their C-level colleagues must be prepared. Get your strategy right now and your business steals a march on its traditional rivals and keeps pace with digital natives. Get your approach wrong and your business risks being left behind forever.

That's the key conclusion from research conducted by CIONET amongst its digital leadership community on behalf of Hitachi Vantara. The recently released research, entitled 'Next Generation Infrastructure: Clouded in Uncertainty', issues a clarion call to CIOs and CTOs, which suggests the starting point for embracing this period of unprecedented change must be the infrastructure upon which their organisation develops new business models.

The traditional IT infrastructure towers of yesterday are unfit for tomorrow's data-rich digital economy. Decade-long arrangements, characterised by rigid outsourcing contracts, must be replaced by flexible cloud relationships that provide a modern platform to support digital business. Rather than virtual private networks and multiprotocol label switching, the research highlights how pioneering digital leaders are creating flexible IT architectures that use software-defined networks, microservices and cloud-based platforms.

The past two years have helped sow the seeds for lasting change. The challenges of the coronavirus pandemic emphasised how the cloud makes it much easier to support rapid changes in business operations and customer services. Right now, some companies are further along their journey to on-demand IT than others. Most organisations are moving towards a hybrid mix of on-premises, private and public cloud. Yet what's increasingly clear across all organisations is that there's no business strategy without a cloud strategy.

Our research suggests that CIOs and CTOs must plot the roadmap towards a next-generation infrastructure. We suggest there are seven key steps that digital leaders can take to help their organisations transition from an old world of legacy technologies and contracts to a new world of flexible services and partnerships.

Let's be clear: making this seven-step journey to a next-generation infrastructure will not be easy. While the move to the cloud continues to quicken, strong ties between enterprises and traditional IT partners remain intransigent. Digital leaders must break these bonds, sunset heritage contracts and build new relationships with technology partners that can help their businesses embrace digital change with confidence.

For those who are successful, the rewards are plentiful – here are the seven steps we believe digital leaders must take during the next decade.
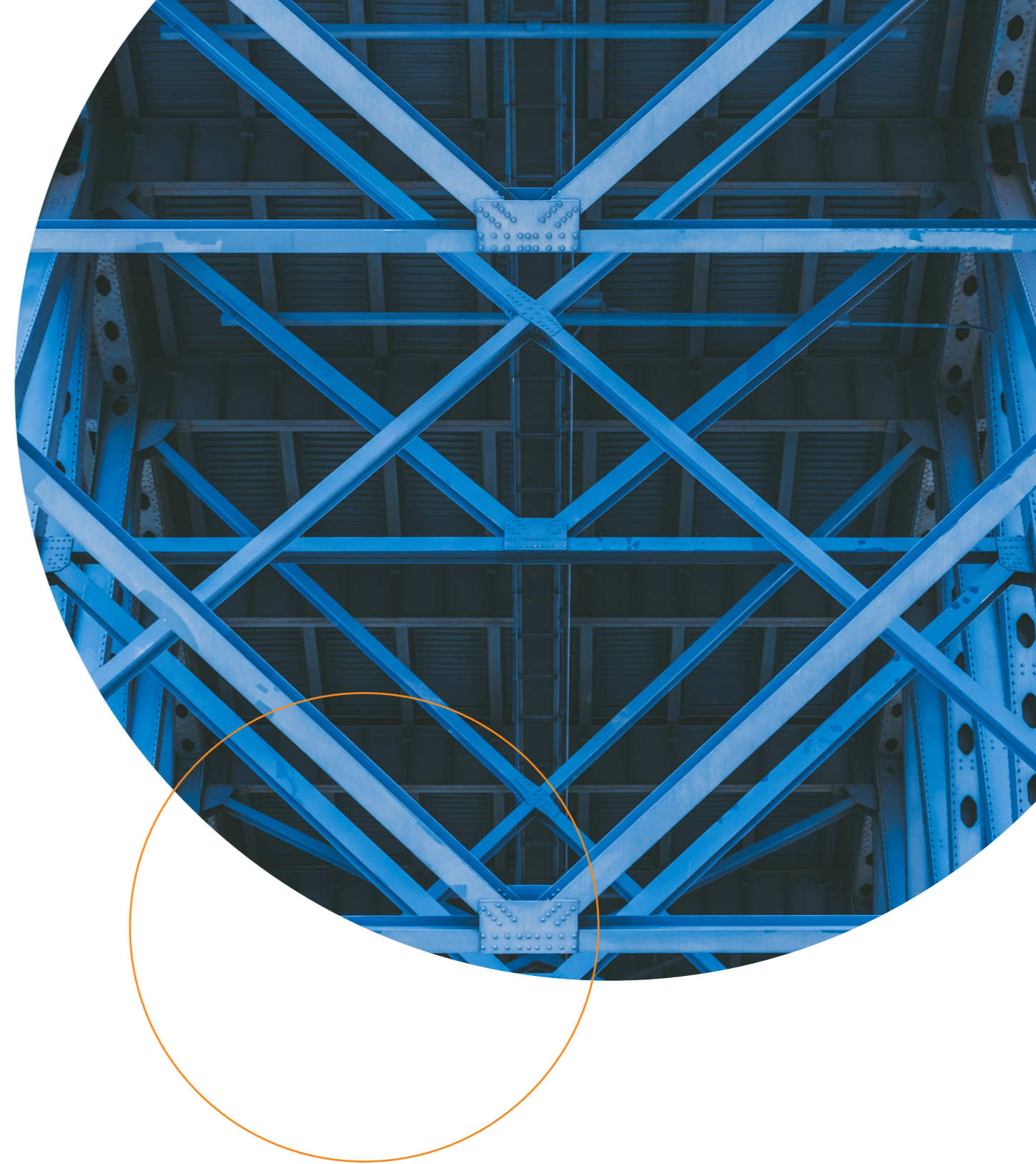
1

Re-imagine: Build modern IT platforms based on new partnerships

Traditional decade-long infrastructure refresh cycles have collapsed. Digital leaders are using the cloud to move away from mega-outsourcing deals and towards two-to-five-year planning horizons for infrastructure upgrades. Our research suggests these modern IT platforms will be used to meet rapid changes in demand during the next decade:

- A digital workforce that combines human and machine-based talent

- Data-driven decision making that streamlines critical processes

- Immersive experiences that favour augmented and virtual realities

- Software-defined business models that are entirely data-centric

- Sustainable technological solutions that reduce carbon emissions

The only way to meet these fast-changing business demands successfully is through partnerships with agile providers that offer flexible, next-generation infrastructures.

2

Re-deploy: Embrace the cloud to satisfy new business demands

Our research suggests up to 60% of workloads could shift to flexible public cloud platforms by 2027. Many of the legacy applications that populate on-premises systems will have been re-deployed to the cloud using Agile methods and DevOps techniques. Our research suggests other trends that will power this shift include:

- Growing demand for high-performance computing to solve complex problems

- Consolidation of corporate data from separate applications to a single data lake

- Emergence of industry clouds that reflect the growing need to share data

As a matter of urgency, CIOs must work with trusted partners, such as Hitachi Vantara, to source the best solutions to the business' ever-increasing compute challenges.

3

Re-think: Prepare for new innovations and IT infrastructure requirements

The pace of technological innovation continues to quicken. Following a first wave of advances around the cloud and the increased use of data, a second wave of innovations, such as 5G, the Internet of Things, artificial intelligence, machine learning, the metaverse and the blockchain, will place further demands on infrastructures. These technologies will power fundamental change in organisational operations, customer demand and business models. Digital and business leaders must create a flexible and sustainable IT infrastructure that can scale with technological advances.

4

Re-connect: Move from older technologies to software-defined networks

Traditional network technologies, such as virtual private networks and multiprotocol label switching, have no role in cloud-based infrastructures. Respondents to our research recognise the pace of change will accelerate further during the next five years. However, the direction of travel is by no means certain. CIOs and CTOs should prepare by building an IT architecture that uses microservices, which are loosely coupled services that are best suited to web environments. Architects of next-generation infrastructures must develop agile solutions, such as software-defined WANs, that can respond flexibly to new requirements.

5

Re-build: Create new architectures to support tomorrow's business models

It's not just IT infrastructure that needs to be refreshed. Too many companies can't compete with digital natives because of their stodgy enterprise architectures. New digital business models require modern IT platforms. The pioneering digital leaders we spoke with have strengthened their internal technology groups and are working closely with trusted partners to identify innovation opportunities. We believe the end point is a unified IT structure, operating within a single enterprise architecture.

6

Re-platform: Adopt a cloud-first approach and exploit microservices

Respondents to our research indicate that a cloud-first strategy will embrace all aspects of IT infrastructure during the next five to 10 years. Next-generation infrastructures will be a combination of public cloud services and software-defined tools that manage service performance and economics. Enterprises will adopt a range of loosely coupled microservices that will allow them to move with agility and flexibility. These nimble businesses will then be able to innovate quickly and compete more effectively with digital natives.

7

Re-start: Plot a roadmap to your next-generation infrastructure

Pioneering digital leaders in our research are already assessing the current state of their IT infrastructures. From this baseline, companies can plot a roadmap to a next-generation infrastructure, including IT architectures, network technologies and strategic partnerships. Digital leaders must work with a trusted specialist such as Hitachi Vantara to complete this journey successfully. By designing and implementing next-generation infrastructures, IT can provide the sustainable foundations on which organisations can evolve and flourish.
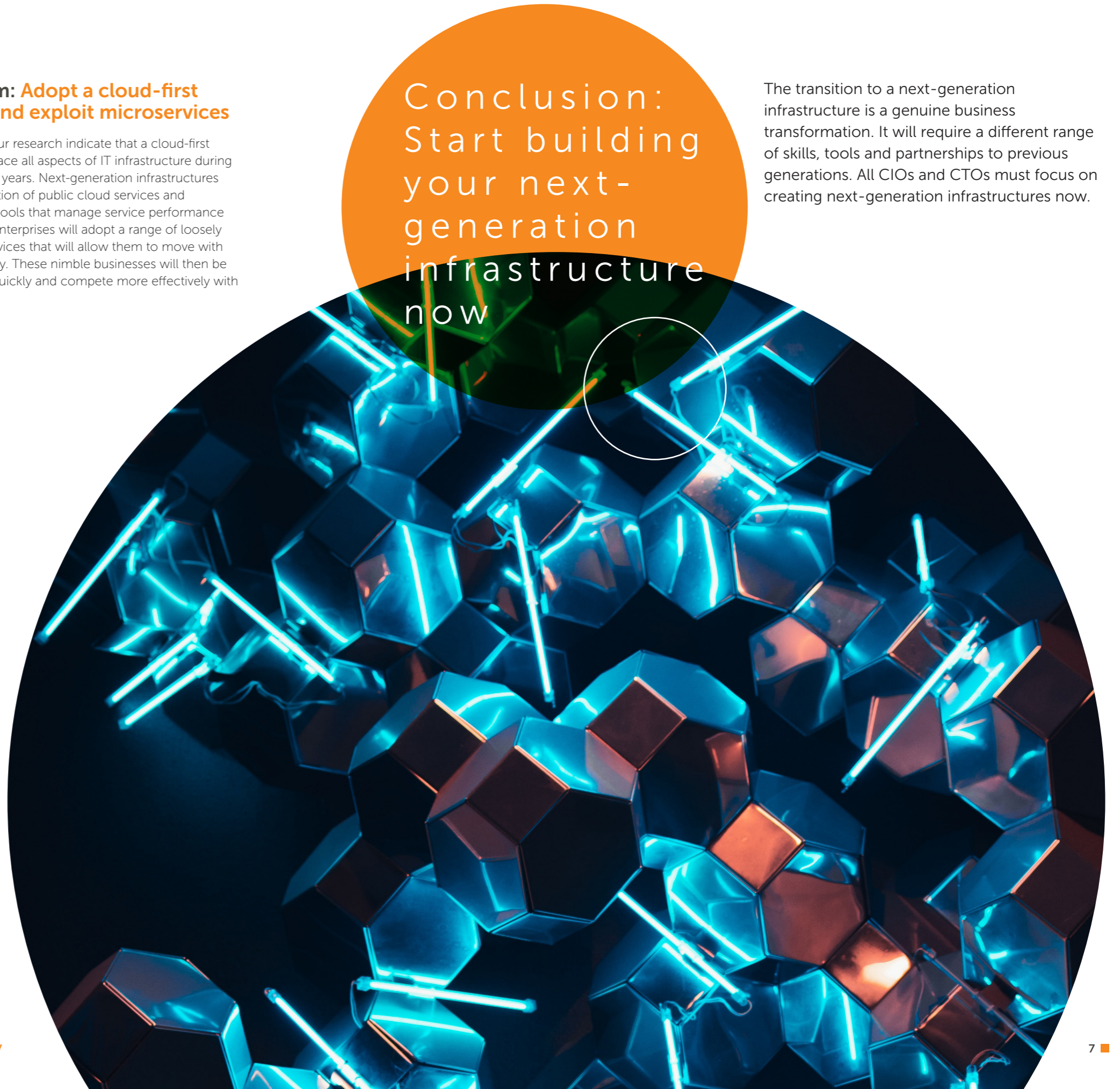
Conclusion: Start building your next-generation infrastructure now

The transition to a next-generation infrastructure is a genuine business transformation. It will require a different range of skills, tools and partnerships to previous generations. All CIOs and CTOs must focus on creating next-generation infrastructures now.

" A tidal wave of new technologies combined with emerging digital business architectures will require a fundamental rethink of infrastructure architectures and associated strategic partnerships. "

Next Generation Infrastructure – Summary

About the author

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Lead researcher

A pioneer of today's Internet as an ARPA research fellow at MIT in the seventies, Roger has spent over forty five years helping corporations harness the power of new technologies such as cloud, mobile communications, e-commerce, voice recognition and satellite. He was a partner at EY responsible for e-commerce during the dot.com boom. He is a graduate of Cambridge University and MIT, and a visiting professor at the University of Surrey.

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About CIONET

CIONET is the leading community of IT executives in Europe and LATAM. With a membership of over 7000 CIOs, CTOs and IT Directors, CIONET has the mission to help IT executives achieve their aspirations. CIONET opens up a universe of new opportunities in IT management by developing, managing and moderating an integrated array of both offline and online tools and services designed to provide real support for IT executives, so they can do more than just keep up with change but ultimately define it.

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