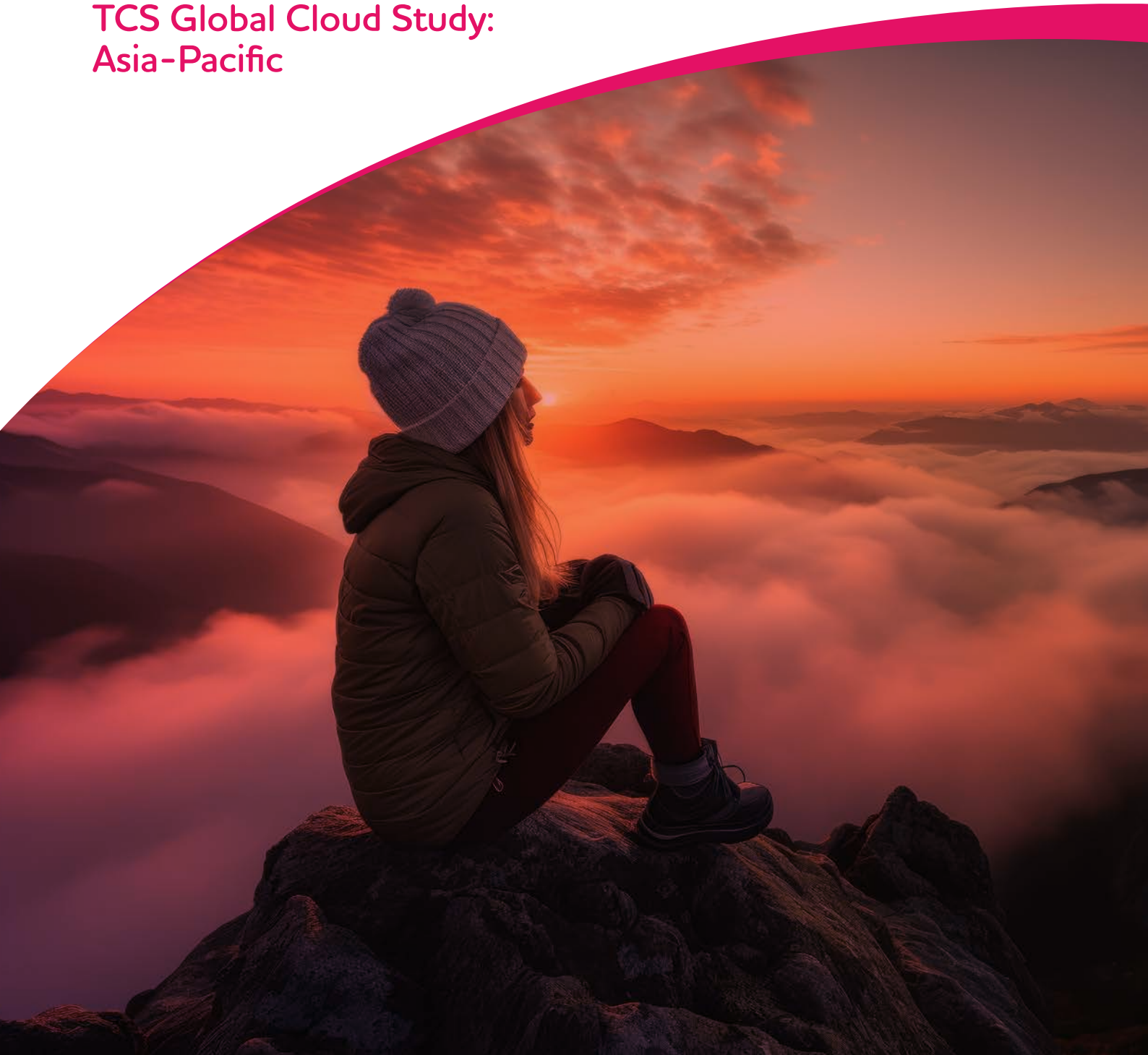


Connected future: How cloud drives business innovation

TCS Global Cloud Study:
Asia-Pacific

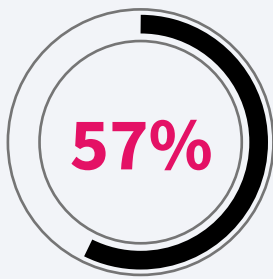


Once viewed primarily as a one-dimensional IT infrastructure, cloud has become both a strategy for business transformation and a catalyst for innovation. It provides the unifying digital fabric that forms the foundation for a connected future – one that continues to unfold with each technological advancement.

The global cloud study from TCS reveals that Asia-Pacific (APAC) companies are moving steadily toward cloud-enabled innovation and embracing its transformative potential.

A future-oriented mindset

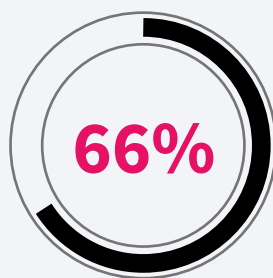
Respondents across all regions acknowledge cloud's role in innovation strategies. The majority of APAC companies view it as an essential component of their future.



of the APAC businesses we surveyed say cloud is crucial to their organization's future as a catalyst for innovation, compared with 68% in North America, 63% in UK&I, and 48% in Continental Europe.

Nor are they narrowly focused solely on their own prospects. Respondents take a broader view of cloud-driven innovation: They see it as a way to build sustainable, inclusive futures for all. All four regions selected "new ways of aligning purpose with business strategies (e.g., sustainability efforts)" as one of the top goals for cloud-enabled innovation.

APAC respondents see sustainability initiatives as another source of cloud's value: Two-thirds cite cloud's success in helping them achieve these goals.



of respondents say cloud technologies have helped their organizations achieve sustainability goals, compared with 75% in UK&I, 73% in NA and 58% in Continental Europe.



63%

report using cloud-enabled data analysis and reporting to track air and water quality management

Investing for the future

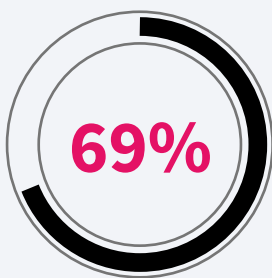
However, the path to purpose-driven business is not without challenges. More than a third say they've hit unexpected technical stumbling blocks with cloud implementations.



38%

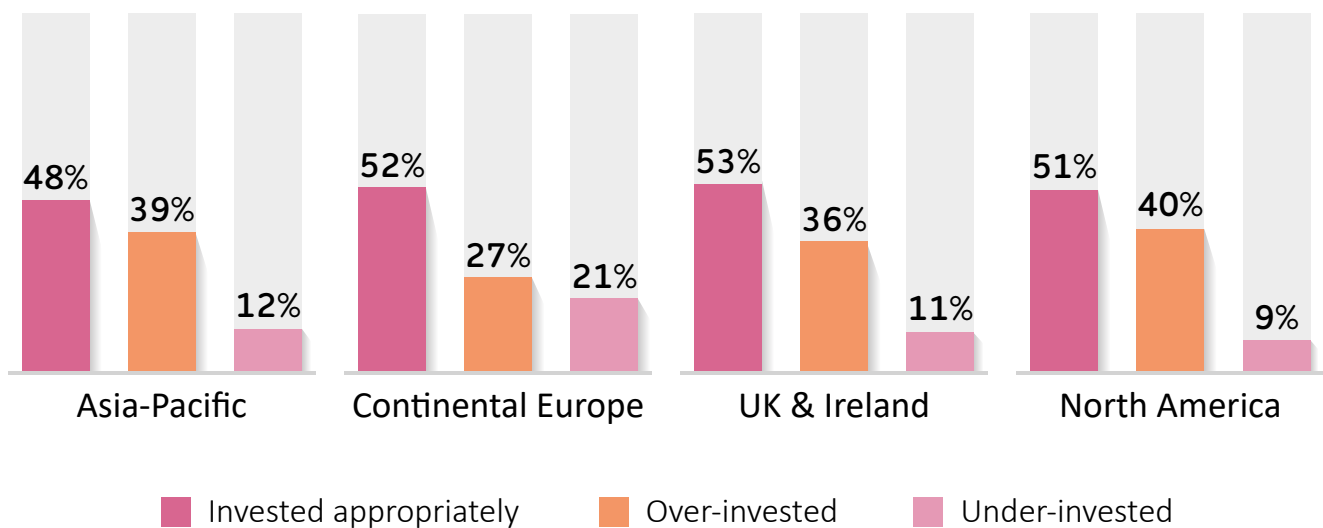
of respondents say cloud implementations have been more challenging or frustrating technically than expected

However, APAC respondents say their commitment to cloud remains strong. More than two-thirds take the long view of cloud investments and intend to push forward toward the realization of them.



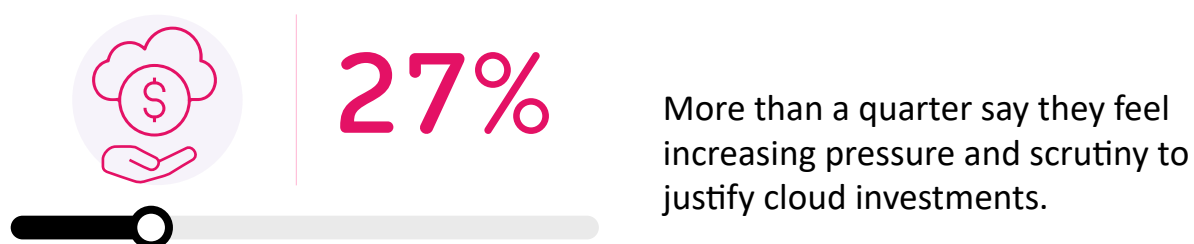
say cloud is a long-term investment and they intend to stay the course, compared with 78% in NA, 60% in UK&I and 63% in Continental Europe.

Yet a sizable number of respondents see room for improvement when it comes to aligning their cloud investments with their requirements. A full 39% say they over-invested in the past three years, though another 12% believe they under-invested.



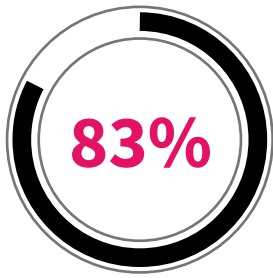
Q. "Thinking back on the past 3 years, how would you describe your company's cloud investments?"

Further, budgets have become more vulnerable to ongoing economic and geopolitical uncertainties, including at APAC companies.



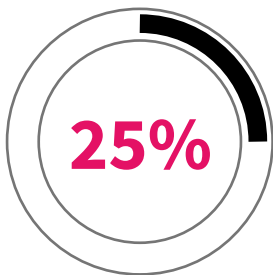
Given how important it will be to invest in the right technologies, many respondents are prioritizing specific areas. Cloud has accelerated and advanced a wave of data-intensive technologies, and there is a clear appetite to take advantage of them. Investments for APAC companies are heavily slanted toward artificial intelligence and machine learning technologies — unsurprising, given the backdrop of renewed urgency fueled by advances in generative AI.





APAC leads the regions in AI/ML investments, with a staggering 83% of APAC respondents reporting they plan to increase investments in AI/ML in the next 1 – 2 years, compared with 72% in Continental Europe, 78% in UK&I and 80% in NA.

While the relentless coverage of artificial intelligence advancements firmly place it in the here- and-now, APAC organizations are also keenly aware of the potential of emerging technologies. A quarter plan to invest in technologies to accelerate metaverse participation.



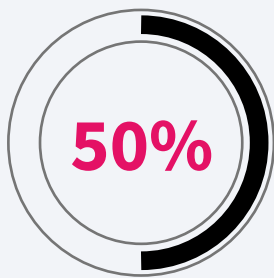
say they plan to increase investments in augmented reality/virtual reality technologies for metaverse participation in the next 1-2 years



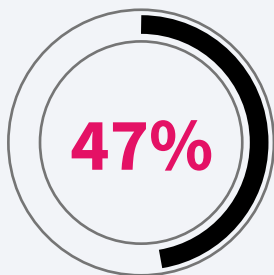
Missed connections

As cloud adoptions have matured, stakeholders outside of the IT department have steadily acquired a deeper role. While there are many technology entry points to cloud, business priorities largely determine which technology to adopt, whether automation, edge computing or others. Connecting business and IT requirements for cloud – and the stakeholders of those – can lead to questions of decision-making and ownership.

APAC organizations are struggling in some ways to integrate business and IT imperatives.



reported skills gaps with clearly defined cloud ownership (C-level, business, IT depts), compared to 38% for NA, 51% for UK&I and 66% for Continental Europe.



reported skills gaps with enterprise-wide cloud strategy based on business objectives, compared to 56% in Continental Europe, 45% in UK&I and 36% in NA.

Unsurprisingly, most respondents see areas that could benefit from changes in the current division of responsibility for decision-making and ownership of cloud transformation. While cloud transformations at their organizations are currently led by IT only or mostly IT roles, the largest proportion of respondents (35%) ideally envision a 50-50 event split between business and IT leaders

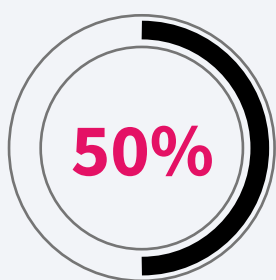
	Roles who currently have the majority of the decision-making and ownership of cloud transformation	Roles that should have the majority of the decision-making and ownership of cloud transformation
IT only (including CIO, senior IT leaders)	23%	15%
Mostly IT, some business	44%	33%
50%-50% even split between business & IT leaders	17%	35%

Not shown: "Business only (including CEO, business unit heads)" and "Mostly business, some IT"

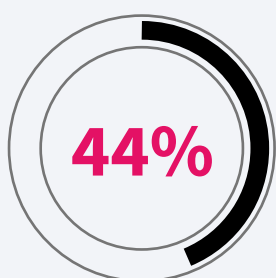
Shortfalls in critical skills & capabilities

When considering cloud transformation as a whole, organizations must first lay the foundation of a strong digital core, with cloud as the unifying digital fabric. With initial modernization efforts underway, organizations can begin unlocking innovation with business processes and models for greater insights and customer experiences. Eventually, organizations begin maturing into a cloud-native environment and participating in transformative partner ecosystems that truly maximize the value of cloud.

At each step, this journey requires deep skills and experience that are not easily won. Thus far, there are multiple areas with significant gaps.

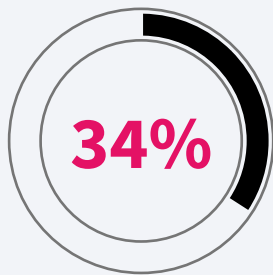


in APAC report proficiency challenges with skills and experience in FinOps, compared with 34% in NA, 50% for UK&I, and 62% for Continental Europe.

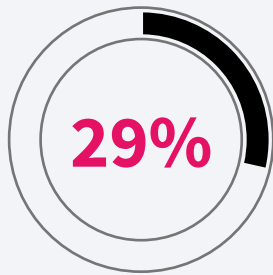


for APAC report proficiency challenges with skills and experience in DevOps, compared with 36% in NA, 53% for UK&I, and 62% for Continental Europe.

These gaps are especially noticeable in areas that are particularly critical: cloud security and data governance.



for APAC say they excel in cloud security and experience no issues, compared with 49% in NA, 40% for UK&I, and 30% for Continental Europe.



in APAC say they excel in data governance and experience no issues, compared with 44% in NA, 27% in UK&I, and 27% in Continental Europe.

But when it comes to the full ecosystem participation indicative of later-stage cloud maturity, APAC, like the other regions, is largely in the initial stages.

	Total	NA	UK&I	Continental Europe	APAC
No plans to participate in ecosystems	15%	17%	17%	15%	13%
Initial stage: Assessing requirements and planning participation in ecosystems	47%	46%	43%	44%	53%
Early stage: Implementing industry, customer or partner ecosystems	19%	17%	28%	23%	16%
Middle stage: Initial participation in industry, customer or partner ecosystems	10%	12%	6%	9%	10%
Late stage: Firmly entrenched and participating in industry, customer and partner ecosystems	9%	9%	6%	9%	9%

Realizing the true promise of cloud-enabled innovation

Our research suggests that many APAC businesses have recognized the crucial role cloud can play in innovation. They have invested in a range of capabilities and technologies to support their organizations' push for cloud-enabled innovation and the connected future it will help bring to fruition. However, they must rapidly address lagging skills and capabilities that could compromise their ability to compete.

To continue moving forward, APAC organizations must prioritize:



Aligning business and IT stakeholders

Ensure all responsibility and decision-making for cloud-enabled innovation rest with both IT and business stakeholders. Connect business and IT requirements for cloud – and the stakeholders of those – to high-level objectives, with a focus on long-term gains.



Continued investing in data-intensive technologies

Cloud technology can fuel the next level of edge computing, AI and the Internet of Things (IoT) to harness the power of these modern technologies for business innovation. As computation and storage get closer to data sources, there is enormous transformative potential for harnessing insights from data across multiple end points.



Achieving and maintaining critical skills

Cloud skills and experience fall short in critical capabilities that could impact growth and transformation. Gaps in data governance and FinOps are of particular concern. This will take a collective, redoubled effort to equip employees with the training and tools needed to thrive in a multi-cloud world.



Accelerating industry cloud adoption

Industry clouds, uniquely tailored for specific sectors with baked-in subject matter expertise and best practices, are rapidly becoming a source of rapid transformation. More than a quarter (27%) of APAC organizations have already adopted industry cloud solutions or are currently doing so, and 42% say they are assessing requirements.

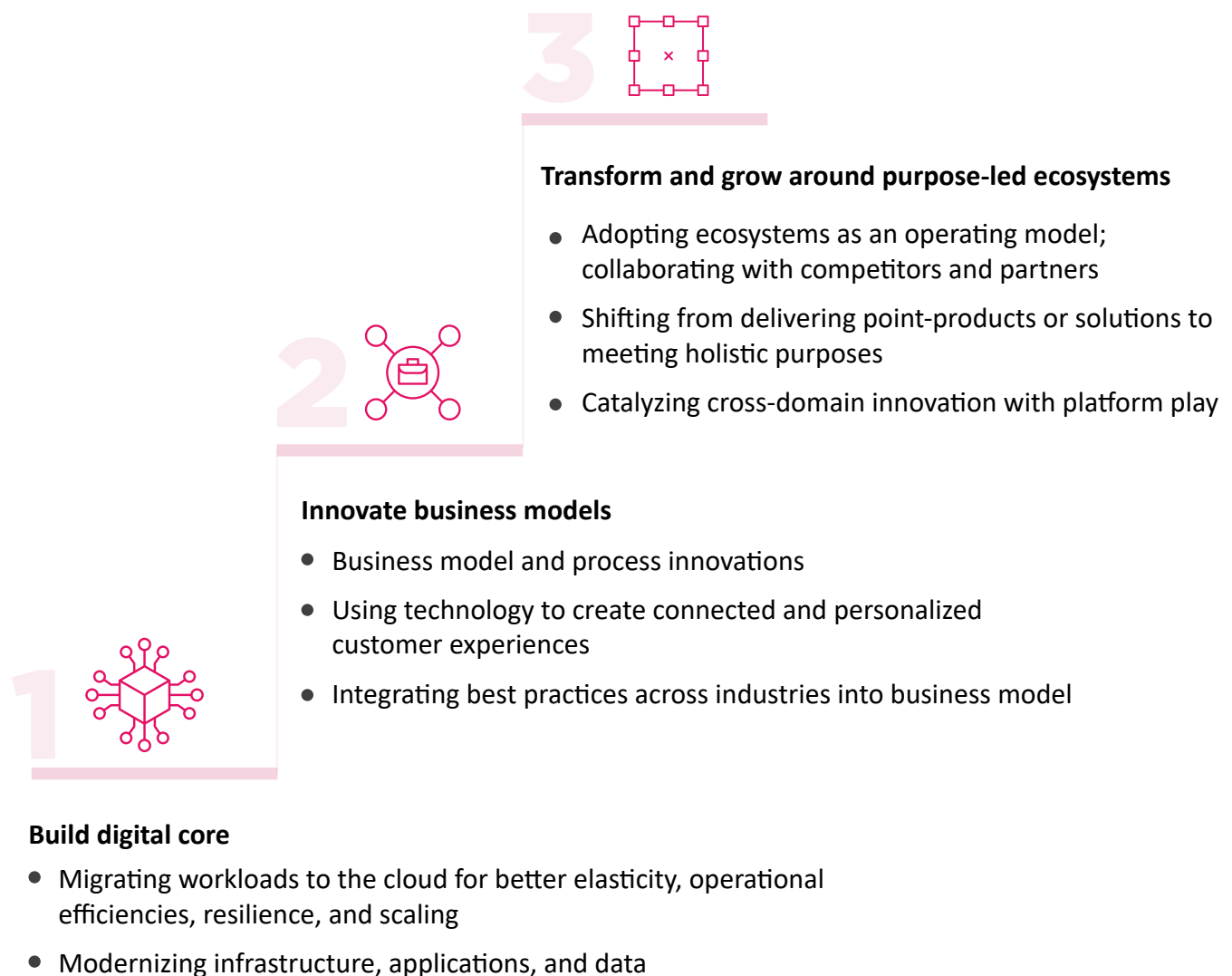
Read the Key Findings report to learn how organizations are moving toward cloud-enabled innovation.

The Cloud 2.0 transformation

If cloud was earlier seen as a way of future-proofing enterprises' technology infrastructure, today it's a means of future-proofing the business itself.

In Cloud 2.0, technology is not something to adopt, but a strategy for business transformation and growth itself.

Three horizons to building a connected future



About the study

Tata Consultancy Services (TCS) conducted a global cloud study from 6 January to 14 February 2023 on the theme of cloud-enabled innovation. TCS surveyed 972 C-suite and IT senior executives and decision makers from companies with +\$1 billion in annual revenue, across UK & Ireland, Continental Europe, North America, and APAC (India, Japan, Australia, NZ).

About the Thought Leadership Institute

Since 2009, the TCS Thought Leadership Institute has initiated conversations by and for executives to advance the purpose-driven enterprise. Through primary research, we deliver forward-looking and practical insights around key business issues to help organizations achieve long-term, sustainable growth. For more information, visit tcs.com/insights/globalstudies

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Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for over 55 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 614,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$27.9 billion in the fiscal year ended March 31, 2023 and is listed on the BSE and the NSE in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index. For more information, visit www.tcs.com